

# TAFELN

für

sämmtliche trigonometrische Functionen

der

cyklischen und hyperbolischen

Sektoren.

Von

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## Vorrede.

Mit Bezugnahme auf das, was Gudermann in seiner „Theorie der Potenzialfunctionen“, Berlin, 1833, Abschnitt 4 und 16, und ich in der Vorrede, pag. VII, zu den „Tafeln für die hyperbolischen Sektoren und für die Logarithmen ihrer Sinus und Cosinus“, Band 6, Heft 4, der neuesten Schriften der Naturforschenden Gesellschaft zu Danzig, 1862, welche zu meiner Abhandlung: „Auflösung der kubischen Gleichungen durch trigonometrische Functionen des Kreises und der Hyperbel“, 1861, gehören, gesagt haben, und mit Rücksicht auf eine besondere Abhandlung, welche in dem nächsten Hefte ihrer Schriften erscheinen wird, und welche vielfache theoretische und praktische Anwendungen der vorliegenden Tafeln enthalten wird, kann ich mich bei der Herausgabe dieser Tafeln kurz fassen.

Schon Gudermann hat in seinem angeführten Werke zwei ausgedehnte Tafeln für die hyperbolischen Functionen gegeben, eine, worin er sämmtlichen Längenzahlen  $k$ , von  $0$  bis  $\infty$ , (meinen  $z$ , von denen die Grösse der hyperbolischen Sektoren oder Flächen oder Aren abhängt), die entsprechenden oder den Uebergang vermittelnden Kreisbogen oder Kreissectoren  $\omega$  (vergl. meine Abhandlung von 1861, § 5) an die Seite setzt, und eine zweite, wo er zu den Längenzahlen von  $k=2$  ab unmittelbar die hyperbolischen Sinus, Cosinus und Tangenten angiebt. Gegen den zweiten Theil wäre an sich wenig zu sagen. Hat man es aber mit Aren unter  $2$  zu thun, so muss man aus der ersten Tafel erst das vermittelnde  $\omega$  suchen und dann durch die alten Tafeln diejenige cyklische Function von  $\omega$ , welche der gesuchten hyperbolischen Function entspricht, ( $\text{Tg } k = \sin \omega$ ,  $\text{Sin } k = \text{tg } \omega$ ,  $\text{Cos } k = \text{sec } \omega$ ,  $\text{Cotg } k = \text{cosec } \omega$ ,  $\text{Sec } k = \cos \omega$ ,  $\text{Cosec } k = \text{cotg } \omega$ ); und so umgekehrt, soll ich etwa aus dem bekannten  $\text{Sin } k$  den hyperbolischen Sektor  $k$  selbst finden, so muss ich mir durch die alten cyklischen Tafeln das  $\omega$  verschaffen und kann dann erst durch die Gudermann'schen Tafeln das  $k$  ermitteln; ich brauche also, wenn  $k < 2$  ist, ausser den beiden Gudermann'schen Tafeln noch die alten Tafeln und die Arbeit ist eine doppelte.

Meine neuen Tafeln sind nun so eingerichtet, dass sie zu sämmtlichen sechs trigonometrischen Functionen, mögen sie cyklisch oder hyperbolisch sein, sofort ohne Vermittelung in allen Fällen den entsprechenden Sektor und umgekehrt, zu jedem Sektor, er mag gross oder klein, cyklisch oder hyperbolisch sein, ohne Umschweife die verlangten trigonometrischen Functionen geben.

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Der Nutzen meiner Tafeln wird sich besonders bei der Integration durch Logarithmen und Kreisfunctionen äussern, indem die durch die ersten erlangten unbequemen Formeln allmählig verschwinden und hyperbolischen Formeln Platz machen werden, welche den Kreisfunctionen analog sind; es wird dann zwischen cyklischen Functionen und hyperbolischen Functionen bei der numerischen Berechnung kein Unterschied stattfinden, man kann alles mit der grössten Bequemlichkeit und in der kürzesten Zeit durch meine Tafeln allein machen.

Ein Wunsch wird für die Theorie nur übrig bleiben, nämlich ähnliche siebenstellige Tafeln zu besitzen. Derselbe wird sich aber, sobald das Bedürfniss wird ausgesprochen sein, leicht befriedigen lassen, da ja eigentlich nur die Eine Rubrik der  $z'$  neu zu berechnen sein wird und das Uebrige fast ohne Umstände aus den alten Büchern zu entnehmen ist; es muss dann auch nochmals überlegt werden, ob man doch vielleicht den  $z$  den Vorzug vor den  $z'$  einzuräumen hat, trotz der Gründe, die mich bewogen haben, die  $z'$  vorzuziehen (1861, pag. 10; 1862, pag. VII). Entschiede man sich für die  $z$ , so könnte die in *Legendre's Exercices*, 3, enthaltene Table IV, für  $\text{Log tg}(45 + \frac{1}{2} \varphi) = z$ , wo  $\varphi = \omega$  ist, als Anhaltspunkt benutzt werden, welche Tafel von 30 zu 30 Minuten fortschreitet.

Anders verhält sich die Sache mit der Gudermann'schen zweiten Tafel, die hier allein in Betracht kommen kann und an welche aus der hinten angehängten Skizze das doppelt Eingefasste erinnern soll. Dass sie in der vorhandenen Unvollständigkeit (von  $\omega = 74^\circ 35' 7''{,}3$  bis  $\omega = 90^\circ$ ) nicht zur Bedeutung kommen konnte, erkannte Gudermann wohl selbst an, indem er § 92 sagt: „Wenn einmal die briggischen Logarithmen der hyperbolischen Cosinus, Sinus und Tangenten der Arcus  $k$  (der Arcus  $z$ ) zwischen den Grenzen  $k = 0$  und  $k = 2$  gleichfalls berechnet sind“ etc. Aber denken wir uns auch seine Tafel nach seinem Plane nach oben regelmässig weiter fortgesetzt, wie es meine Skizze angiebt, so wird 1) bald klar, dass während das herausgegebene Stück der Tafel anfänglich von Tausendtel zu Tausendtel, später nur von Hundertel zu Hundertel fortschreiten durfte, das fehlende Stück derselben nach kleinern Intervallen fortgehen müsste. Ferner 2) da zu seinen  $k$  irrationale  $\omega$  gehören, so kann man die drei Rubriken für die cyklischen Sinus, Sekanten und Tangenten nicht ohne Weiteres aus den vorhandenen trigonometrischen Tafeln entnehmen, sie müssen durch Interpolation berechnet werden. 3) Wünscht man, dass die Columnen nicht blos eine Ueberschrift ( $\text{Tg } z, \sin \omega$ ), sondern auch eine Unterschrift ( $\cos \omega, \text{Sec } z$ ) haben, da z. B. die unten aufgestellte Formel für  $A \text{ am } u$  (IV') es wünschenswerth macht, dass die neuen Tafeln auch ohne Weiteres die hyperbolischen Cotangenten enthalten, so hat man die auf die Unterschrift bezügliche Columnne der  $k$  noch einmal zu berechnen, da sie in den auf die Ueberschrift sich beziehenden  $k$  kein constantes Complement haben, wie sich die  $\omega$  der ersten Columnne eines constanten Complements in der letzten Columnne ( $90^\circ$ ) erfreuen. Dass dabei die  $k$  aus der vorletzten Rubrik zu den  $k$  aus der zweiten Rubrik in einem irrationalen Verhältniss stehen, ist übrig zu erwähnen, so wie auch, dass ein von vorne genommenes  $k$  (0,145) hinten nur



zwischen zwei benachbarten horizontalen Reihen Platz finden könnte. Auch werden trotzdem, dass die vordern rationalen  $k$  regelmässig wachsen, die hinten dazu gehörigen irrationalen  $k$  verschiedene Differenzen haben. 4) Wollte man die auf die angedeutete Weise vervollständigten Gudermann'schen Tafeln zugleich auch für Kreisrechnungen benutzen, so müssten nun noch links und rechts zwei Columnen mit den irrationalen  $\omega$  hinzukommen, welche natürlich wieder verschiedene Differenzen haben würden und die man also hin zu setzen hätte. Aber an verschiedene Differenzen bei den  $\omega$  würde sich der Rechner schwer gewöhnen, schon wegen der Sexagesimaleintheilung. Gudermann hätte also nur bei einer Rubrik keine Differenzen hin zu schreiben, während ich bei zwei Rubriken die Angabe der Differenzen erspare. Aber vor allen Dingen brauche ich die  $z'$  nur einmal vorne zu berechnen, da sie hinten mit den Complementen der  $\omega$  in umgekehrter Ordnung unverändert wiederkehren.

Im Grunde habe ich nicht viel mehr gethan, als eine Idee Lambert's (*Histoire de l'Académie Royale des sciences, Berlin 1770, pag. 350 etc.*) weiter ausgeführt, welcher in seiner dort befindlichen Skizze den Hilfswinkel  $\omega$  von Grad zu Grad wachsen liess und die hyperbolischen Sektoren, Sinus, Cosinus und Tangenten der bezüglichen Winkel gab. Gudermann hätte diesen Weg nicht verlassen sollen; dass er die  $z$  (seine  $k$ ) zum Massstabe des Fortschreitens wählte, war ein Fehlgriff.

Da von den hyperbolischen Sinus und Cosinus schon in meiner Abhandlung über die kubischen Gleichungen Anwendungen vorkommen, so will ich hier vorläufig nur einige Anwendungen von den hyperbolischen Tangenten und Cotangenten mittheilen.

Durège giebt in seiner Theorie der elliptischen Functionen, 1861, pag. 194, die zuerst von Richelot aufgestellte und von ihm zur Berechnung von  $\log. \sin am (u, k)$  bereits benutzte Formel:

$$\sin am (u, k) = A'. \sin am \frac{\pi u}{2K'} \prod_{i=1}^{\infty} \sin am \frac{\pi}{2K'} (2hK + u) \cdot \sin am \frac{\pi}{2K'} (2hK - u),$$

(Mod. 1).

Man setze nämlich  $\sin am (u, 1) = \frac{e^u - e^{-u}}{e^u + e^{-u}} = Tg u = i tg i u$  (nach meiner Abhandlung von 1861, pag. 9) und ausserdem

$$\frac{\pi}{2K'} 2K = L, \frac{\pi}{2K'} u = v. \quad \text{Dann kann man schreiben:}$$

$$\text{I. } \begin{cases} \sin am (u, k) = A'. Tg v \cdot Tg(L + v) \cdot Tg(L - v) Tg(2L + v) \cdot Tg(2L - v) \dots \\ \text{wobei } A' = \frac{1}{\sqrt{k}} \text{ ist.} \end{cases}$$

Fasst man je zwei entsprechende Glieder zusammen, so entsteht:

$$\text{II. } \sin am (u, k) = A'. Tg v \cdot \frac{Tg L^2 - Tg v^2}{1 - Tg L^2 \cdot Tg v^2} \cdot \frac{Tg 2L^2 - Tg v^2}{1 - Tg 2L^2 \cdot Tg v^2} \cdot \frac{Tg 3L^2 - Tg v^2}{1 - Tg 3L^2 \cdot Tg v^2} \dots$$

welche Reihe der vorigen in praktischer Hinsicht wenig nachsteht.

Da ferner  $\sin am (u, k) = -i \cdot tg am (i u, k')$  ist, so hat man

$$-i tg am (i u, k') = A'. -i tg i v \cdot \frac{Tg L^2 + tg i v^2}{1 + Tg L^2 \cdot tg i v^2} \cdot \frac{Tg 2L^2 + tg i v^2}{1 + Tg 2L^2 \cdot tg i v^2} \dots$$

Schreibt man  $u$  statt  $iu$ , also  $v$  statt  $iv$ ,  
ferner  $k$  statt  $k'$ , also  $A$  statt  $A'$ ,  $L$ , statt  $L$  und  $v$ , statt  $v$ , wobei

$$A = \frac{1}{\sqrt{k'}}, L, = \frac{\pi}{2K} \cdot 2K' \text{ und } v, = \frac{\pi}{2K} u \text{ ist, so erh\u00e4lt man:}$$

$$tg \, am(u, k) = A \cdot tg \, v, \cdot \frac{Tg L,^2 + tg v,^2}{1 + Tg L,^2 \cdot tg v,^2} \cdot \frac{Tg 2L,^2 + tg v,^2}{1 + Tg 2L,^2 \cdot tg v,^2} \dots \text{ III.}$$

Jetzt setze ich in I  $iu + K$  statt  $u$ , also  $\frac{L}{2} + iv$  statt  $v$ . Dies giebt  
 $sin \, am(iu + K, k) = A' \cdot Tg(\frac{1}{2}L + iv) \cdot Tg(1\frac{1}{2}L + iv) \cdot Tg(\frac{1}{2}L - iv) \cdot$

$$\begin{aligned} & Tg(2\frac{1}{2}L + iv) \cdot Tg(1\frac{1}{2}L - iv) \dots \\ = & A' \cdot \frac{Tg \frac{1}{2}L^2 - Tg iv^2}{1 - Tg \frac{1}{2}L^2 \cdot Tg iv^2} \cdot \frac{Tg 1\frac{1}{2}L^2 - Tg iv^2}{1 - Tg 1\frac{1}{2}L^2 \cdot Tg iv^2} \cdot \frac{Tg 2\frac{1}{2}L^2 - Tg iv^2}{1 - Tg 2\frac{1}{2}L^2 \cdot Tg iv^2} \dots \end{aligned}$$

Nun ist  $sin \, am(iu + K, k) = \frac{1}{A \, am(u, k')}$ , (Dur\u00e8ge, pag. 28, 18) und  $Tg \, iv$   
 $= i \, tg \, v$ , also haben wir

$$\frac{1}{A \, am(u, k')} = A' \cdot \frac{Tg \frac{1}{2}L^2 + tg v^2}{1 + Tg \frac{1}{2}L^2 \cdot tg v^2} \cdot \frac{Tg \frac{3}{2}L^2 + tg v^2}{1 + Tg \frac{3}{2}L^2 \cdot tg v^2} \cdot \frac{Tg \frac{5}{2}L^2 + tg v^2}{1 + Tg \frac{5}{2}L^2 \cdot tg v^2} \dots$$

oder

$$\left\{ \begin{aligned} \Delta am(u, k) &= \frac{1}{A} \cdot \frac{1 + Tg \frac{1}{2}L,^2 \cdot tg v,^2}{Tg \frac{1}{2}L,^2 + tg v,^2} \cdot \frac{1 + Tg \frac{3}{2}L,^2 \cdot tg v,^2}{Tg \frac{3}{2}L,^2 + tg v,^2} \cdot \frac{1 + Tg \frac{5}{2}L,^2 \cdot tg v,^2}{Tg \frac{5}{2}L,^2 + tg v,^2} \dots \text{ IV} \\ \text{wo } \frac{1}{A} &= \sqrt{k'} \text{ ist.} \end{aligned} \right.$$

Die Formeln III und IV k\u00f6nnen in folgender Weise logarithmisch gemacht werden:

1) Mit zwei Hilfsaren:

$$\text{Es ist } \log \frac{a+b}{1+ab} = \log(a+b) - \log(1+ab).$$

Nun ist (1861, pag. 41, § 31):

$$\log(a+b) = \log a + 2 \log \cos \varphi, \text{ wo } \sin \varphi = \sqrt{\frac{b}{a}} \text{ und}$$

$$\log(1+ab) = 2 \log \cos \psi, \text{ wo } \sin \psi = \sqrt{ab}.$$

Also hat man  $\log \frac{a+b}{1+ab} = \log a + 2 \log \left( \frac{\cos \varphi}{\cos \psi} \right)$  (f\u00fcr III) und ebenso

$$\log \frac{1+ab}{a+b} = 2 \log \left( \frac{\cos \psi}{\cos \varphi} \right) - \log a \text{ (f\u00fcr IV).}$$

F\u00fcr III ist successive  $a = Tg L,^2, Tg 2L,^2, \dots$  und  $b = tg v,^2$

f\u00fcr IV . . . .  $a = Tg \frac{1}{2}L,^2, Tg \frac{3}{2}L,^2, \dots$   $b = tg v,^2$

2) Mit einer ver\u00e4nderlichen Hilfsare, wobei aber  $v, < 45^\circ$  sein muss:

$$\text{Es ist } Tg(\varphi + \omega) = \frac{Tg \varphi + Tg \omega}{1 + Tg \varphi \cdot Tg \omega}.$$

Setzt man  $Tg \omega = tg v,^2$  und respective

in III  $Tg \varphi, Tg \varphi', Tg \varphi'' \dots = Tg L,^2, Tg 2L,^2, Tg 3L,^2, \dots$

in IV  $Tg \varphi, Tg \varphi', Tg \varphi'' \dots = Tg \frac{1}{2}L,^2, Tg \frac{3}{2}L,^2, Tg \frac{5}{2}L,^2, \dots$ , so hat man

$$tg \, am(u, k) = \frac{tg v,}{\sqrt{k'}} Tg(\varphi + \omega) \cdot Tg(\varphi' + \omega) \cdot Tg(\varphi'' + \omega) \dots \text{ III'}$$

$$\Delta am(u, k) = \sqrt{k'} \cdot Cotg(\varphi + \omega) \cdot Cotg(\varphi' + \omega) \cdot Cotg(\varphi'' + \omega) \dots \text{ IV'}$$

Gudermann giebt im Crelleschen Journal 20, pag. 128, (oder in seiner Theorie der Modularfunctionen, Berlin, 1844, pag. 384) folgende drei Formeln:

$$snu = \frac{1}{\sqrt{k}} Tg \eta' u \cdot Tg(2 \eta' K + \eta' u) \cdot Tg(2 \eta' K - \eta' u) \cdot Tg(4 \eta' K + \eta' u).$$

$$Tg(4 \eta' K - \eta' u) \dots \text{ wo } \eta' = \frac{\pi}{2K'} \text{ ist.}$$

$$\log tnu = \log \frac{tg \eta' u}{\sqrt{k'}} - 2 \cdot Arc. Tg \frac{\cos 2 \eta' u}{\cos 4 \eta' K'} - 2 Arc. Tg \frac{\cos 2 \eta' u}{\cos 8 \eta' K'} \\ - 2 Arc. Tg \frac{\cos 2 \eta' u}{\cos 12 \eta' K'} \dots$$

$$\log dnu = \log \sqrt{k'} + 2 Arc. Tg \frac{\cos 2 \eta' u}{\cos 2 \eta' K'} + 2 Arc. Tg \frac{\cos 2 \eta' u}{\cos 6 \eta' K'} \\ + 2 Arc. Tg \frac{\cos 2 \eta' u}{\cos 10 \eta' K'} \dots \text{ wo } \eta = \frac{\pi}{2K} \text{ ist.}$$

Dass die erste dieser drei Formeln mit I übereinstimmt, leuchtet von selbst ein; aber auch die andern beiden Formeln stimmen mit III und IV Glied vor Glied überein, indem z. B.:

$$\log \frac{Tg L,^2 + tg v,^2}{1 + Tg \cdot L,^2 tg v,^2} = \log Tg(\varphi + \omega) = -2 Ar. Tg \frac{\cos 2 \eta' u}{\cos 4 \eta' K'} \\ \log \frac{1 + Tg \frac{1}{2} L,^2 \cdot tg v,^2}{Tg \frac{1}{2} L,^2 + tg v,^2} = \log Cotg(\varphi + \omega) = 2 Ar. Tg \frac{\cos 2 \eta' u}{\cos 2 \eta' K'} \text{ ist.}$$

Ich glaube indess, dass man lieber nach meinen logarithmisch gemachten Formeln III und IV, als nach den beiden letzten Gudermann'schen Formeln werde rechnen wollen.

Hiebei erinnere ich noch, dass wenn man in den beiden letzten Gudermann'schen Formeln die briggsischen Logarithmen von  $tnu$  und  $dnu$  sucht, unter Gudermanns *Arc* oder unter meiner *Area* = *Ar.* nicht die  $z$ , die seine Tafeln geben, zu verstehen sind, sondern ohne Weiteres die  $z' = M.z$ , wie sie meine Tafeln enthalten.

### Beispiel 1.

Es sei  $k = \sqrt{\frac{1}{2}} = k'$ , also  $K = K' = 1,8540746$ . Ferner sei  $u = 0,1$ . Dann ist  $L = \pi = 3,14159$  und  $v = 0,084721$ .

Zu I. Da meine Tafeln nicht die  $z$ , sondern die  $z'$  geben, so hat man vor dem Gebrauch derselben  $v, L \pm v, 2L \pm v, \dots$  noch mit 0,43429 zu multipliciren. Demnach ist zu rechnen mit

$$v = 0,036793, L + v = 1,40110, L - v = 1,3276.$$

Die übrigen von  $2L \pm v, 3L \pm v \dots$  abhängigen Glieder können vernachlässigt werden, da ihre hyperbolischen Tangenten bei fünf Decimalstellen schon = 1 sind.

$$\begin{aligned} \text{Nun ist } \log A' &= 0,07526 \\ \log Tg v &= 8,92695 \\ \log Tg(L + v) &= 9,99863 \\ \log Tg(L - v) &= 9,99808. \\ \text{Also } \log \sin am u &= 8,99892. \end{aligned}$$

Nach Durège pag. 226 ist

$$\sin am u = \frac{2\pi}{kK} \left[ \frac{\sqrt{q}}{1-q} \sin v, + \frac{\sqrt{q^3}}{1-q^3} \sin 3v, + \frac{\sqrt{q^5}}{1-q^5} \sin 5v, + \frac{\sqrt{q^7}}{1-q^7} \sin 7v, \dots \right].$$

Da hier  $q = e^{-\frac{\pi K'}{K}} = 0,0432138$  ist, so braucht man vier Glieder der Reihenentwicklung für 5stellige Tafeln und sechs Glieder für 7stellige

Tafeln. Die Rechnung liefert im ersten Falle 8,99890, im andern Falle 8,99891,57.

Ich habe das Beispiel auch nach der bei Durège auf pag. 260 befindlichen Formel berechnet, welche lautet:

$$\sin am u = 2 \cdot \sqrt{k} \frac{\sqrt{q} \cdot \sin v, - \sqrt{q^9} \cdot \sin 3v, + \sqrt{q^{25}} \cdot \sin 5v, - \sqrt{q^{49}} \cdot \sin 7v, \dots}{1 - 2q \cdot \cos 2v, + 2q^4 \cdot \cos 4v, - 2q^9 \cdot \cos 6v, + 2q^{16} \cdot \cos 8v, \dots}$$

Hier musste ich im Zähler zwei Glieder, im Nenner also drei Glieder nehmen, um das Resultat auf fünf Decimalstellen zu erhalten, es lautet: 8,99891.

Nach einer von Herrn Professor Richelot aufgestellten Näherungsformel (bis Grössen von der Ordnung  $q^4$ ), welche lautet

$$\sin am u = \sin x \cdot \frac{1 - 4q^2 \cdot \cos^2 x}{1 - 4q \cdot \cos^2 x}, \text{ wo } x = \frac{\pi u}{2K}, \text{ also } = v, \text{ ist, findet sich für}$$

unser Beispiel  $\log \sin am u = 8,99890$ .

Zu III. Sowie man die hyperbolischen  $L$ , vor dem Gebrauche meiner Tafeln mit dem logarithmischen Modul  $M$  zu multipliciren hat, so ist es bekanntlich auch nöthig, die cyklischen Bogenlängen  $v$ , durch  $\Pi = \frac{\pi}{180 \cdot 60 \cdot 60}$  zu dividiren, um sie in Sekunden zu verwandeln, wornach für unser Beispiel  $v = 4^\circ 51' 15''$  wird. Von der unendlichen Reihe der Brüche

$$B = \frac{Tg L,^2 + tg v,^2}{1 + Tg L,^2 tg v,^2}, B' = \frac{Tg 2L,^2 + tg v,^2}{1 + Tg 2L,^2 tg v,^2} \dots$$

kommt diesmal nur der erste in Betracht.

Es ist  $\log Tg L,^2 = 9,99676$ ,  $\log A = 0,07526$  Also

$\log tg v,^2 = 7,85806$ ,  $\log tg v, = 8,92903$   $\log tg am u = 9,00109$ .

$\log B = 9,99680$ .

Rechne ich nach der gewöhnlichen Formel:

$$tg am (u, k) = \frac{\pi}{2k'K} \left[ tg v, - \frac{4q^2}{1+q^2} \sin 2v, + \frac{4q^4}{1+q^4} \sin 4v, - \frac{4q^6}{1+q^6} \sin 6v, + \dots \right]$$

so erhalte ich mit Benutzung der drei ersten Glieder 9,00108.

Zu IV. Hier brauche ich die beiden ersten Brüche

$$b = \frac{1 + Tg \frac{1}{2} L,^2 tg v,^2}{Tg \frac{1}{2} L,^2 + tg v,^2}, b' = \frac{1 + Tg \frac{3}{2} L,^2 tg v,^2}{Tg \frac{3}{2} L,^2 + tg v,^2}.$$

Es ist  $\log Tg \frac{1}{2} L,^2 = 9,92488$ ,  $\log Tg \frac{3}{2} L,^2 = 9,99986$ .

Da nun  $\log \frac{1}{A} = 9,92474$

$\log b = 0,07404$

$\log b' = 0,00014$  ist, so ist  $\log A am u = 9,99892$ .

### Beispiel 2.

Während  $u = 0,1$  bleibt, sei in  $k = \sin \vartheta$ ,  $k' = \cos \vartheta$ ,  $\vartheta = 22^\circ 30'$ .

Es ist dann  $\log k = 9,58284$ ,  $\log K = 0,21314,208$ ,

$\log k' = 9,96562$ ,  $\log K' = 0,38023,833$ .

$L = \frac{\pi \cdot K}{K'}$  giebt für die Rechnung  $L = 0,92864$

$L' = \frac{\pi K'}{K} \dots \dots \dots L, = 2,0046$ .



$v = \frac{\pi u}{2K}$ , giebt hyperbolisch  $v = 0.02842.3$ , cyklisch  $v = 3^\circ 45'$

$v_1 = \frac{\pi u}{2K}$  . . . . .  $v_1 = 0.041760$ , . . .  $v_1 = 5^\circ 30' 34''$ .

Darnach hat man:

$\log Tg L = 9,98793$	$\log Tg \frac{L}{2} = 9,89714$	$\log Tg L_1 = 9,99992$
$\log Tg 2L = 9,99983$	$\log Tg \frac{3L}{2} = 9,99858$	$\log Tg \frac{L}{2} = 9,99141$
	$\log Tg \frac{5L}{2} = 9,99998$	
$\log Tg v = 8,81527$	$\log Tg v_1 = 8,98164$	
$\log tg v = 8,81653$	$\log tg v_1 = 8,98433$	

Zu I.

$\log A' = 0,20858$   
 $\log Tg v = 8,81527$   
 $\log Tg (L + v) = 9,98941$   
 $\log Tg (L - v) = 9,98626$   
 $\log Tg (2L + v) = 9,99985$   
 $\log Tg (2L - v) = 9,99981$

Demnach:

$\log \sin am u = 8,99918$ .

Durège, pag. 226: Nach Meissel's Tafeln für  $q$ , Iserlohn, 1860 ist

$\log q = -M.L. = 7,99543.366$  (und ebenso, da  $q' = e^{-\frac{\pi K}{K'}}$ )  
 $\log q' = -M.L. = 9,07135.883$

Demnach ist die Klammer (weil  $v_1 = 5^\circ 30' 34''$ ):  
 $Kl. = 0,0096463 + 0,0002800 + 0,0000045 + 0,0000001 = 0,0099309$ .

Nun ist  $\log Kl. = 7,99698.86$ .

und  $\log \frac{2\pi}{kK} = 1,00219.81$

Also  $\log \sin am u = 8,99918.67$ .

Nach der oben mitgetheilten Näherungsformel ist  $\log \sin am u = 8,99917$ .

Zu III.

$\log A = 0,01719$   
 $\log tg v_1 = 8,98433$   
 $\log B = 9,99984$   
 Also  $\log tg am u = 9,00136$

Zu IV.

$\log \sqrt{k} = 9,98281$   
 $\log b = 0,01685$   
 Also  $\log \Delta am u = 9,99966$

Beispiel 3.

$u = 0,1; \mathcal{G} = 67^\circ 30'$

Zu I.

$\log A' = 0,01719$   
 $\log Tg v = 8,98164$   
 $\log Tg (L + v) = 9,99993$   
 $\log Tg (L - v) = 9,99990$   
 Also  $\log \sin am u = 8,99866$

Zu III.

$\log A = 0,20858$   
 $\log tg v_1 = 8,81653$   
 $\log B = 9,97607$   
 $\log B' = 9,99966$   
 $\log tg am u = 9,00084$

Zu IV.

$\log \sqrt{k} = 9,79142$   
 $\log b = 0,20389$   
 $\log b' = 0,00282$   
 $\log b'' = 0,00004$   
 $\log \Delta am u = 9,99817$

Nach der Näherungsformel ist, da diesmal  $q$  schon bedeutend gross ist  $\log \sin am u = 8,99841$ .

Wenn  $k$  klein, also  $\mathcal{G} < 45^\circ$  ist, so ist es vortheilhaft, die Tangente Amplitudo oder  $\Delta am$  zu berechnen; ist aber  $k$  gross, also  $\mathcal{G} > 45^\circ$ , dann wird man es vorziehen, den Sinus Amplitudo zu berechnen.



Zusammenstellung für  $u = 0,1$ .

$(k = \sin) \delta$	$\log. \sin am(u, k)$	Diff.
0°	8,99929	10
22° 30'	8,99919	27
45°	8,99892	26
67° 30'	8,99866	8
90°	8,99858	

Da nun schon Legendre in seinen Exercices Tafeln für  $K$  und Meissel für  $q$ , welche mit meinen  $L$  in der einfachsten Beziehung stehen, gegeben haben, so bedurfte es eben nur noch besonderer Tafeln, wie der vorliegenden, welche die hyperbolischen Tangenten und Cotangenten enthalten, um auf dem kürzesten Wege  $\sin am u$ ,  $tg am u$ ,  $\Delta am u$  für beliebige Werthe von  $k$  und  $u$  numerisch zu berechnen.

Ich habe jetzt nur noch einige Bemerkungen zu machen.

In meiner Abhandlung: Ueber die allgemeine und volle Gültigkeit der mathematischen Formeln. Ein Beitrag zur Deutung des Negativen und Imaginären. 2. Theil, 1. Heft, Osterprogramm der St. Johannisschule in Danzig, 1863, Vorrede pag. IV—VII habe ich für die Ausdrücke des asymptotischen Raums und des hyperbolischen Sektors kürzere Beweise gegeben, als die sind, welche sich in der Abhandlung über die kubischen Gleichungen von 1861, pag. 6—7 und pag. 47—49 vorfinden.

In der Vorrede zu meinen Tafeln von 1862, pag. 1 habe ich das letzte Glied der Entwicklung von  $\log \cos z$  falsch angegeben, es ist nicht  $\frac{263M}{4032} \Pi^s \omega_{,,}^s$ , sondern  $\frac{17M}{2520} \Pi^s \omega_{,,}^s$  und der Logarithme des Coefficienten von  $\omega_{,,}^s$  ist demnach nicht 5,93682—50, sondern nur 4,95143—50. Indess hat dieser Fehler auf meine Tafeln keinen Einfluss, ja nicht einmal auf meine dortigen Ausstellungen gegen einige Zahlen des Thesaurus von Vega, indem z. B.  $\log \sec 1^\circ 20' 0''$  zwar nicht = (3)1176049.8417, sondern = (3)1176049.8381 ist, also doch immer die Angabe Vega's (3)1176051 falsch ist.

Ich habe noch (aus 1862, Vorrede pag. I) in Erinnerung zu bringen, dass (3)11761 bei mir bedeutet 0,00011761. Vielleicht wäre es auch zweckmässig gewesen, etwa statt 9,999975832 zu schreiben 4)75832. Man könnte dadurch die  $\log Tgz$  und  $\log \sin \omega$  von  $\omega = 52^\circ 36'$  ab auf demselben Raume viel genauer angeben, als es bisher möglich war. Doch muss man darüber erst das Urtheil der Rechner abwarten.

Auch halte ich es nicht für übrig, hier noch zu wiederholen, dass ich die cyklisch trigonometrischen Functionen mit kleinen, die hyperbolisch trigonometrischen Functionen mit grossen Anfangsbuchstaben, die briggischen Logarithmen mit  $\log$  und die hyperbolischen mit  $Log$  bezeichnet habe.

Endlich kann ich nicht unterlassen anzugeben, dass mich bei der Anfertigung und Correctur der vorliegenden Tafeln der Vermessungs-Eleve Herr E. J. Th. Mertins unterstützt hat.

Danzig, im September 1863.

Der Verfasser.

ω	z'	Diff.	log Tg. z log sin ω	Diff.	log Cos z log sec ω	Diff.	log Sin z log tg. ω	Diff.	ω
0'	(∞)		∞		(∞)		∞		60'
10	(4)2.1055	2.1055	5.68557	30103	(9)51039	15312	5.68557	30103	50
20	(4)4.2110	2.1056	5.98660	17610	(8)20416	25519	5.98660	17610	40
30	(4)6.3166	2.1055	6.16270	12493	(8)45935	35728	6.16270	12493	30
40	(4)8.4221	2.106	6.28763	9691	(8)81663	4594	6.28763	9691	20
50	(3)10.528	2.105	6.38454	7919	(7)12760	5614	6.38454	7919	10
1'	(3)12.633	2.106	6.46373	6694	(7)18374	6635	6.46373	6694	59'
10	(3)14.739	2.105	6.53067	5799	(7)25009	7656	6.53067	5799	50
20	(3)16.844	2.106	6.58866	5116	(7)32665	8677	6.58866	5116	40
30	(3)18.950	2.105	6.63982	4575	(7)41342	9697	6.63982	4575	30
40	(3)21.055	2.106	6.68557	4140	(7)51039	10718	6.68557	4140	20
50	(3)23.161	2.105	6.72697	3779	(7)61757	11739	6.72697	3779	10
2'	(3)25.266	2.106	6.76476	3476	(7)73496	12760	6.76476	3476	58'
10	(3)27.372	2.105	6.79952	3218	(7)86256	1378	6.79952	3218	50
20	(3)29.477	2.106	6.83170	2997	(6)10004	1480	6.83170	2997	40
30	(3)31.583	2.105	6.86167	2802	(6)11484	1582	6.86167	2802	30
40	(3)33.688	2.106	6.88969	2633	(6)13066	1684	6.88969	2633	20
50	(3)35.794	2.105	6.91602	2483	(6)14750	1787	6.91602	2483	10
3'	(3)37.899	2.106	6.94085	2348	(6)16537	1888	6.94085	2348	57'
10	(3)40.005	2.105	6.96433	2227	(6)18425	1991	6.96433	2227	50
20	(3)42.110	2.106	6.98660	2119	(6)20416	2092	6.98660	2119	40
30	(3)44.216	2.105	7.00779	2021	(6)22508	2195	7.00779	2021	30
40	(3)46.321	2.106	7.02800	1930	(6)24703	2297	7.02800	1930	20
50	(3)48.427	2.105	7.04730	1849	(6)27000	2399	7.04730	1849	10
4'	(3)50.532	2.106	7.06579	1772	(6)29399	2501	7.06579	1772	56'
10	(3)52.638	2.106	7.08351	1704	(6)31900	2603	7.08351	1704	50
20	(3)54.744	2.105	7.10055	1639	(6)34503	2705	7.10055	1639	40
30	(3)56.849	2.106	7.11694	1579	(6)37208	2807	7.11694	1579	30
40	(3)58.955	2.105	7.13273	1524	(6)40015	2909	7.13273	1524	20
50	(3)61.060	2.106	7.14797	1473	(6)42924	3011	7.14797	1473	10
5'	(3)63.166	2.105	7.16270	1424	(6)45935	3114	7.16270	1424	55'
10	(3)65.271	2.106	7.17694	1378	(6)49049	3215	7.17694	1378	50
20	(3)67.377	2.105	7.19072	1337	(6)52264	3318	7.19073	1336	40
30	(3)69.482	2.106	7.20409	1296	(6)55582	3419	7.20409	1296	30
40	(3)71.588	2.105	7.21705	1259	(6)59001	3522	7.21705	1259	20
50	(3)73.693	2.106	7.22964	1224	(6)62523	3624	7.22964	1224	10
6'	(3)75.799	2.105	7.24188	1190	(6)66147	3726	7.24188	1190	54'
10	(3)77.904	2.106	7.25378	1158	(6)69873	3828	7.25378	1158	50
20	(3)80.010	2.105	7.26536	1128	(6)73701	3930	7.26536	1128	40
30	(3)82.115	2.106	7.27664	1099	(6)77631	4032	7.27664	1100	30
40	(3)84.221	2.105	7.28763	1073	(8)81663	4134	7.28764	1072	20
50	(3)86.326	2.106	7.29836	1046	(6)85797	4236	7.29836	1046	10
7'	(3)88.432	2.105	7.30882	1022	(6)90033	4339	7.30882	1022	53'
10	(3)90.537	2.106	7.31904	999	(6)94372	4440	7.31904	999	50
20	(3)92.643	2.105	7.32903	976	(6)98812	454	7.32903	976	40
30	(3)94.748	2.106	7.33879	954	(5)10335	465	7.33879	954	30
40	(3)96.854	2.105	7.34833	934	(5)10800	475	7.34833	934	20
50	(3)98.959	2.11	7.35767	915	(5)11275	484	7.35767	915	10
8'	(2)101.07	2.10	7.36682	895	(5)11759	496	7.36682	895	52'
10	(2)103.17	2.11	7.37577	877	(5)12255	505	7.37577	878	50
20	(2)105.28	2.10	7.38454	860	(5)12760	515	7.38455	860	40
30	(2)107.38	2.11	7.39314	844	(5)13275	526	7.39315	843	30
40	(2)109.49	2.10	7.40158	827	(5)13801	536	7.40158	827	20
50	(2)111.59	2.11	7.40985	812	(5)14337	546	7.40985	812	10
9'	(2)113.70	2.10	7.41797	797	(5)14883	556	7.41797	797	51'
10	(2)115.80	2.11	7.42594	782	(5)15439	567	7.42594	782	50
20	(2)117.91	2.10	7.43376	769	(5)16006	577	7.43376	769	40
30	(2)120.01	2.11	7.44145	755	(5)16583	587	7.44145	755	30
40	(2)122.12	2.11	7.44900	743	(5)17170	597	7.44900	743	20
50	(2)124.23	2.10	7.45643	730	(5)17767	607	7.45643	730	10
10'	(2)126.33	2.10	7.46373		(5)18374		7.46373		50'

log cos ω      Diff.      l. cosec ω      Diff.      log cotg ω      Diff.      z'      Diff.      ω



$\omega$	$z'$	Diff.	log Tg. $z'$ log sin $\omega$	Diff.	log Cos $z'$ log sec $\omega$	Diff.	log Sin $z'$ log tg. $\omega$	Diff.					
<b>10'</b>	(2)126.33	2.11	7.46373	717	(5).18374	617	7.46373	718	2.83730	718	<b>50'</b>		
10	(2)128.44	2.10	7.47090	707	(5).18992	628	7.47091	706	2.83012	706	50		
20	(2)130.54	2.11	7.47797	694	(5).19620	637	7.47797	695	2.82306	695	40		
30	(2)132.65	2.10	7.48491	684	(5).20257	649	7.48492	684	2.81611	684	30		
40	(2)134.75	2.11	7.49175	674	(5).20906	658	7.49176	673	2.80927	673	20		
50	(2)136.86	2.10	7.49849	663	(5).21564	669	7.49849	663	2.80254	663	10		
<b>11'</b>	(2)138.96	2.11	7.50512	653	(5).22233	679	7.50512	653	2.79591	653	<b>49'</b>		
10	(2)141.07	2.11	7.51165	643	(5).22916	689	7.51165	644	2.78938	643	50		
20	(2)143.18	2.10	7.51808	634	(5).23601	699	7.51809	634	2.78295	634	40		
30	(2)145.28	2.11	7.52442	625	(5).24300	709	7.52443	624	2.77661	625	30		
40	(2)147.39	2.10	7.53067	616	(5).25009	720	7.53067	616	2.77036	616	20		
50	(2)149.49	2.11	7.53683	608	(5).25729	730	7.53683	608	2.76420	608	10		
<b>12'</b>	(2)151.60	2.10	7.54291	599	(5).26459	740	7.54291	599	2.75812	599	<b>48'</b>		
10	(2)153.70	2.11	7.54890	591	(5).27199	750	7.54890	591	2.75213	591	50		
20	(2)155.81	2.10	7.55481	583	(5).27949	761	7.55481	583	2.74622	583	40		
30	(2)157.91	2.11	7.56064	575	(5).28710	770	7.56064	575	2.74039	575	30		
40	(2)160.02	2.11	7.56639	567	(5).29480	781	7.56639	568	2.73464	568	20		
50	(2)162.13	2.10	7.57206	561	(5).30261	791	7.57207	560	2.72896	560	10		
<b>13'</b>	(2)164.23	2.11	7.57767	553	(5).31052	802	7.57767	553	2.72336	553	<b>47'</b>		
10	(2)166.34	2.10	7.58320	546	(5).31854	811	7.58320	547	2.71783	547	50		
20	(2)168.44	2.11	7.58866	540	(5).32665	822	7.58867	539	2.71236	539	40		
30	(2)170.55	2.10	7.59406	533	(5).33487	832	7.59406	533	2.70697	533	30		
40	(2)172.65	2.11	7.59939	526	(5).34319	842	7.59939	527	2.70164	526	20		
50	(2)174.76	2.10	7.60465	520	(5).35161	852	7.60466	520	2.69638	520	10		
<b>14'</b>	(2)176.86	2.11	7.60985	514	(5).36013	863	7.60986	514	2.69118	514	<b>46'</b>		
10	(2)178.97	2.11	7.61499	508	(5).36876	873	7.61500	508	2.68604	508	50		
20	(2)181.08	2.10	7.62007	502	(5).37749	883	7.62008	502	2.68096	502	40		
30	(2)183.18	2.11	7.62509	497	(5).38632	893	7.62510	496	2.67594	497	30		
40	(2)185.29	2.10	7.63006	490	(5).39525	903	7.63006	491	2.67097	491	20		
50	(2)187.39	2.11	7.63496	486	(5).40428	914	7.63497	485	2.66606	485	10		
<b>15'</b>	(2)189.50	2.10	7.63982	479	(5).41342	924	7.63982	480	2.66121	480	<b>45'</b>		
10	(2)191.60	2.11	7.64461	475	(5).42266	934	7.64462	475	2.65641	474	50		
20	(2)193.71	2.10	7.64936	470	(5).43200	944	7.64937	469	2.65167	470	40		
30	(2)195.81	2.11	7.65406	464	(5).44144	954	7.65406	465	2.64697	464	30		
40	(2)197.92	2.11	7.65870	460	(5).45098	965	7.65871	459	2.64233	460	20		
50	(2)200.03	2.10	7.66330	454	(5).46063	975	7.66330	455	2.63773	455	10		
<b>16'</b>	(2)202.13	2.11	7.66784	451	(5).47038	985	7.66785	450	2.63318	450	<b>44'</b>		
10	(2)204.24	2.10	7.67235	445	(5).48023	995	7.67235	445	2.62868	445	50		
20	(2)206.34	2.11	7.67680	441	(5).49018	1006	7.67680	441	2.62423	441	40		
30	(2)208.45	2.10	7.68121	436	(5).50024	1015	7.68121	437	2.61982	437	30		
40	(2)210.55	2.11	7.68557	432	(5).51039	1026	7.68558	432	2.61545	432	20		
50	(2)212.66	2.10	7.68989	428	(5).52065	1036	7.68990	428	2.61113	428	10		
<b>17'</b>	(2)214.76	2.11	7.69417	424	(5).53101	1047	7.69418	424	2.60685	423	<b>43'</b>		
10	(2)216.87	2.10	7.69841	420	(5).54148	1056	7.69842	419	2.60262	420	50		
20	(2)218.97	2.11	7.70261	415	(5).55204	1067	7.70261	416	2.59842	416	40		
30	(2)221.08	2.11	7.70676	412	(5).56271	1077	7.70677	411	2.59426	411	30		
40	(2)223.19	2.10	7.71088	408	(5).57348	1087	7.71088	408	2.59015	408	20		
50	(2)225.29	2.11	7.71496	404	(5).58435	1097	7.71496	404	2.58607	404	10		
<b>18'</b>	(2)227.40	2.10	7.71900	400	(5).59532	1108	7.71900	401	2.58203	400	<b>42'</b>		
10	(2)229.50	2.11	7.72300	397	(5).60640	1118	7.72301	396	2.57803	397	50		
20	(2)231.61	2.10	7.72697	393	(5).61758	1128	7.72697	393	2.57406	393	40		
30	(2)233.71	2.11	7.73090	389	(5).62886	1138	7.73090	390	2.57013	389	30		
40	(2)235.82	2.10	7.73479	386	(5).64024	1148	7.73480	386	2.56624	386	20		
50	(2)237.92	2.11	7.73865	383	(5).65172	1159	7.73866	382	2.56238	383	10		
<b>19'</b>	(2)240.03	2.11	7.74248	379	(5).66331	1169	7.74248	380	2.55855	379	<b>41'</b>		
10	(2)242.14	2.10	7.74627	376	(5).67500	1179	7.74628	376	2.55476	376	50		
20	(2)244.24	2.11	7.75003	373	(5).68679	1189	7.75004	373	2.55100	373	40		
30	(2)246.35	2.10	7.75376	369	(5).69868	1199	7.75377	369	2.54727	370	30		
40	(2)248.45	2.11	7.75745	367	(5).71067	1210	7.75746	367	2.54357	366	20		
50	(2)250.56	2.10	7.76112	363	(5).72277	1220	7.76113	363	2.53991	364	10		
<b>20'</b>	(2)252.66	2.10	7.76475	363	(5).73497		7.76476		2.53627		<b>40'</b>		

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>20'</b>	(2)252.66	2.11	7.76475	361	(5).73497	1230	7.76476	361	2.53627	360	<b>40'</b>	
10	(2)254.77	2.10	7.76836	357	(5).74727	1240	7.76837	357	2.53267	358	50	
20	(2)256.87	2.11	7.77193	355	(5).75967	1251	7.77194	355	2.52909	354	40	
30	(2)258.98	2.11	7.77548	351	(5).77218	1260	7.77549	351	2.52555	352	30	
40	(2)261.09	2.10	7.77899	349	(5).78478	1271	7.77899	349	2.52203	349	20	
50	(2)263.19	2.11	7.78248	346	(5).79749	1281	7.78249	346	2.51854	346	10	
<b>21'</b>	(2)265.30	2.10	7.78594	344	(5).81030	1292	7.78595	343	2.51508	343	<b>39'</b>	
10	(2)267.40	2.11	7.78938	340	(5).82322	1301	7.78938	341	2.51165	341	50	
20	(2)269.51	2.10	7.79278	338	(5).83623	1312	7.79279	338	2.50824	338	40	
30	(2)271.61	2.11	7.79616	336	(5).84935	1322	7.79617	335	2.50486	335	30	
40	(2)273.72	2.10	7.79952	332	(5).86257	1332	7.79952	333	2.50151	333	20	
50	(2)275.82	2.11	7.80284	331	(5).87589	1342	7.80285	330	2.49818	330	10	
<b>22'</b>	(2)277.93	2.11	7.80615	327	(5).88931	1353	7.80615	328	2.49488	328	<b>38'</b>	
10	(2)280.04	2.10	7.80942	326	(5).90284	1363	7.80943	326	2.49160	325	50	
20	(2)282.14	2.11	7.81268	323	(5).91647	1373	7.81269	322	2.48835	323	40	
30	(2)284.25	2.10	7.81591	320	(5).93020	1383	7.81591	321	2.48512	321	30	
40	(2)286.35	2.11	7.81911	318	(5).94403	1393	7.81912	318	2.48191	318	20	
50	(2)288.46	2.10	7.82229	316	(5).95796	1404	7.82230	316	2.47873	316	10	
<b>23'</b>	(2)290.56	2.11	7.82545	314	(5).97200	1414	7.82546	314	2.47557	313	<b>37'</b>	
10	(2)292.67	2.10	7.82859	311	(5).98614	1423	7.82860	311	2.47244	311	50	
20	(2)294.77	2.11	7.83170	309	(4)1.0004	143	7.83171	309	2.46933	310	40	
30	(2)296.88	2.11	7.83479	307	(4)1.0147	145	7.83480	307	2.46623	306	30	
40	(2)298.99	2.10	7.83786	305	(4)1.0292	145	7.83787	305	2.46317	305	20	
50	(2)301.09	2.11	7.84091	302	(4)1.0437	147	7.84092	302	2.46012	303	10	
<b>24'</b>	(2)303.20	2.10	7.84393	301	(4)1.0584	147	7.84394	301	2.45709	300	<b>36'</b>	
10	(2)305.30	2.11	7.84694	298	(4)1.0731	149	7.84695	298	2.45409	299	50	
20	(2)307.41	2.10	7.84992	297	(4)1.0880	149	7.84993	297	2.45110	299	40	
30	(2)309.51	2.11	7.85289	294	(4)1.1029	151	7.85290	294	2.44814	295	30	
40	(2)311.62	2.11	7.85583	293	(4)1.1180	151	7.85584	293	2.44519	292	20	
50	(2)313.73	2.10	7.85876	290	(4)1.1331	153	7.85877	290	2.44227	291	10	
<b>25'</b>	(2)315.83	2.11	7.86166	289	(4)1.1484	154	7.86167	289	2.43936	288	<b>35'</b>	
10	(2)317.94	2.10	7.86455	286	(4)1.1638	154	7.86456	287	2.43648	288	50	
20	(2)320.04	2.11	7.86741	285	(4)1.1792	156	7.86743	284	2.43361	285	40	
30	(2)322.15	2.10	7.87026	283	(4)1.1948	157	7.87027	283	2.43076	283	30	
40	(2)324.25	2.11	7.87309	281	(4)1.2105	157	7.87310	281	2.42793	283	20	
50	(2)326.36	2.10	7.87590	280	(4)1.2262	159	7.87591	280	2.42512	281	10	
<b>26'</b>	(2)328.46	2.11	7.87870	277	(4)1.2421	160	7.87871	277	2.42233	278	<b>34'</b>	
10	(2)330.57	2.11	7.88147	276	(4)1.2581	161	7.88148	276	2.41955	275	50	
20	(2)332.68	2.10	7.88423	274	(4)1.2742	161	7.88424	274	2.41680	274	40	
30	(2)334.78	2.11	7.88697	272	(4)1.2903	163	7.88698	272	2.41406	273	30	
40	(2)336.89	2.10	7.88969	271	(4)1.3066	164	7.88970	271	2.41133	273	20	
50	(2)338.99	2.11	7.89240	269	(4)1.3230	165	7.89241	269	2.40863	270	10	
<b>27'</b>	(2)341.10	2.10	7.89509	267	(4)1.3395	166	7.89510	267	2.40594	269	<b>33'</b>	
10	(2)343.20	2.11	7.89776	265	(4)1.3561	167	7.89777	266	2.40327	267	50	
20	(2)345.31	2.10	7.90041	264	(4)1.3728	168	7.90043	264	2.40061	266	40	
30	(2)347.41	2.11	7.90305	263	(4)1.3896	169	7.90307	262	2.39797	264	30	
40	(2)349.52	2.11	7.90568	261	(4)1.4065	169	7.90569	261	2.39534	263	20	
50	(2)351.63	2.10	7.90829	259	(4)1.4234	171	7.90830	259	2.39274	260	10	
<b>28'</b>	(2)353.73	2.11	7.91088	258	(4)1.4405	172	7.91089	258	2.39014	260	<b>32'</b>	
10	(2)355.84	2.10	7.91346	256	(4)1.4577	174	7.91347	256	2.38757	257	50	
20	(2)357.94	2.11	7.91602	255	(4)1.4751	174	7.91603	255	2.38500	254	40	
30	(2)360.05	2.10	7.91857	253	(4)1.4925	175	7.91858	253	2.38246	254	30	
40	(2)362.15	2.11	7.92110	252	(4)1.5100	176	7.92111	252	2.37992	254	20	
50	(2)364.26	2.10	7.92362	250	(4)1.5276	177	7.92363	250	2.37741	251	10	
<b>29'</b>	(2)366.36	2.11	7.92612	249	(4)1.5453	178	7.92613	249	2.37490	251	<b>31'</b>	
10	(2)368.47	2.11	7.92861	247	(4)1.5631	179	7.92862	248	2.37241	249	50	
20	(2)370.58	2.10	7.93108	246	(4)1.5810	180	7.93110	246	2.36994	247	40	
30	(2)372.68	2.11	7.93354	245	(4)1.5990	181	7.93356	245	2.36748	246	30	
40	(2)374.79	2.10	7.93599	243	(4)1.6171	183	7.93601	243	2.36503	245	20	
50	(2)376.89	2.11	7.93842	242	(4)1.6354	183	7.93844	242	2.36260	243	10	
<b>30'</b>	(2)379.00	2.11	7.94084	242	(4)1.6537	183	7.94086	242	2.36018	242	<b>30'</b>	

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg. z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega$



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>30'</b>	(2)379.00	2.10	7.94084	241	(4)1.0537	184	7.94086	240	2.36018	241	<b>30'</b>	
10	(2)381.10	2.11	7.94325	239	(4)1.0721	185	7.94326	240	2.35777	239	50	
20	(2)383.21	2.11	7.94564	238	(4)1.6906	187	7.94566	238	2.35538	238	40	
30	(2)385.32	2.10	7.94802	237	(4)1.7093	187	7.94804	236	2.35300	237	30	
40	(2)387.42	2.11	7.95039	235	(4)1.7280	188	7.95040	236	2.35063	235	20	
50	(2)389.53	2.10	7.95274	234	(4)1.7468	190	7.95276	234	2.34828	234	10	
<b>31'</b>	(2)391.63	2.11	7.95508	233	(4)1.7658	190	7.95510	233	2.34594	233	<b>29'</b>	
10	(2)393.74	2.10	7.95741	232	(4)1.7848	192	7.95743	231	2.34361	232	50	
20	(2)395.84	2.11	7.95973	230	(4)1.8040	192	7.95974	231	2.34129	230	40	
30	(2)397.95	2.10	7.96203	229	(4)1.8232	193	7.96205	229	2.33899	229	30	
40	(2)400.05	2.11	7.96432	228	(4)1.8425	195	7.96434	228	2.33670	228	20	
50	(2)402.16	2.11	7.96660	227	(4)1.8620	195	7.96662	227	2.33442	227	10	
<b>32'</b>	(2)404.27	2.10	7.96887	226	(4)1.8815	197	7.96889	225	2.33215	226	<b>28'</b>	
10	(2)406.37	2.11	7.97113	224	(4)1.9012	197	7.97114	225	2.32989	224	50	
20	(2)408.48	2.10	7.97337	223	(4)1.9209	199	7.97339	223	2.32765	223	40	
30	(2)410.58	2.11	7.97560	222	(4)1.9408	200	7.97562	222	2.32542	222	30	
40	(2)412.69	2.10	7.97782	221	(4)1.9608	200	7.97784	221	2.32320	221	20	
50	(2)414.79	2.11	7.98003	220	(4)1.9808	202	7.98005	220	2.32099	220	10	
<b>33'</b>	(2)416.90	2.10	7.98223	219	(4)2.0010	202	7.98225	219	2.31879	219	<b>27'</b>	
10	(2)419.00	2.11	7.98442	218	(4)2.0212	204	7.98444	218	2.31660	218	50	
20	(2)421.11	2.11	7.98660	216	(4)2.0416	205	7.98662	216	2.31442	216	40	
30	(2)423.22	2.10	7.98876	216	(4)2.0621	205	7.98878	216	2.31226	216	30	
40	(2)425.32	2.11	7.99092	214	(4)2.0826	207	7.99094	214	2.31010	214	20	
50	(2)427.43	2.10	7.99306	214	(4)2.1033	208	7.99308	214	2.30796	214	10	
<b>34'</b>	(2)429.53	2.11	7.99520	212	(4)2.1241	209	7.99522	212	2.30582	212	<b>26'</b>	
10	(2)431.64	2.10	7.99732	211	(4)2.1450	209	7.99734	212	2.30370	212	50	
20	(2)433.74	2.11	7.99943	211	(4)2.1659	211	7.99946	210	2.30158	210	40	
30	(2)435.85	2.11	8.00154	209	(4)2.1870	212	8.00156	209	2.29948	209	30	
40	(2)437.96	2.10	8.00363	208	(4)2.2082	213	8.00365	209	2.29739	208	20	
50	(2)440.06	2.11	8.00571	208	(4)2.2295	214	8.00574	207	2.29531	208	10	
<b>35'</b>	(2)442.17	2.10	8.00779	206	(4)2.2509	215	8.00781	206	2.29323	206	<b>25'</b>	
10	(2)444.27	2.11	8.00985	205	(4)2.2724	215	8.00987	206	2.29117	205	50	
20	(2)446.38	2.10	8.01190	205	(4)2.2939	217	8.01193	204	2.28912	205	40	
30	(2)448.48	2.11	8.01395	203	(4)2.3156	218	8.01397	203	2.28707	203	30	
40	(2)450.59	2.10	8.01598	203	(4)2.3374	219	8.01600	203	2.28504	203	20	
50	(2)452.69	2.11	8.01801	201	(4)2.3593	220	8.01803	201	2.28301	201	10	
<b>36'</b>	(2)454.80	2.11	8.02002	201	(4)2.3813	221	8.02004	201	2.28100	201	<b>24'</b>	
10	(2)456.91	2.10	8.02203	199	(4)2.4034	222	8.02205	200	2.27899	200	50	
20	(2)459.01	2.11	8.02402	199	(4)2.4256	223	8.02405	199	2.27699	198	40	
30	(2)461.12	2.10	8.02601	198	(4)2.4479	224	8.02604	197	2.27501	198	30	
40	(2)463.22	2.11	8.02799	197	(4)2.4703	226	8.02801	197	2.27303	197	20	
50	(2)465.33	2.10	8.02996	196	(4)2.4929	226	8.02998	196	2.27106	196	10	
<b>37'</b>	(2)467.43	2.11	8.03192	195	(4)2.5155	227	8.03194	196	2.26910	195	<b>23'</b>	
10	(2)469.54	2.11	8.03387	194	(4)2.5382	228	8.03390	194	2.26715	195	50	
20	(2)471.65	2.10	8.03581	194	(4)2.5610	229	8.03584	193	2.26520	193	40	
30	(2)473.75	2.11	8.03775	192	(4)2.5839	230	8.03777	193	2.26327	193	30	
40	(2)475.86	2.10	8.03967	192	(4)2.6069	232	8.03970	192	2.26134	192	20	
50	(2)477.96	2.11	8.04159	191	(4)2.6301	232	8.04162	191	2.25942	190	10	
<b>38'</b>	(2)480.07	2.10	8.04350	190	(4)2.6533	233	8.04353	190	2.25752	190	<b>22'</b>	
10	(2)482.17	2.11	8.04540	189	(4)2.6766	234	8.04543	189	2.25562	190	50	
20	(2)484.28	2.11	8.04729	189	(4)2.7000	236	8.04732	189	2.25372	188	40	
30	(2)486.39	2.10	8.04918	187	(4)2.7236	236	8.04921	187	2.25184	188	30	
40	(2)488.49	2.11	8.05105	187	(4)2.7472	237	8.05108	187	2.24996	187	20	
50	(2)490.60	2.10	8.05292	186	(4)2.7709	239	8.05295	186	2.24809	186	10	
<b>39'</b>	(2)492.70	2.11	8.05478	185	(4)2.7948	239	8.05481	185	2.24623	185	<b>21'</b>	
10	(2)494.81	2.10	8.05663	185	(4)2.8187	240	8.05666	185	2.24438	184	50	
20	(2)496.91	2.11	8.05848	183	(4)2.8427	242	8.05851	183	2.24254	184	40	
30	(2)499.02	2.10	8.06031	183	(4)2.8669	242	8.06034	183	2.24070	183	30	
40	(2)501.12	2.11	8.06214	182	(4)2.8911	244	8.06217	182	2.23887	182	20	
50	(2)503.23	2.11	8.06396	182	(4)2.9155	244	8.06399	182	2.23705	182	10	
<b>40'</b>	(2)505.34	2.11	8.06578	182	(4)2.9399	244	8.06581	182	2.23524	181	<b>20'</b>	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z log Cotg. z l. Cosec z



$\omega$	$z'$	Diff.	log Tg. z. log Sin $\omega$	Diff.	log Cos z log Tg $\omega$	Diff.	log Sin z log Tg $\omega$	Diff.				
<b>40'</b>	(2)505.34		8.06578		(4)2.9399		8.06581		2.23524			<b>20'</b>
10	(2)507.44	2.10	8.06758	180	(4)2.9645	246	8.06761	180	2.23343	180	50	50
20	(2)509.55	2.11	8.06938	180	(4)2.9891	246	8.06941	180	2.23163	180	40	40
30	(2)511.65	2.10	8.07117	179	(4)3.0139	248	8.07120	179	2.22984	179	30	30
40	(2)513.76	2.11	8.07295	178	(4)3.0387	248	8.07298	178	2.22806	178	20	20
50	(2)515.86	2.10	8.07473	178	(4)3.0637	250	8.07476	178	2.22628	178	10	10
<b>41'</b>	(2)517.97		8.07650		(4)3.0888		8.07653		2.22451			<b>19'</b>
10	(2)520.08	2.11	8.07826	176	(4)3.1139	251	8.07829	176	2.22275	176	50	50
20	(2)522.18	2.10	8.08002	176	(4)3.1392	253	8.08005	176	2.22100	176	40	40
30	(2)524.29	2.11	8.08176	174	(4)3.1646	254	8.08180	175	2.21925	175	30	30
40	(2)526.39	2.10	8.08350	174	(4)3.1900	254	8.08354	174	2.21751	174	20	20
50	(2)528.50	2.11	8.08524	174	(4)3.2156	256	8.08527	173	2.21578	173	10	10
<b>42'</b>	(2)530.60		8.08696		(4)3.2413		8.08700		2.21405			<b>18'</b>
10	(2)532.71	2.11	8.08868	172	(4)3.2671	258	8.08872	172	2.21233	172	50	50
20	(2)534.82	2.11	8.09040	172	(4)3.2929	258	8.09043	171	2.21062	171	40	40
30	(2)536.92	2.10	8.09210	170	(4)3.3189	260	8.09214	171	2.20891	171	30	30
40	(2)539.03	2.11	8.09380	170	(4)3.3450	261	8.09384	170	2.20721	170	20	20
50	(2)541.13	2.10	8.09550	170	(4)3.3712	262	8.09553	169	2.20552	169	10	10
<b>43'</b>	(2)543.24		8.09718		(4)3.3975		8.09722		2.20383			<b>17'</b>
10	(2)545.34	2.10	8.09886	168	(4)3.4239	264	8.09890	168	2.20215	168	50	50
20	(2)547.45	2.11	8.10054	168	(4)3.4503	264	8.10057	167	2.20048	167	40	40
30	(2)549.56	2.11	8.10220	166	(4)3.4769	266	8.10224	167	2.19881	167	30	30
40	(2)551.66	2.10	8.10386	166	(4)3.5036	267	8.10390	166	2.19715	166	20	20
50	(2)553.77	2.11	8.10552	166	(4)3.5304	268	8.10555	165	2.19549	165	10	10
<b>44'</b>	(2)555.87		8.10717		(4)3.5573		8.10720		2.19385			<b>16'</b>
10	(2)557.98	2.11	8.10881	164	(4)3.5843	270	8.10884	164	2.19220	164	50	50
20	(2)560.08	2.10	8.11044	163	(4)3.6114	271	8.11048	164	2.19057	163	40	40
30	(2)562.19	2.11	8.11207	163	(4)3.6386	272	8.11211	163	2.18894	163	30	30
40	(2)564.29	2.10	8.11370	163	(4)3.6659	273	8.11373	162	2.18731	162	20	20
50	(2)566.40	2.11	8.11531	161	(4)3.6934	275	8.11535	162	2.18570	161	10	10
<b>45'</b>	(2)568.51		8.11693		(4)3.7209		8.11696		2.18409			<b>15'</b>
10	(2)570.61	2.10	8.11853	160	(4)3.7485	276	8.11857	161	2.18248	161	50	50
20	(2)572.72	2.11	8.12013	160	(4)3.7762	277	8.12017	160	2.18088	160	40	40
30	(2)574.82	2.10	8.12172	159	(4)3.8040	278	8.12176	159	2.17929	159	30	30
40	(2)576.93	2.11	8.12331	159	(4)3.8319	279	8.12335	159	2.17770	159	20	20
50	(2)579.03	2.10	8.12489	158	(4)3.8600	281	8.12493	158	2.17612	158	10	10
<b>46'</b>	(2)581.14		8.12647		(4)3.8881		8.12651		2.17454			<b>14'</b>
10	(2)583.25	2.11	8.12804	157	(4)3.9163	282	8.12808	157	2.17297	157	50	50
20	(2)585.35	2.10	8.12961	157	(4)3.9446	283	8.12965	157	2.17140	157	40	40
30	(2)587.46	2.11	8.13117	156	(4)3.9731	285	8.13121	156	2.16984	156	30	30
40	(2)589.56	2.10	8.13272	155	(4)4.0016	285	8.13276	155	2.16829	155	20	20
50	(2)591.67	2.11	8.13427	155	(4)4.0302	286	8.13431	155	2.16674	155	10	10
<b>47'</b>	(2)593.77		8.13581		(4)4.0590		8.13585		2.16520			<b>13'</b>
10	(2)595.88	2.11	8.13735	154	(4)4.0878	288	8.13739	154	2.16366	154	50	50
20	(2)597.99	2.11	8.13888	153	(4)4.1167	289	8.13892	153	2.16213	153	40	40
30	(2)600.09	2.10	8.14041	153	(4)4.1458	291	8.14045	153	2.16060	153	30	30
40	(2)602.20	2.11	8.14193	152	(4)4.1749	291	8.14197	152	2.15908	152	20	20
50	(2)604.30	2.10	8.14344	151	(4)4.2042	293	8.14348	151	2.15757	151	10	10
<b>48'</b>	(2)606.41		8.14495		(4)4.2335		8.14500		2.15606			<b>12'</b>
10	(2)608.51	2.10	8.14646	151	(4)4.2630	295	8.14650	150	2.15455	150	50	50
20	(2)610.62	2.11	8.14796	150	(4)4.2925	295	8.14800	150	2.15305	150	40	40
30	(2)612.73	2.11	8.14945	149	(4)4.3222	297	8.14950	150	2.15155	150	30	30
40	(2)614.83	2.10	8.15094	149	(4)4.3520	298	8.15099	149	2.15007	149	20	20
50	(2)616.94	2.11	8.15243	149	(4)4.3818	298	8.15247	148	2.14858	148	10	10
<b>49'</b>	(2)619.04		8.15391		(4)4.4118		8.15395		2.14710			<b>11'</b>
10	(2)621.15	2.11	8.15538	147	(4)4.4418	300	8.15543	148	2.14563	147	50	50
20	(2)623.26	2.10	8.15685	147	(4)4.4720	302	8.15690	147	2.14416	147	40	40
30	(2)625.36	2.10	8.15832	147	(4)4.5023	303	8.15836	146	2.14269	146	30	30
40	(2)627.47	2.11	8.15978	146	(4)4.5326	303	8.15982	146	2.14123	146	20	20
50	(2)629.57	2.10	8.16123	145	(4)4.5631	305	8.16128	146	2.13978	145	10	10
<b>50'</b>	(2)631.68		8.16268		(4)4.5937		8.16273		2.13833			<b>10'</b>

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff.  $z'$  Diff.  $\omega$   
 log Sin  $\omega$  Diff. log Cotg z Diff. l. Cosc z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
<b>50'</b>	(2)631.68	2.10	8.16268	145	(4)4.5937	307	8.16273	144	2.13833	145	<b>10'</b>		
10	(2)633.78	2.11	8.16413	144	(4)4.6244	307	8.16417	144	2.13688	144	50		
20	(2)635.89	2.11	8.16557	143	(4)4.6551	309	8.16561	144	2.13544	144	40		
30	(2)638.00	2.10	8.16700	143	(4)4.6860	310	8.16705	143	2.13400	143	30		
40	(2)640.10	2.11	8.16843	143	(4)4.7170	311	8.16848	143	2.13257	142	20		
50	(2)642.21	2.10	8.16986	142	(4)4.7481	312	8.16991	142	2.13115	142	10		
<b>51'</b>	(2)644.31	2.11	8.17128	142	(4)4.7793	313	8.17133	142	2.12973	142	<b>9'</b>		
10	(2)646.42	2.10	8.17270	141	(4)4.8106	314	8.17275	141	2.12831	141	50		
20	(2)648.52	2.11	8.17411	141	(4)4.8420	315	8.17416	141	2.12690	141	40		
30	(2)650.63	2.11	8.17552	140	(4)4.8735	316	8.17557	140	2.12549	140	30		
40	(2)652.74	2.10	8.17692	140	(4)4.9051	317	8.17697	140	2.12409	140	20		
50	(2)654.84	2.11	8.17832	139	(4)4.9368	318	8.17837	139	2.12269	140	10		
<b>52'</b>	(2)656.95	2.10	8.17971	139	(4)4.9686	319	8.17976	139	2.12129	139	<b>8'</b>		
10	(2)659.05	2.11	8.18110	139	(4)5.0005	320	8.18115	139	2.11990	138	50		
20	(2)661.16	2.10	8.18249	138	(4)5.0325	321	8.18254	138	2.11852	138	40		
30	(2)663.26	2.11	8.18387	137	(4)5.0646	322	8.18392	138	2.11714	138	30		
40	(2)665.37	2.11	8.18524	138	(4)5.0968	323	8.18530	137	2.11576	137	20		
50	(2)667.48	2.10	8.18662	136	(4)5.1291	324	8.18667	137	2.11439	137	10		
<b>53'</b>	(2)669.58	2.11	8.18798	137	(4)5.1615	325	8.18804	136	2.11302	136	<b>7'</b>		
10	(2)671.69	2.10	8.18935	136	(4)5.1940	326	8.18940	136	2.11166	136	50		
20	(2)673.79	2.11	8.19071	135	(4)5.2266	327	8.19076	135	2.11030	136	40		
30	(2)675.90	2.10	8.19206	135	(4)5.2593	329	8.19211	136	2.10894	135	30		
40	(2)678.00	2.10	8.19341	135	(4)5.2922	329	8.19347	134	2.10759	135	20		
50	(2)680.11	2.11	8.19476	134	(4)5.3251	330	8.19481	135	2.10624	134	10		
<b>54'</b>	(2)682.22	2.10	8.19610	134	(4)5.3581	331	8.19616	133	2.10490	134	<b>6'</b>		
10	(2)684.32	2.11	8.19744	133	(4)5.3912	333	8.19749	134	2.10356	133	50		
20	(2)686.43	2.10	8.19877	133	(4)5.4245	333	8.19883	133	2.10223	133	40		
30	(2)688.53	2.11	8.20010	133	(4)5.4578	334	8.20016	133	2.10090	133	30		
40	(2)690.64	2.11	8.20143	132	(4)5.4912	336	8.20149	132	2.09957	133	20		
50	(2)692.75	2.10	8.20275	132	(4)5.5248	336	8.20281	132	2.09825	132	10		
<b>55'</b>	(2)694.85	2.11	8.20407	131	(4)5.5584	337	8.20413	131	2.09693	131	<b>5'</b>		
10	(2)696.96	2.10	8.20538	131	(4)5.5921	339	8.20544	131	2.09562	131	50		
20	(2)699.06	2.11	8.20669	131	(4)5.6260	339	8.20675	131	2.09431	131	40		
30	(2)701.17	2.10	8.20800	130	(4)5.6599	341	8.20806	130	2.09300	130	30		
40	(2)703.27	2.11	8.20930	130	(4)5.6940	341	8.20936	130	2.09170	130	20		
50	(2)705.38	2.11	8.21060	129	(4)5.7281	343	8.21066	129	2.09040	130	10		
<b>56'</b>	(2)707.49	2.10	8.21189	130	(4)5.7624	343	8.21195	129	2.08911	129	<b>4'</b>		
10	(2)709.59	2.11	8.21319	128	(4)5.7967	345	8.21324	129	2.08782	129	50		
20	(2)711.70	2.10	8.21447	129	(4)5.8312	345	8.21453	128	2.08653	128	40		
30	(2)713.80	2.11	8.21576	127	(4)5.8657	347	8.21581	128	2.08525	128	30		
40	(2)715.91	2.10	8.21703	128	(4)5.9004	348	8.21709	128	2.08397	128	20		
50	(2)718.01	2.11	8.21831	127	(4)5.9352	348	8.21837	127	2.08269	127	10		
<b>57'</b>	(2)720.12	2.11	8.21958	127	(4)5.9700	350	8.21964	127	2.08142	127	<b>3'</b>		
10	(2)722.23	2.10	8.22085	126	(4)6.0050	351	8.22091	126	2.08015	126	50		
20	(2)724.33	2.11	8.22211	126	(4)6.0401	351	8.22217	126	2.07889	126	40		
30	(2)726.44	2.10	8.22337	126	(4)6.0752	353	8.22343	126	2.07763	126	30		
40	(2)728.54	2.11	8.22463	125	(4)6.1105	354	8.22469	126	2.07637	126	20		
50	(2)730.65	2.11	8.22588	125	(4)6.1459	354	8.22595	125	2.07512	125	10		
<b>58'</b>	(2)732.76	2.10	8.22713	125	(4)6.1813	356	8.22720	124	2.07387	125	<b>2'</b>		
10	(2)734.86	2.11	8.22838	124	(4)6.2169	357	8.22844	124	2.07262	125	50		
20	(2)736.97	2.10	8.22962	124	(4)6.2526	358	8.22968	124	2.07138	124	40		
30	(2)739.07	2.11	8.23086	124	(4)6.2884	359	8.23092	124	2.07014	124	30		
40	(2)741.18	2.10	8.23210	123	(4)6.3243	360	8.23216	123	2.06890	124	20		
50	(2)743.28	2.11	8.23333	123	(4)6.3603	360	8.23339	123	2.06767	123	10		
<b>59'</b>	(2)745.39	2.11	8.23456	122	(4)6.3963	362	8.23462	123	2.06644	123	<b>1'</b>		
10	(2)747.50	2.10	8.23578	122	(4)6.4325	363	8.23585	122	2.06522	122	50		
20	(2)749.60	2.11	8.23700	122	(4)6.4688	364	8.23707	122	2.06399	123	40		
30	(2)751.71	2.10	8.23822	122	(4)6.5052	365	8.23829	121	2.06278	121	30		
40	(2)753.81	2.11	8.23944	121	(4)6.5417	366	8.23950	121	2.06156	122	20		
50	(2)755.92	2.11	8.24065	121	(4)6.5783	367	8.24071	121	2.06035	121	10		
<b>60'</b>	(2)758.03	2.11	8.24186	121	(4)6.6150	367	8.24192	121	2.05914	121	<b>0'</b>		

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.       $z'$       Diff.       $\omega$   
 log Sec z           log Cotg z           l. Cosec z



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos. z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>0'</b>	(2)758.03	2.10	8.24186	120	(4)6.6150	368	8.24192	121	2.05914	120	<b>60'</b>	
10	(2)760.13	2.11	8.24306	120	(4)6.6518	369	8.24313	120	2.05794	120	50	
20	(2)762.24	2.11	8.24426	120	(4)6.6887	370	8.24433	120	2.05674	120	40	
30	(2)764.34	2.11	8.24546	119	(4)6.7257	371	8.24553	119	2.05554	120	30	
40	(2)766.45	2.10	8.24665	120	(4)6.7628	373	8.24672	119	2.05434	119	20	
50	(2)768.55	2.11	8.24785	118	(4)6.8001	373	8.24791	119	2.05315	119	10	
<b>1'</b>	(2)770.66	2.11	8.24903	119	(4)6.8374	374	8.24910	119	2.05196	118	<b>59'</b>	
10	(2)772.77	2.10	8.25022	118	(4)6.8748	375	8.25029	118	2.05078	118	50	
20	(2)774.87	2.11	8.25140	118	(4)6.9123	376	8.25147	118	2.04960	118	40	
30	(2)776.98	2.10	8.25258	117	(4)6.9499	377	8.25265	117	2.04842	118	30	
40	(2)779.08	2.11	8.25375	118	(4)6.9876	379	8.25382	118	2.04724	117	20	
50	(2)781.19	2.11	8.25493	116	(4)7.0255	379	8.25500	116	2.04607	117	10	
<b>2'</b>	(2)783.30	2.10	8.25609	117	(4)7.0634	380	8.25616	117	2.04490	117	<b>58'</b>	
10	(2)785.40	2.11	8.25726	116	(4)7.1014	382	8.25733	116	2.04373	116	50	
20	(2)787.51	2.10	8.25842	116	(4)7.1396	382	8.25849	116	2.04257	116	40	
30	(2)789.61	2.11	8.25958	116	(4)7.1778	383	8.25965	116	2.04141	115	30	
40	(2)791.72	2.10	8.26074	115	(4)7.2161	385	8.26081	115	2.04026	116	20	
50	(2)793.82	2.11	8.26189	115	(4)7.2546	385	8.26196	116	2.03910	115	10	
<b>3'</b>	(2)795.93	2.11	8.26304	115	(4)7.2931	386	8.26312	114	2.03795	115	<b>57'</b>	
10	(2)798.04	2.10	8.26419	114	(4)7.3317	388	8.26426	115	2.03680	114	50	
20	(2)800.14	2.11	8.26533	115	(4)7.3705	388	8.26541	114	2.03566	114	40	
30	(2)802.25	2.10	8.26648	113	(4)7.4093	390	8.26655	114	2.03452	114	30	
40	(2)804.35	2.11	8.26761	114	(4)7.4483	390	8.26769	113	2.03338	114	20	
50	(2)806.46	2.11	8.26875	113	(4)7.4873	392	8.26882	114	2.03224	113	10	
<b>4'</b>	(2)808.57	2.10	8.26988	113	(4)7.5265	392	8.26996	113	2.03111	113	<b>56'</b>	
10	(2)810.67	2.11	8.27101	113	(4)7.5657	394	8.27109	112	2.02998	112	50	
20	(2)812.78	2.10	8.27214	112	(4)7.6051	394	8.27221	113	2.02886	113	40	
30	(2)814.88	2.10	8.27326	112	(4)7.6445	396	8.27334	112	2.02773	112	30	
40	(2)816.99	2.11	8.27438	112	(4)7.6841	397	8.27446	112	2.02661	112	20	
50	(2)819.10	2.10	8.27550	111	(4)7.7238	397	8.27558	111	2.02549	111	10	
<b>5'</b>	(2)821.20	2.11	8.27661	112	(4)7.7635	399	8.27669	111	2.02438	111	<b>55'</b>	
10	(2)823.31	2.10	8.27773	110	(4)7.8034	400	8.27780	111	2.02327	111	50	
20	(2)825.41	2.11	8.27883	111	(4)7.8434	400	8.27891	111	2.02216	111	40	
30	(2)827.52	2.10	8.27994	110	(4)7.8834	402	8.28002	110	2.02105	110	30	
40	(2)829.62	2.11	8.28104	111	(4)7.9236	403	8.28112	111	2.01995	110	20	
50	(2)831.73	2.11	8.28215	109	(4)7.9639	404	8.28223	109	2.01884	109	10	
<b>6'</b>	(2)833.84	2.10	8.28324	110	(4)8.0043	404	8.28332	110	2.01775	110	<b>54'</b>	
10	(2)835.94	2.11	8.28434	109	(4)8.0447	406	8.28442	109	2.01665	109	50	
20	(2)838.05	2.10	8.28543	109	(4)8.0853	407	8.28551	109	2.01556	109	40	
30	(2)840.15	2.11	8.28652	109	(4)8.1260	408	8.28660	109	2.01447	109	30	
40	(2)842.26	2.11	8.28761	108	(4)8.1668	409	8.28769	108	2.01338	108	20	
50	(2)844.37	2.10	8.28869	108	(4)8.2077	410	8.28877	109	2.01230	108	10	
<b>7'</b>	(2)846.47	2.11	8.28977	108	(4)8.2487	411	8.28986	108	2.01122	108	<b>53'</b>	
10	(2)848.58	2.10	8.29085	108	(4)8.2898	412	8.29094	107	2.01014	108	50	
20	(2)850.68	2.11	8.29193	107	(4)8.3310	412	8.29201	108	2.00906	107	40	
30	(2)852.79	2.11	8.29300	107	(4)8.3722	414	8.29309	107	2.00799	107	30	
40	(2)854.90	2.10	8.29407	107	(4)8.4136	415	8.29416	107	2.00692	107	20	
50	(2)857.00	2.11	8.29514	107	(4)8.4551	416	8.29523	106	2.00585	107	10	
<b>8'</b>	(2)859.11	2.10	8.29621	106	(4)8.4967	418	8.29629	107	2.00478	106	<b>52'</b>	
10	(2)861.21	2.11	8.29727	106	(4)8.5385	418	8.29736	106	2.00372	106	50	
20	(2)863.32	2.11	8.29833	106	(4)8.5803	419	8.29842	105	2.00266	106	40	
30	(2)865.43	2.10	8.29939	105	(4)8.6222	420	8.29947	106	2.00160	106	30	
40	(2)867.53	2.11	8.30044	106	(4)8.6642	421	8.30053	105	2.00054	105	20	
50	(2)869.64	2.10	8.30150	105	(4)8.7063	422	8.30158	105	1.99949	105	10	
<b>9'</b>	(2)871.74	2.11	8.30255	104	(4)8.7485	423	8.30263	105	1.99844	105	<b>51'</b>	
10	(2)873.85	2.11	8.30359	105	(4)8.7908	424	8.30368	105	1.99739	104	50	
20	(2)875.96	2.10	8.30464	104	(4)8.8332	426	8.30473	104	1.99635	104	40	
30	(2)878.06	2.11	8.30568	104	(4)8.8758	426	8.30577	104	1.99530	104	30	
40	(2)880.17	2.10	8.30672	104	(4)8.9184	427	8.30681	104	1.99426	104	20	
50	(2)882.27	2.11	8.30776	103	(4)8.9611	428	8.30785	104	1.99323	103	10	
<b>10'</b>	(2)884.38	2.11	8.30879	103	(4)9.0039	428	8.30888	103	1.99219	104	<b>50'</b>	
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg. z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$	

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log Tg. $\omega$	Diff.				
<b>10'</b>	(2)884.38	2.11	8.30879	104	(4)9.0039	430	8.30888	104	1.99219	103	<b>50'</b>	
10	(2)886.49	2.10	8.30983	103	(4)9.0469	430	8.30992	103	1.99116	103	50	
20	(2)888.59	2.11	8.31086	102	(4)9.0899	431	8.31095	103	1.99013	103	40	
30	(2)890.70	2.10	8.31188	103	(4)9.1330	433	8.31198	102	1.98910	103	30	
40	(2)892.80	2.11	8.31291	102	(4)9.1763	433	8.31300	103	1.98807	102	20	
50	(2)894.91	2.10	8.31393	102	(4)9.2196	435	8.31403	102	1.98705	102	10	
<b>11'</b>	(2)897.01	2.11	8.31495	102	(4)9.2631	435	8.31505	101	1.98603	102	<b>49'</b>	
10	(2)899.12	2.11	8.31597	102	(4)9.3066	436	8.31606	102	1.98501	101	50	
20	(2)901.23	2.10	8.31699	101	(4)9.3502	438	8.31708	101	1.98400	102	40	
30	(2)903.33	2.11	8.31800	101	(4)9.3940	438	8.31809	102	1.98298	101	30	
40	(2)905.44	2.10	8.31901	101	(4)9.4378	440	8.31911	101	1.98197	101	20	
50	(2)907.54	2.11	8.32002	101	(4)9.4818	440	8.32012	100	1.98096	100	10	
<b>12'</b>	(2)909.65	2.11	8.32103	100	(4)9.5258	442	8.32112	101	1.97996	101	<b>48'</b>	
10	(2)911.76	2.10	8.32203	100	(4)9.5700	443	8.32213	100	1.97895	100	50	
20	(2)913.86	2.11	8.32303	100	(4)9.6143	443	8.32313	100	1.97795	100	40	
30	(2)915.97	2.10	8.32403	100	(4)9.6586	445	8.32413	100	1.97695	100	30	
40	(2)918.07	2.11	8.32503	99	(4)9.7031	445	8.32513	99	1.97595	100	20	
50	(2)920.18	2.11	8.32602	100	(4)9.7476	447	8.32612	99	1.97496	100	10	
<b>13'</b>	(2)922.29	2.10	8.32702	99	(4)9.7923	448	8.32711	99	1.97396	99	<b>47'</b>	
10	(2)924.39	2.11	8.32801	98	(4)9.8371	448	8.32810	99	1.97297	98	50	
20	(2)926.50	2.10	8.32899	99	(4)9.8819	450	8.32909	99	1.97199	99	40	
30	(2)928.60	2.11	8.32998	98	(4)9.9269	451	8.33008	98	1.97100	99	30	
40	(2)930.71	2.11	8.33096	99	(4)9.9720	45	8.33106	99	1.97002	99	20	
50	(2)932.82	2.10	8.33195	97	(3)10.017	45	8.33205	97	1.96903	97	10	
<b>14'</b>	(2)934.92	2.11	8.33292	98	(3)10.062	46	8.33302	98	1.96806	98	<b>46'</b>	
10	(2)937.03	2.10	8.33390	98	(3)10.108	45	8.33400	98	1.96708	98	50	
20	(2)939.13	2.11	8.33488	97	(3)10.153	46	8.33498	97	1.96610	97	40	
30	(2)941.24	2.11	8.33585	97	(3)10.199	46	8.33595	97	1.96513	97	30	
40	(2)943.35	2.10	8.33682	97	(3)10.245	45	8.33692	97	1.96416	97	20	
50	(2)945.45	2.11	8.33779	96	(3)10.290	46	8.33789	97	1.96319	96	10	
<b>15'</b>	(2)947.56	2.10	8.33875	97	(3)10.336	46	8.33886	96	1.96223	97	<b>45'</b>	
10	(2)949.66	2.11	8.33972	96	(3)10.382	46	8.33982	96	1.96126	96	50	
20	(2)951.77	2.11	8.34068	96	(3)10.428	47	8.34078	96	1.96030	96	40	
30	(2)953.88	2.10	8.34164	96	(3)10.475	46	8.34174	96	1.95934	96	30	
40	(2)955.98	2.11	8.34260	95	(3)10.521	46	8.34270	96	1.95838	95	20	
50	(2)958.09	2.10	8.34355	95	(3)10.567	47	8.34366	95	1.95743	95	10	
<b>16'</b>	(2)960.19	2.11	8.34450	96	(3)10.614	46	8.34461	95	1.95647	95	<b>44'</b>	
10	(2)962.30	2.11	8.34546	94	(3)10.660	47	8.34556	95	1.95552	95	50	
20	(2)964.41	2.10	8.34640	95	(3)10.707	47	8.34651	95	1.95457	95	40	
30	(2)966.51	2.11	8.34735	95	(3)10.754	47	8.34746	94	1.95362	94	30	
40	(2)968.62	2.11	8.34830	94	(3)10.801	47	8.34840	95	1.95268	94	20	
50	(2)970.73	2.10	8.34924	94	(3)10.848	47	8.34935	94	1.95174	95	10	
<b>17'</b>	(2)972.83	2.11	8.35018	94	(3)10.895	47	8.35029	94	1.95079	94	<b>43'</b>	
10	(2)974.94	2.10	8.35112	94	(3)10.942	47	8.35123	94	1.94986	94	50	
20	(2)977.04	2.11	8.35206	93	(3)10.989	48	8.35217	93	1.94892	94	40	
30	(2)979.15	2.11	8.35299	93	(3)11.037	47	8.35310	93	1.94798	93	30	
40	(2)981.26	2.10	8.35392	93	(3)11.084	48	8.35403	94	1.94705	93	20	
50	(2)983.36	2.11	8.35485	93	(3)11.132	48	8.35497	93	1.94612	93	10	
<b>18'</b>	(2)985.47	2.10	8.35578	93	(3)11.180	48	8.35590	92	1.94519	93	<b>42'</b>	
10	(2)987.57	2.11	8.35671	93	(3)11.228	48	8.35682	93	1.94426	92	50	
20	(2)989.68	2.11	8.35764	92	(3)11.276	48	8.35775	92	1.94334	92	40	
30	(2)991.79	2.10	8.35856	92	(3)11.324	48	8.35867	92	1.94242	93	30	
40	(2)993.89	2.11	8.35948	92	(3)11.372	48	8.35959	92	1.94149	92	20	
50	(2)996.00	2.10	8.36040	91	(3)11.420	48	8.36051	92	1.94057	91	10	
<b>19'</b>	(2)998.10	2.10	8.36131	92	(3)11.468	49	8.36143	92	1.93966	92	<b>41'</b>	
10	(1)1000.2	2.1	8.36223	91	(3)11.517	48	8.36235	91	1.93874	91	50	
20	(1)1002.3	2.1	8.36314	91	(3)11.565	49	8.36326	91	1.93783	91	40	
30	(1)1004.4	2.1	8.36405	91	(3)11.614	49	8.36417	91	1.93692	91	30	
40	(1)1006.5	2.1	8.36496	91	(3)11.663	49	8.36508	91	1.93601	91	20	
50	(1)1008.6	2.1	8.36587	91	(3)11.712	49	8.36599	90	1.93510	91	10	
<b>20'</b>	(1)1010.7	2.1	8.36678	91	(3)11.760	48	8.36689		1.93419		<b>40'</b>	

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.      z'      Diff.       $\omega$   
 log Sec z           log Cotg. z           l. Cosec z



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>20'</b>	(1)1010.7	2.1	8.36678	90	(3)11.760	50	8.36689	91	1.93419	90	<b>40'</b>	
10	(1)1012.8	2.2	8.36768	90	(3)11.810	49	8.36780	90	1.93329	90	50	
20	(1)1015.0	2.1	8.36858	90	(3)11.859	49	8.36870	90	1.93239	90	40	
30	(1)1017.1	2.1	8.36948	90	(3)11.908	49	8.36960	90	1.93149	90	30	
40	(1)1019.2	2.1	8.37038	90	(3)11.957	50	8.37050	90	1.93059	90	20	
50	(1)1021.3	2.1	8.37128	89	(3)12.007	49	8.37140	89	1.92969	89	10	
<b>21'</b>	(1)1023.4	2.1	8.37217	89	(3)12.056	50	8.37229	89	1.92880	89	<b>39'</b>	
10	(1)1025.5	2.1	8.37306	89	(3)12.106	50	8.37318	89	1.92791	89	50	
20	(1)1027.6	2.1	8.37395	89	(3)12.156	50	8.37408	90	1.92702	89	40	
30	(1)1029.7	2.1	8.37484	89	(3)12.206	50	8.37497	88	1.92613	89	30	
40	(1)1031.8	2.1	8.37573	89	(3)12.256	50	8.37585	89	1.92524	89	20	
50	(1)1033.9	2.1	8.37662	88	(3)12.306	50	8.37674	88	1.92435	88	10	
<b>22'</b>	(1)1036.0	2.1	8.37750	88	(3)12.356	50	8.37762	88	1.92347	88	<b>38'</b>	
10	(1)1038.1	2.1	8.37838	88	(3)12.406	51	8.37850	88	1.92259	88	50	
20	(1)1040.2	2.1	8.37926	88	(3)12.457	50	8.37938	88	1.92171	88	40	
30	(1)1042.3	2.1	8.38014	87	(3)12.507	51	8.38026	88	1.92083	88	30	
40	(1)1044.4	2.1	8.38101	88	(3)12.558	50	8.38114	88	1.91995	87	20	
50	(1)1046.5	2.2	8.38189	87	(3)12.608	51	8.38202	87	1.91908	88	10	
<b>23'</b>	(1)1048.7	2.1	8.38276	87	(3)12.659	51	8.38289	87	1.91820	87	<b>37'</b>	
10	(1)1050.8	2.1	8.38363	87	(3)12.710	51	8.38376	87	1.91733	87	50	
20	(1)1052.9	2.1	8.38450	87	(3)12.761	51	8.38463	87	1.91646	86	40	
30	(1)1055.0	2.1	8.38537	87	(3)12.812	51	8.38550	86	1.91560	87	30	
40	(1)1057.1	2.1	8.38624	86	(3)12.863	52	8.38636	87	1.91473	86	20	
50	(1)1059.2	2.1	8.38710	86	(3)12.915	51	8.38723	86	1.91387	87	10	
<b>24'</b>	(1)1061.3	2.1	8.38796	86	(3)12.966	52	8.38809	86	1.91300	86	<b>36'</b>	
10	(1)1063.4	2.1	8.38882	86	(3)13.018	51	8.38895	86	1.91214	86	50	
20	(1)1065.5	2.1	8.38968	86	(3)13.069	52	8.38981	86	1.91128	85	40	
30	(1)1067.6	2.1	8.39054	85	(3)13.121	52	8.39067	86	1.91043	86	30	
40	(1)1069.7	2.1	8.39139	86	(3)13.173	52	8.39153	85	1.90957	85	20	
50	(1)1071.8	2.1	8.39225	85	(3)13.225	52	8.39238	85	1.90872	86	10	
<b>25'</b>	(1)1073.9	2.1	8.39310	85	(3)13.277	52	8.39323	85	1.90786	85	<b>35'</b>	
10	(1)1076.0	2.1	8.39395	85	(3)13.329	52	8.39408	85	1.90701	85	50	
20	(1)1078.1	2.1	8.39480	85	(3)13.381	52	8.39493	85	1.90616	84	40	
30	(1)1080.2	2.1	8.39565	84	(3)13.433	53	8.39578	85	1.90532	85	30	
40	(1)1082.3	2.2	8.39649	85	(3)13.486	52	8.39663	84	1.90447	85	20	
50	(1)1084.5	2.1	8.39734	84	(3)13.538	53	8.39747	85	1.90363	84	10	
<b>26'</b>	(1)1086.6	2.1	8.39818	84	(3)13.591	53	8.39832	84	1.90278	85	<b>34'</b>	
10	(1)1088.7	2.1	8.39902	84	(3)13.644	52	8.39916	84	1.90194	84	50	
20	(1)1090.8	2.1	8.39986	84	(3)13.696	53	8.40000	83	1.90110	84	40	
30	(1)1092.9	2.1	8.40070	83	(3)13.749	53	8.40083	84	1.90026	83	30	
40	(1)1095.0	2.1	8.40153	84	(3)13.802	54	8.40167	83	1.89943	84	20	
50	(1)1097.1	2.1	8.40237	83	(3)13.856	53	8.40250	81	1.89859	83	10	
<b>27'</b>	(1)1099.2	2.1	8.40320	83	(3)13.909	53	8.40334	83	1.89776	83	<b>33'</b>	
10	(1)1101.3	2.1	8.40403	83	(3)13.962	54	8.40417	83	1.89693	83	50	
20	(1)1103.4	2.1	8.40486	83	(3)14.016	53	8.40500	83	1.89610	83	40	
30	(1)1105.5	2.1	8.40569	82	(3)14.069	54	8.40583	82	1.89527	82	30	
40	(1)1107.6	2.1	8.40651	83	(3)14.123	54	8.40665	83	1.89445	83	20	
50	(1)1109.7	2.1	8.40734	82	(3)14.177	53	8.40748	82	1.89362	82	10	
<b>28'</b>	(1)1111.8	2.1	8.40816	82	(3)14.230	54	8.40830	83	1.89280	82	<b>32'</b>	
10	(1)1113.9	2.1	8.40898	82	(3)14.284	54	8.40913	82	1.89198	82	50	
20	(1)1116.0	2.2	8.40980	82	(3)14.338	55	8.40995	82	1.89116	82	40	
30	(1)1118.2	2.1	8.41062	82	(3)14.393	54	8.41077	81	1.89034	82	30	
40	(1)1120.3	2.1	8.41144	81	(3)14.447	54	8.41158	82	1.88952	82	20	
50	(1)1122.4	2.1	8.41225	82	(3)14.501	55	8.41240	81	1.88870	81	10	
<b>29'</b>	(1)1124.5	2.1	8.41307	81	(3)14.556	54	8.41321	82	1.88789	81	<b>31'</b>	
10	(1)1126.6	2.1	8.41388	81	(3)14.610	55	8.41403	81	1.88708	81	50	
20	(1)1128.7	2.1	8.41469	81	(3)14.665	55	8.41484	81	1.88627	81	40	
30	(1)1130.8	2.1	8.41550	81	(3)14.720	55	8.41565	81	1.88546	81	30	
40	(1)1132.9	2.1	8.41631	80	(3)14.775	55	8.41646	80	1.88465	81	20	
50	(1)1135.0	2.1	8.41711	80	(3)14.830	55	8.41726	81	1.88384	81	10	
<b>30'</b>	(1)1137.1	2.1	8.41792	81	(3)14.885	55	8.41807	81	1.88304	80	<b>30'</b>	

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg. z

Diff.

log cotg  $\omega$   
l. Cosc z

Diff.

$z'$

Diff.

$\omega$



ω	z'	Diff.	log Tg. z log sin ω	Diff.	log Cos z log sec ω	Diff.	log Sin z log tg. ω	Diff.				
<b>30'</b>	(1)1137.1	2.1	8.41792	80	(3)14.885	55	8.41807	80	1.88304	81	<b>30'</b>	
10	(1)1139.2	2.1	8.41872	80	(3)14.940	55	8.41887	80	1.88233	80	50	
20	(1)1141.3	2.1	8.41952	80	(3)14.995	56	8.41967	81	1.88143	80	40	
30	(1)1143.4	2.1	8.42032	80	(3)15.051	55	8.42048	79	1.88063	80	30	
40	(1)1145.5	2.1	8.42112	80	(3)15.106	56	8.42127	80	1.87983	80	20	
50	(1)1147.6	2.1	8.42192	80	(3)15.162	55	8.42207	80	1.87903	80	10	
<b>31'</b>	(1)1149.7	2.2	8.42272	79	(3)15.217	56	8.42287	79	1.87824	80	<b>29'</b>	
10	(1)1151.9	2.1	8.42351	79	(3)15.273	56	8.42366	80	1.87744	79	50	
20	(1)1154.0	2.1	8.42430	80	(3)15.329	56	8.42446	79	1.87665	79	40	
30	(1)1156.1	2.1	8.42510	79	(3)15.385	56	8.42525	79	1.87586	79	30	
40	(1)1158.2	2.1	8.42589	78	(3)15.441	56	8.42604	79	1.87507	79	20	
50	(1)1160.3	2.1	8.42667	79	(3)15.497	57	8.42683	79	1.87428	79	10	
<b>32'</b>	(1)1162.4	2.1	8.42746	79	(3)15.554	56	8.42762	78	1.87349	79	<b>28'</b>	
10	(1)1164.5	2.1	8.42825	78	(3)15.610	57	8.42840	79	1.87270	79	50	
20	(1)1166.6	2.1	8.42903	79	(3)15.667	56	8.42919	78	1.87192	78	40	
30	(1)1168.7	2.1	8.42982	78	(3)15.723	57	8.42997	78	1.87114	79	30	
40	(1)1170.8	2.1	8.43060	78	(3)15.780	57	8.43075	79	1.87035	78	20	
50	(1)1172.9	2.1	8.43138	78	(3)15.837	57	8.43154	78	1.86957	78	10	
<b>33'</b>	(1)1175.0	2.1	8.43216	77	(3)15.894	57	8.43232	77	1.86879	77	<b>27'</b>	
10	(1)1177.1	2.1	8.43293	78	(3)15.951	57	8.43309	78	1.86802	78	50	
20	(1)1179.2	2.1	8.43371	77	(3)16.008	57	8.43387	77	1.86724	77	40	
30	(1)1181.3	2.1	8.43448	78	(3)16.065	57	8.43464	78	1.86647	78	30	
40	(1)1183.4	2.2	8.43526	77	(3)16.122	58	8.43542	77	1.86569	77	20	
50	(1)1185.6	2.1	8.43603	77	(3)16.180	57	8.43619	77	1.86492	77	10	
<b>34'</b>	(1)1187.7	2.1	8.43680	77	(3)16.237	58	8.43696	77	1.86415	77	<b>26'</b>	
10	(1)1189.8	2.1	8.43757	77	(3)16.295	58	8.43773	77	1.86338	77	50	
20	(1)1191.9	2.1	8.43834	76	(3)16.353	58	8.43850	77	1.86261	77	40	
30	(1)1194.0	2.1	8.43910	77	(3)16.411	58	8.43927	76	1.86184	76	30	
40	(1)1196.1	2.1	8.43987	76	(3)16.469	58	8.44003	77	1.86108	76	20	
50	(1)1198.2	2.1	8.44063	76	(3)16.527	58	8.44080	76	1.86032	76	10	
<b>35'</b>	(1)1200.3	2.1	8.44139	77	(3)16.585	58	8.44156	76	1.85955	76	<b>25'</b>	
10	(1)1202.4	2.1	8.44216	76	(3)16.643	58	8.44232	76	1.85879	76	50	
20	(1)1204.5	2.1	8.44292	75	(3)16.701	59	8.44308	76	1.85803	76	40	
30	(1)1206.6	2.1	8.44367	76	(3)16.760	58	8.44384	76	1.85727	75	30	
40	(1)1208.7	2.1	8.44443	76	(3)16.818	59	8.44460	76	1.85652	76	20	
50	(1)1210.8	2.1	8.44519	75	(3)16.877	59	8.44536	75	1.85576	76	10	
<b>36'</b>	(1)1212.9	2.1	8.44594	75	(3)16.936	59	8.44611	75	1.85500	75	<b>24'</b>	
10	(1)1215.0	2.1	8.44669	76	(3)16.995	59	8.44686	76	1.85425	75	50	
20	(1)1217.1	2.2	8.44745	75	(3)17.054	59	8.44762	75	1.85350	75	40	
30	(1)1219.3	2.1	8.44820	75	(3)17.113	59	8.44837	75	1.85275	75	30	
40	(1)1221.4	2.1	8.44895	74	(3)17.172	59	8.44912	75	1.85200	75	20	
50	(1)1223.5	2.1	8.44969	75	(3)17.231	60	8.44987	74	1.85125	75	10	
<b>37'</b>	(1)1225.6	2.1	8.45044	75	(3)17.291	59	8.45061	75	1.85050	75	<b>23'</b>	
10	(1)1227.7	2.1	8.45119	74	(3)17.350	60	8.45136	74	1.84976	74	50	
20	(1)1229.8	2.1	8.45193	74	(3)17.410	59	8.45210	75	1.84901	74	40	
30	(1)1231.9	2.1	8.45267	71	(3)17.469	60	8.45285	74	1.84827	74	30	
40	(1)1234.0	2.1	8.45341	74	(3)17.529	60	8.45359	74	1.84753	74	20	
50	(1)1236.1	2.1	8.45415	74	(3)17.589	60	8.45433	74	1.84679	74	10	
<b>38'</b>	(1)1238.2	2.1	8.45489	74	(3)17.649	60	8.45507	74	1.84605	74	<b>22'</b>	
10	(1)1240.3	2.1	8.45563	74	(3)17.709	60	8.45581	74	1.84531	74	50	
20	(1)1242.4	2.1	8.45637	73	(3)17.769	60	8.45655	73	1.84457	74	40	
30	(1)1244.5	2.1	8.45710	74	(3)17.829	61	8.45728	74	1.84384	74	30	
40	(1)1246.6	2.1	8.45784	73	(3)17.890	60	8.45802	73	1.84310	73	20	
50	(1)1248.7	2.2	8.45857	73	(3)17.950	61	8.45875	73	1.84237	73	10	
<b>39'</b>	(1)1250.9	2.1	8.45930	73	(3)18.011	61	8.45948	73	1.84164	73	<b>21'</b>	
10	(1)1253.0	2.1	8.46003	73	(3)18.072	60	8.46021	73	1.84091	73	50	
20	(1)1255.1	2.1	8.46076	73	(3)18.132	61	8.46094	73	1.84018	73	40	
30	(1)1257.2	2.1	8.46149	73	(3)18.193	61	8.46167	73	1.83945	73	30	
40	(1)1259.3	2.1	8.46222	72	(3)18.254	61	8.46240	72	1.83872	73	20	
50	(1)1261.4	2.1	8.46294	72	(3)18.315	61	8.46312	73	1.83800	72	10	
<b>40'</b>	(1)1263.5	2.1	8.46366	72	(3)18.377	62	8.46385	73	1.83727	73	<b>20'</b>	

log cos ω      Diff.      l. cosec ω      Diff.      log cotg ω      Diff.      l. Cosec z

$\omega$	$z'$	Diff.	log Tg. z. log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log Tg $\omega$	Diff.				
<b>10'</b>	(1)1263.5		8.46366	73	(3)18.377	61	8.46385	72	1.83727	72	<b>20'</b>	
10	(1)1265.6	2.1	8.46439	72	(3)18.438	61	8.46457	72	1.83655	72	50	
20	(1)1267.7	2.1	8.46511	72	(3)18.499	62	8.46529	73	1.83583	72	40	
30	(1)1269.8	2.1	8.46583	72	(3)18.561	62	8.46602	72	1.83511	72	30	
40	(1)1271.9	2.1	8.46655	72	(3)18.623	61	8.46674	71	1.83439	72	20	
50	(1)1274.0	2.1	8.46727	72	(3)18.684	62	8.46745	72	1.83367	72	10	
<b>11'</b>	(1)1276.1	2.1	8.46799	71	(3)18.746	62	8.46817	72	1.83295	71	<b>19'</b>	
10	(1)1278.2	2.1	8.46870	72	(3)18.808	62	8.46889	71	1.83224	72	50	
20	(1)1280.3	2.1	8.46942	71	(3)18.870	62	8.46960	72	1.83152	71	40	
30	(1)1282.4	2.1	8.47013	71	(3)18.932	62	8.47032	71	1.83081	72	30	
40	(1)1284.6	2.2	8.47084	71	(3)18.994	63	8.47103	71	1.83009	71	20	
50	(1)1286.7	2.1	8.47155	71	(3)19.057	62	8.47174	71	1.82938	71	10	
<b>12'</b>	(1)1288.8	2.1	8.47226	71	(3)19.119	63	8.47245	71	1.82867	71	<b>18'</b>	
10	(1)1290.9	2.1	8.47297	71	(3)19.182	62	8.47316	71	1.82796	71	50	
20	(1)1293.0	2.1	8.47368	71	(3)19.244	63	8.47387	71	1.82725	70	40	
30	(1)1295.1	2.1	8.47439	70	(3)19.307	63	8.47458	70	1.82655	71	30	
40	(1)1297.2	2.1	8.47509	71	(3)19.370	63	8.47528	71	1.82584	70	20	
50	(1)1299.3	2.1	8.47580	70	(3)19.433	63	8.47599	70	1.82514	71	10	
<b>13'</b>	(1)1301.4	2.1	8.47650	70	(3)19.496	63	8.47669	71	1.82443	70	<b>17'</b>	
10	(1)1303.5	2.1	8.47720	70	(3)19.559	63	8.47740	70	1.82373	70	50	
20	(1)1305.6	2.1	8.47790	70	(3)19.622	64	8.47810	70	1.82303	70	40	
30	(1)1307.7	2.1	8.47860	70	(3)19.686	63	8.47880	70	1.82233	70	30	
40	(1)1309.8	2.2	8.47930	70	(3)19.749	64	8.47950	70	1.82163	70	20	
50	(1)1311.9	2.1	8.48000	69	(3)19.813	63	8.48020	69	1.82093	69	10	
<b>14'</b>	(1)1314.0	2.2	8.48069	70	(3)19.876	64	8.48089	70	1.82024	70	<b>16'</b>	
10	(1)1316.2	2.2	8.48139	70	(3)19.940	64	8.48159	69	1.81954	69	50	
20	(1)1318.3	2.1	8.48208	69	(3)20.004	64	8.48228	70	1.81885	70	40	
30	(1)1320.4	2.1	8.48278	69	(3)20.068	64	8.48298	69	1.81815	69	30	
40	(1)1322.5	2.1	8.48347	69	(3)20.132	64	8.48367	69	1.81746	69	20	
50	(1)1324.6	2.1	8.48416	69	(3)20.196	65	8.48436	69	1.81677	69	10	
<b>15'</b>	(1)1326.7	2.1	8.48485	69	(3)20.261	64	8.48505	69	1.81608	69	<b>15'</b>	
10	(1)1328.8	2.1	8.48554	68	(3)20.325	64	8.48574	69	1.81539	69	50	
20	(1)1330.9	2.1	8.48622	69	(3)20.389	65	8.48643	68	1.81470	68	40	
30	(1)1333.0	2.1	8.48691	69	(3)20.454	65	8.48711	69	1.81402	69	30	
40	(1)1335.1	2.1	8.48760	68	(3)20.519	65	8.48780	69	1.81333	68	20	
50	(1)1337.2	2.1	8.48828	68	(3)20.584	64	8.48849	68	1.81265	69	10	
<b>16'</b>	(1)1339.3	2.1	8.48896	68	(3)20.648	65	8.48917	68	1.81196	68	<b>14'</b>	
10	(1)1341.4	2.1	8.48965	69	(3)20.713	66	8.48985	68	1.81128	68	50	
20	(1)1343.5	2.1	8.49033	68	(3)20.777	65	8.49053	68	1.81060	68	40	
30	(1)1345.6	2.1	8.49101	68	(3)20.841	65	8.49121	68	1.80992	68	30	
40	(1)1347.7	2.1	8.49169	68	(3)20.909	65	8.49189	68	1.80924	68	20	
50	(1)1349.9	2.2	8.49236	68	(3)20.974	66	8.49257	68	1.80856	67	10	
<b>17'</b>	(1)1352.0	2.1	8.49304	68	(3)21.040	66	8.49325	68	1.80789	68	<b>13'</b>	
10	(1)1354.1	2.1	8.49372	67	(3)21.106	65	8.49393	67	1.80721	68	50	
20	(1)1356.2	2.1	8.49439	67	(3)21.171	66	8.49460	68	1.80653	67	40	
30	(1)1358.3	2.1	8.49506	67	(3)21.237	66	8.49528	67	1.80586	67	30	
40	(1)1360.4	2.1	8.49574	67	(3)21.303	66	8.49595	67	1.80519	67	20	
50	(1)1362.5	2.1	8.49641	67	(3)21.369	66	8.49662	67	1.80452	68	10	
<b>18'</b>	(1)1364.6	2.1	8.49708	67	(3)21.435	66	8.49729	67	1.80384	67	<b>12'</b>	
10	(1)1366.7	2.1	8.49775	67	(3)21.501	67	8.49796	67	1.80317	66	50	
20	(1)1368.8	2.1	8.49842	66	(3)21.568	66	8.49863	67	1.80251	67	40	
30	(1)1370.9	2.1	8.49908	66	(3)21.634	67	8.49930	67	1.80184	67	30	
40	(1)1373.0	2.1	8.49975	67	(3)21.701	66	8.49997	66	1.80117	66	20	
50	(1)1375.1	2.1	8.50042	66	(3)21.767	67	8.50063	67	1.80051	67	10	
<b>19'</b>	(1)1377.2	2.1	8.50108	66	(3)21.834	67	8.50130	66	1.79984	66	<b>11'</b>	
10	(1)1379.3	2.1	8.50174	66	(3)21.901	67	8.50196	67	1.79918	67	50	
20	(1)1381.5	2.2	8.50241	67	(3)21.968	67	8.50263	66	1.79851	66	40	
30	(1)1383.6	2.1	8.50307	66	(3)22.035	67	8.50329	66	1.79785	66	30	
40	(1)1385.7	2.1	8.50373	66	(3)22.102	67	8.50395	66	1.79719	66	20	
50	(1)1387.8	2.1	8.50439	66	(3)22.169	67	8.50461	66	1.79653	66	10	
<b>50'</b>	(1)1389.9	2.1	8.50504	65	(3)22.236	67	8.50527	66	1.79587	66	<b>10'</b>	

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.       $z'$       Diff.       $\omega$   
 log Sec z           log Cotg z           l. Cosc z           l. Cosc z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>50'</b>	(1)1389.9	2.1	8.50504	66	(3)22.236	68	8.50527	66	1.79587			<b>10'</b>
10	(1)1392.0	2.1	8.50570	66	(3)22.304	67	8.50593	66	1.79522			50
20	(1)1394.1	2.1	8.50636	65	(3)22.371	68	8.50658	66	1.79456			40
30	(1)1396.2	2.1	8.50701	66	(3)22.439	68	8.50724	65	1.79390			30
40	(1)1398.3	2.1	8.50767	65	(3)22.507	68	8.50789	66	1.79325			20
50	(1)1400.4	2.1	8.50832	65	(3)22.575	68	8.50855	66	1.79260			10
<b>51'</b>	(1)1402.5	2.1	8.50897	66	(3)22.643	68	8.50920	65	1.79194			<b>9'</b>
10	(1)1404.6	2.1	8.50963	65	(3)22.711	68	8.50985	65	1.79129			50
20	(1)1406.7	2.1	8.51028	64	(3)22.779	68	8.51050	65	1.79064			40
30	(1)1408.8	2.1	8.51092	65	(3)22.847	69	8.51115	65	1.78999			30
40	(1)1410.9	2.2	8.51157	65	(3)22.916	68	8.51180	65	1.78934			20
50	(1)1413.1	2.1	8.51222	65	(3)22.984	69	8.51245	65	1.78869			10
<b>52'</b>	(1)1415.2	2.1	8.51287	64	(3)23.053	69	8.51310	65	1.78805			<b>8'</b>
10	(1)1417.3	2.1	8.51351	65	(3)23.121	69	8.51374	64	1.78740			50
20	(1)1419.4	2.1	8.51416	64	(3)23.190	69	8.51439	64	1.78676			40
30	(1)1421.5	2.1	8.51480	64	(3)23.259	69	8.51503	65	1.78611			30
40	(1)1423.6	2.1	8.51544	65	(3)23.328	69	8.51568	65	1.78547			20
50	(1)1425.7	2.1	8.51609	64	(3)23.397	69	8.51632	64	1.78483			10
<b>53'</b>	(1)1427.8	2.1	8.51673	64	(3)23.466	69	8.51696	64	1.78419			<b>7'</b>
10	(1)1429.9	2.1	8.51737	64	(3)23.535	70	8.51760	64	1.78355			50
20	(1)1432.0	2.1	8.51801	63	(3)23.605	69	8.51824	64	1.78291			40
30	(1)1434.1	2.1	8.51864	64	(3)23.674	70	8.51888	64	1.78227			30
40	(1)1436.2	2.1	8.51928	64	(3)23.744	70	8.51952	63	1.78163			20
50	(1)1438.3	2.1	8.51992	63	(3)23.814	69	8.52015	64	1.78099			10
<b>54'</b>	(1)1440.4	2.1	8.52055	64	(3)23.883	70	8.52079	64	1.78036			<b>6'</b>
10	(1)1442.5	2.2	8.52119	63	(3)23.953	70	8.52143	63	1.77972			50
20	(1)1444.7	2.1	8.52182	63	(3)24.023	70	8.52206	63	1.77909			40
30	(1)1446.8	2.1	8.52245	63	(3)24.093	71	8.52269	63	1.77846			30
40	(1)1448.9	2.1	8.52308	63	(3)24.164	70	8.52332	63	1.77783			20
50	(1)1451.0	2.1	8.52371	63	(3)24.234	70	8.52396	63	1.77720			10
<b>55'</b>	(1)1453.1	2.1	8.52434	63	(3)24.304	71	8.52459	63	1.77657			<b>5'</b>
10	(1)1455.2	2.1	8.52497	63	(3)24.375	71	8.52522	62	1.77594			50
20	(1)1457.3	2.1	8.52560	63	(3)24.445	70	8.52584	63	1.77531			40
30	(1)1459.4	2.1	8.52623	62	(3)24.516	71	8.52647	63	1.77468			30
40	(1)1461.5	2.1	8.52685	63	(3)24.587	71	8.52710	62	1.77405			20
50	(1)1463.6	2.1	8.52748	62	(3)24.658	71	8.52772	62	1.77343			10
<b>56'</b>	(1)1465.7	2.1	8.52810	62	(3)24.729	71	8.52835	63	1.77280			<b>4'</b>
10	(1)1467.8	2.1	8.52872	63	(3)24.800	71	8.52897	63	1.77218			50
20	(1)1469.9	2.1	8.52935	62	(3)24.871	72	8.52960	62	1.77156			40
30	(1)1472.0	2.1	8.52997	62	(3)24.943	71	8.53022	62	1.77094			30
40	(1)1474.1	2.2	8.53059	62	(3)25.014	72	8.53084	62	1.77032			20
50	(1)1476.3	2.1	8.53121	62	(3)25.086	71	8.53146	62	1.76970			10
<b>57'</b>	(1)1478.4	2.1	8.53183	62	(3)25.157	72	8.53208	62	1.76908			<b>3'</b>
10	(1)1480.5	2.1	8.53245	61	(3)25.229	72	8.53270	62	1.76846			50
20	(1)1482.6	2.1	8.53306	62	(3)25.301	72	8.53332	61	1.76784			40
30	(1)1484.7	2.1	8.53368	61	(3)25.373	72	8.53393	62	1.76722			30
40	(1)1486.8	2.1	8.53429	62	(3)25.445	72	8.53455	62	1.76661			20
50	(1)1488.9	2.1	8.53491	61	(3)25.517	72	8.53516	61	1.76599			10
<b>58'</b>	(1)1491.0	2.1	8.53552	62	(3)25.589	73	8.53578	61	1.76538			<b>2'</b>
10	(1)1493.1	2.1	8.53614	61	(3)25.662	72	8.53639	61	1.76477			50
20	(1)1495.2	2.1	8.53675	61	(3)25.734	73	8.53700	62	1.76415			40
30	(1)1497.3	2.1	8.53736	61	(3)25.807	72	8.53762	61	1.76354			30
40	(1)1499.4	2.1	8.53797	61	(3)25.879	73	8.53823	61	1.76293			20
50	(1)1501.5	2.1	8.53858	61	(3)25.952	73	8.53884	61	1.76232			10
<b>59'</b>	(1)1503.6	2.1	8.53919	60	(3)26.025	73	8.53945	60	1.76171			<b>1'</b>
10	(1)1505.7	2.2	8.53979	61	(3)26.098	73	8.54005	61	1.76111			50
20	(1)1507.9	2.1	8.54040	61	(3)26.171	73	8.54066	61	1.76050			40
30	(1)1510.0	2.1	8.54101	60	(3)26.244	73	8.54127	60	1.75989			30
40	(1)1512.1	2.1	8.54161	61	(3)26.317	74	8.54187	61	1.75929			20
50	(1)1514.2	2.1	8.54222	60	(3)26.391	73	8.54248	60	1.75868			10
<b>60'</b>	(1)1516.3	2.1	8.54282	60	(3)26.464	73	8.54308	60	1.75808			<b>0'</b>

log cos  $\omega$ 
Diff.
l. cosec  $\omega$ 
Diff.
log cotg  $\omega$ 
Diff.
 $z'$ 
Diff.
 $\omega$

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos. z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.			
<b>0'</b>	(1)1516.3	2.1	8.54282	60	(3)26.464	74	8.54308	61	1.75808	60	<b>60'</b>
10	(1)1518.4	2.1	8.54342	60	(3)26.538	73	8.54369	60	1.75748	60	50
20	(1)1520.5	2.1	8.54402	60	(3)26.611	74	8.54429	60	1.75687	60	40
30	(1)1522.6	2.1	8.54462	60	(3)26.685	74	8.54489	60	1.75627	60	30
40	(1)1524.7	2.1	8.54522	60	(3)26.759	74	8.54549	60	1.75567	60	20
50	(1)1526.8	2.1	8.54582	60	(3)26.833	74	8.54609	60	1.75507	60	10
<b>1'</b>	(1)1528.9	2.1	8.54642	60	(3)26.907	74	8.54669	60	1.75447	59	<b>59'</b>
10	(1)1531.0	2.1	8.54702	60	(3)26.981	75	8.54729	60	1.75388	60	50
20	(1)1533.1	2.1	8.54762	59	(3)27.056	74	8.54789	59	1.75328	60	40
30	(1)1535.2	2.1	8.54821	60	(3)27.130	74	8.54848	60	1.75268	59	30
40	(1)1537.3	2.2	8.54881	59	(3)27.204	75	8.54908	59	1.75209	60	20
50	(1)1539.5	2.1	8.54940	59	(3)27.279	75	8.54967	60	1.75149	59	10
<b>2'</b>	(1)1541.6	2.1	8.54999	60	(3)27.354	75	8.55027	59	1.75090	59	<b>58'</b>
10	(1)1543.7	2.1	8.55059	59	(3)27.429	74	8.55086	59	1.75031	59	50
20	(1)1545.8	2.1	8.55118	59	(3)27.503	76	8.55145	60	1.74971	59	40
30	(1)1547.9	2.1	8.55177	59	(3)27.579	75	8.55205	59	1.74912	59	30
40	(1)1550.0	2.1	8.55236	59	(3)27.654	75	8.55264	59	1.74853	59	20
50	(1)1552.1	2.1	8.55295	59	(3)27.729	75	8.55323	59	1.74794	59	10
<b>3'</b>	(1)1554.2	2.1	8.55354	59	(3)27.804	76	8.55382	59	1.74735	59	<b>57'</b>
10	(1)1556.3	2.1	8.55413	58	(3)27.880	75	8.55441	59	1.74676	58	50
20	(1)1558.4	2.1	8.55471	59	(3)27.955	76	8.55499	59	1.74618	58	40
30	(1)1560.5	2.1	8.55530	59	(3)28.031	75	8.55558	59	1.74559	59	30
40	(1)1562.6	2.1	8.55589	58	(3)28.106	76	8.55617	58	1.74500	58	20
50	(1)1564.7	2.1	8.55647	58	(3)28.182	76	8.55675	59	1.74442	58	10
<b>4'</b>	(1)1566.8	2.2	8.55705	59	(3)28.258	76	8.55734	58	1.74384	59	<b>56'</b>
10	(1)1569.0	2.1	8.55764	58	(3)28.334	76	8.55792	58	1.74325	58	50
20	(1)1571.1	2.1	8.55822	58	(3)28.410	76	8.55850	59	1.74267	58	40
30	(1)1573.2	2.1	8.55880	58	(3)28.487	76	8.55909	58	1.74209	58	30
40	(1)1575.3	2.1	8.55938	58	(3)28.563	76	8.55967	58	1.74151	58	20
50	(1)1577.4	2.1	8.55996	58	(3)28.639	77	8.56025	58	1.74093	58	10
<b>5'</b>	(1)1579.5	2.1	8.56054	58	(3)28.716	77	8.56083	58	1.74035	58	<b>55'</b>
10	(1)1581.6	2.1	8.56112	58	(3)28.793	77	8.56141	58	1.73977	58	50
20	(1)1583.7	2.1	8.56170	57	(3)28.869	76	8.56199	58	1.73919	58	40
30	(1)1585.8	2.1	8.56227	58	(3)28.946	77	8.56256	58	1.73861	57	30
40	(1)1587.9	2.1	8.56285	57	(3)29.023	77	8.56314	58	1.73804	58	20
50	(1)1590.0	2.1	8.56342	58	(3)29.100	77	8.56372	57	1.73746	58	10
<b>6'</b>	(1)1592.1	2.1	8.56400	57	(3)29.177	78	8.56429	58	1.73688	57	<b>54'</b>
10	(1)1594.2	2.1	8.56457	58	(3)29.255	77	8.56487	57	1.73631	57	50
20	(1)1596.3	2.1	8.56515	57	(3)29.332	77	8.56544	57	1.73574	58	40
30	(1)1598.4	2.2	8.56572	57	(3)29.409	78	8.56601	58	1.73516	57	30
40	(1)1600.6	2.1	8.56629	57	(3)29.487	78	8.56659	57	1.73459	57	20
50	(1)1602.7	2.1	8.56686	57	(3)29.565	77	8.56716	57	1.73402	57	10
<b>7'</b>	(1)1604.8	2.1	8.56743	57	(3)29.642	78	8.56773	57	1.73345	57	<b>53'</b>
10	(1)1606.9	2.1	8.56800	57	(3)29.720	78	8.56830	57	1.73288	57	50
20	(1)1609.0	2.1	8.56857	57	(3)29.798	78	8.56887	57	1.73231	57	40
30	(1)1611.1	2.1	8.56914	56	(3)29.876	78	8.56944	56	1.73174	56	30
40	(1)1613.2	2.1	8.56970	57	(3)29.954	79	8.57000	57	1.73118	57	20
50	(1)1615.3	2.1	8.57027	57	(3)30.033	78	8.57057	57	1.73061	57	10
<b>8'</b>	(1)1617.4	2.1	8.57084	56	(3)30.111	79	8.57114	56	1.73004	56	<b>52'</b>
10	(1)1619.5	2.1	8.57140	56	(3)30.190	78	8.57170	57	1.72948	57	50
20	(1)1621.6	2.1	8.57196	57	(3)30.268	79	8.57227	57	1.72891	56	40
30	(1)1623.7	2.1	8.57253	56	(3)30.347	79	8.57283	57	1.72835	56	30
40	(1)1625.8	2.1	8.57309	56	(3)30.426	79	8.57340	56	1.72779	57	20
50	(1)1627.9	2.2	7.57365	56	(3)30.505	79	8.57396	56	1.72722	56	10
<b>9'</b>	(1)1630.1	2.1	8.57421	56	(3)30.584	79	8.57452	56	1.72666	56	<b>51'</b>
10	(1)1632.2	2.1	8.57477	56	(3)30.663	79	8.57508	56	1.72610	56	50
20	(1)1634.3	2.1	8.57533	56	(3)30.742	79	8.57564	56	1.72554	56	40
30	(1)1636.4	2.1	8.57589	56	(3)30.821	80	8.57620	56	1.72498	56	30
40	(1)1638.5	2.1	8.57645	56	(3)30.901	79	8.57676	56	1.72442	55	20
50	(1)1640.6	2.1	8.57701	56	(3)30.980	79	8.57732	56	1.72387	56	10
<b>10'</b>	(1)1642.7	2.1	8.57757	56	(3)31.060	80	8.57788	56	1.72331	56	<b>50'</b>

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	z'	Diff.	$\omega$
log Sec z		log Cotg. z		l. Cosec z				



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.			
<b>10'</b>	(1)1642.7	2.1	8.57757	55	(3)31.060	79	8.57788	55	1.72331		<b>50'</b>
10	(1)1644.8	2.1	8.57812	56	(3)31.139	80	8.57843	56	1.72275		50
20	(1)1646.9	2.1	8.57868	55	(3)31.219	80	8.57899	56	1.72220		40
30	(1)1649.0	2.1	8.57923	56	(3)31.299	80	8.57955	55	1.72164		30
40	(1)1651.1	2.1	8.57979	55	(3)31.379	80	8.58010	55	1.72109		20
50	(1)1653.2	2.1	8.58034	55	(3)31.459	80	8.58065	55	1.72053		10
<b>11'</b>	(1)1655.3	2.1	8.58089	55	(3)31.539	81	8.58121	55	1.71998		<b>49'</b>
10	(1)1657.4	2.2	8.58144	56	(3)31.620	80	8.58176	55	1.71943		50
20	(1)1659.6	2.1	8.58200	55	(3)31.700	81	8.58231	55	1.71888		40
30	(1)1661.7	2.1	8.58255	55	(3)31.781	80	8.58286	55	1.71833		30
40	(1)1663.8	2.1	8.58310	54	(3)31.861	81	8.58341	55	1.71777		20
50	(1)1665.9	2.1	8.58364	55	(3)31.942	81	8.58396	55	1.71723		10
<b>12'</b>	(1)1668.0	2.1	8.58419	55	(3)32.023	81	8.58451	55	1.71668		<b>48'</b>
10	(1)1670.1	2.1	8.58474	55	(3)32.104	81	8.58506	55	1.71613		50
20	(1)1672.2	2.1	8.58529	54	(3)32.185	81	8.58561	55	1.71558		40
30	(1)1674.3	2.1	8.58583	55	(3)32.266	81	8.58616	54	1.71503		30
40	(1)1676.4	2.1	8.58638	55	(3)32.347	82	8.58670	54	1.71449		20
50	(1)1678.5	2.1	8.58693	54	(3)32.429	81	8.58725	54	1.71394		10
<b>13'</b>	(1)1680.6	2.1	8.58747	54	(3)32.510	82	8.58779	55	1.71340		<b>47'</b>
10	(1)1682.7	2.1	8.58801	55	(3)32.592	81	8.58834	54	1.71285		50
20	(1)1684.8	2.1	8.58856	54	(3)32.673	82	8.58888	55	1.71231		40
30	(1)1686.9	2.2	8.58910	54	(3)32.755	82	8.58943	54	1.71177		30
40	(1)1689.1	2.1	8.58964	54	(3)32.837	82	8.58997	54	1.71123		20
50	(1)1691.2	2.1	8.59018	54	(3)32.919	82	8.59051	54	1.71068		10
<b>14'</b>	(1)1693.3	2.1	8.59072	54	(3)33.001	82	8.59105	54	1.71014		<b>46'</b>
10	(1)1695.4	2.1	8.59126	54	(3)33.083	82	8.59159	54	1.70960		50
20	(1)1697.5	2.1	8.59180	54	(3)33.165	83	8.59213	54	1.70906		40
30	(1)1699.6	2.1	8.59234	54	(3)33.248	82	8.59267	54	1.70853		30
40	(1)1701.7	2.1	8.59288	53	(3)33.330	83	8.59321	54	1.70799		20
50	(1)1703.8	2.1	8.59341	54	(3)33.413	82	8.59375	53	1.70745		10
<b>15'</b>	(1)1705.9	2.1	8.59395	53	(3)33.495	83	8.59428	54	1.70691		<b>45'</b>
10	(1)1708.0	2.1	8.59448	54	(3)33.578	83	8.59482	54	1.70638		50
20	(1)1710.1	2.1	8.59502	53	(3)33.661	83	8.59536	53	1.70584		40
30	(1)1712.2	2.1	8.59555	54	(3)33.744	83	8.59589	53	1.70531		30
40	(1)1714.3	2.1	8.59609	53	(3)33.827	83	8.59642	54	1.70477		20
50	(1)1716.4	2.2	8.59662	53	(3)33.910	84	8.59696	53	1.70424		10
<b>16'</b>	(1)1718.6	2.1	8.59715	53	(3)33.991	83	8.59749	53	1.70371		<b>44'</b>
10	(1)1720.7	2.1	8.59768	53	(3)34.077	84	8.59802	54	1.70318		50
20	(1)1722.8	2.1	8.59821	53	(3)34.161	83	8.59856	53	1.70264		40
30	(1)1724.9	2.1	8.59874	53	(3)34.244	84	8.59909	53	1.70211		30
40	(1)1727.0	2.1	8.59927	53	(3)34.328	84	8.59962	53	1.70158		20
50	(1)1729.1	2.1	8.59980	53	(3)34.412	84	8.60015	53	1.70105		10
<b>17'</b>	(1)1731.2	2.1	8.60033	53	(3)34.496	84	8.60068	53	1.70053		<b>43'</b>
10	(1)1733.3	2.1	8.60086	53	(3)34.580	84	8.60121	52	1.70000		50
20	(1)1735.4	2.1	8.60139	52	(3)34.664	84	8.60173	53	1.69947		40
30	(1)1737.5	2.1	8.60191	53	(3)34.748	84	8.60226	53	1.69894		30
40	(1)1739.6	2.1	8.60244	52	(3)34.832	85	8.60279	52	1.69842		20
50	(1)1741.7	2.1	8.60296	53	(3)34.917	84	8.60331	52	1.69789		10
<b>18'</b>	(1)1743.8	2.1	8.60349	52	(3)35.001	85	8.60384	52	1.69737		<b>42'</b>
10	(1)1745.9	2.2	8.60401	53	(3)35.086	84	8.60436	53	1.69684		50
20	(1)1748.1	2.1	8.60454	52	(3)35.170	85	8.60489	52	1.69632		40
30	(1)1750.2	2.1	8.60506	52	(3)35.255	85	8.60541	52	1.69580		30
40	(1)1752.3	2.1	8.60558	52	(3)35.340	85	8.60593	53	1.69527		20
50	(1)1754.4	2.1	8.60610	52	(3)35.425	85	8.60646	52	1.69475		10
<b>19'</b>	(1)1756.5	2.1	8.60662	52	(3)35.510	86	8.60698	52	1.69423		<b>41'</b>
10	(1)1758.6	2.1	8.60714	52	(3)35.596	85	8.60750	52	1.69371		50
20	(1)1760.7	2.1	8.60766	52	(3)35.681	85	8.60802	52	1.69319		40
30	(1)1762.8	2.1	8.60818	52	(3)35.766	86	8.60854	52	1.69267		30
40	(1)1764.9	2.1	8.60870	52	(3)35.852	85	8.60906	52	1.69215		20
50	(1)1767.0	2.1	8.60922	51	(3)35.937	86	8.60958	51	1.69163		10
<b>20'</b>	(1)1769.1	2.1	8.60973		(3)36.023		8.61009		1.69112		<b>40'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg. z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

z'

Diff.

$\omega$



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>20'</b>	(1)1769.1	2.1	8.60973	52	(3)36.023	86	8.61009	52	1.69112			<b>40'</b>
10	(1)1771.2	2.1	8.61025	52	(3)36.109	86	8.61061	52	1.69060			50
20	(1)1773.3	2.1	8.61077	51	(3)36.195	86	8.61113	51	1.69008			30
30	(1)1775.4	2.2	8.61128	52	(3)36.281	86	8.61164	52	1.68957			20
40	(1)1777.6	2.1	8.61180	51	(3)36.367	86	8.61216	51	1.68905			10
50	(1)1779.7	2.1	8.61231	51	(3)36.453	87	8.61267	52	1.68854			
<b>21'</b>	(1)1781.8	2.1	8.61282	52	(3)36.540	86	8.61319	51	1.68802			<b>39'</b>
10	(1)1783.9	2.1	8.61334	51	(3)36.626	87	8.61370	52	1.68751			50
20	(1)1786.0	2.1	8.61385	51	(3)36.713	87	8.61422	51	1.68700			40
30	(1)1788.1	2.1	8.61436	51	(3)36.800	86	8.61473	51	1.68649			30
40	(1)1790.2	2.1	8.61487	51	(3)36.886	87	8.61524	51	1.68597			20
50	(1)1792.3	2.1	8.61538	51	(3)36.973	87	8.61575	51	1.68546			10
<b>22'</b>	(1)1794.4	2.1	8.61589	51	(3)37.060	87	8.61626	51	1.68495			<b>38'</b>
10	(1)1796.5	2.1	8.61640	51	(3)37.147	87	8.61677	51	1.68444			50
20	(1)1798.6	2.1	8.61691	51	(3)37.234	88	8.61728	51	1.68394			40
30	(1)1800.7	2.1	8.61742	50	(3)37.322	87	8.61779	51	1.68343			30
40	(1)1802.8	2.1	8.61792	51	(3)37.409	87	8.61830	51	1.68292			20
50	(1)1804.9	2.2	8.61843	51	(3)37.496	88	8.61881	50	1.68241			10
<b>23'</b>	(1)1807.1	2.1	8.61894	50	(3)37.584	88	8.61931	51	1.68191			<b>37'</b>
10	(1)1809.2	2.1	8.61944	51	(3)37.672	88	8.61982	51	1.68140			50
20	(1)1811.3	2.1	8.61995	50	(3)37.760	87	8.62033	50	1.68089			40
30	(1)1813.4	2.1	8.62045	51	(3)37.847	88	8.62083	51	1.68039			30
40	(1)1815.5	2.1	8.62096	50	(3)37.935	89	8.62134	50	1.67988			20
50	(1)1817.6	2.1	8.62146	50	(3)38.024	88	8.62184	50	1.67938			10
<b>24'</b>	(1)1819.7	2.1	8.62196	50	(3)38.112	88	8.62234	51	1.67888			<b>36'</b>
10	(1)1821.8	2.1	8.62246	51	(3)38.200	88	8.62285	50	1.67838			50
20	(1)1823.9	2.1	(3)38.297	50	(3)38.288	89	8.62335	50	1.67787			40
30	(1)1826.0	2.1	8.62347	50	(3)38.377	89	8.62385	50	1.67737			30
40	(1)1828.1	2.1	8.62397	50	(3)38.466	88	8.62435	50	1.67687			20
50	(1)1830.2	2.1	8.62447	50	(3)38.554	89	8.62485	50	1.67637			10
<b>25'</b>	(1)1832.3	2.2	8.62497	49	(3)38.643	89	8.62535	50	1.67587			<b>35'</b>
10	(1)1834.5	2.1	8.62546	50	(3)38.732	89	8.62585	50	1.67537			50
20	(1)1836.6	2.1	8.62596	50	(3)38.821	89	8.62635	50	1.67487			40
30	(1)1838.7	2.1	8.62646	50	(3)38.910	89	8.62685	50	1.67438			30
40	(1)1840.8	2.1	8.62696	49	(3)38.999	90	8.62735	50	1.67388			20
50	(1)1842.9	2.1	8.62745	50	(3)39.089	89	8.62784	50	1.67338			10
<b>26'</b>	(1)1845.0	2.1	8.62795	49	(3)39.178	90	8.62834	50	1.67289			<b>34'</b>
10	(1)1847.1	2.1	8.62844	50	(3)39.268	89	8.62884	49	1.67239			50
20	(1)1849.2	2.1	8.62894	49	(3)39.357	90	8.62933	50	1.67190			40
30	(1)1851.3	2.1	8.62943	50	(3)39.447	90	8.62983	49	1.67140			30
40	(1)1853.4	2.1	8.62993	49	(3)39.537	90	8.63032	49	1.67091			20
50	(1)1855.5	2.1	8.63042	49	(3)39.627	90	8.63081	50	1.67041			10
<b>27'</b>	(1)1857.6	2.1	8.63091	49	(3)39.717	90	8.63131	49	1.66992			<b>33'</b>
10	(1)1859.7	2.1	8.63140	49	(3)39.807	90	8.63180	49	1.66943			50
20	(1)1861.8	2.2	8.63189	49	(3)39.897	90	8.63229	49	1.66894			40
30	(1)1864.0	2.1	8.63238	50	(3)39.987	91	8.63278	50	1.66845			30
40	(1)1866.1	2.1	8.63288	48	(3)40.078	90	8.63328	49	1.66795			20
50	(1)1868.2	2.1	8.63336	49	(3)40.168	91	8.63377	49	1.66746			10
<b>28'</b>	(1)1870.3	2.1	8.63385	49	(3)40.259	91	8.63426	49	1.66698			<b>32'</b>
10	(1)1872.4	2.1	8.63434	49	(3)40.350	91	8.63475	48	1.66649			50
20	(1)1874.5	2.1	8.63483	49	(3)40.441	91	8.63523	49	1.66600			40
30	(1)1876.6	2.1	8.63532	48	(3)40.532	91	8.63572	49	1.66551			30
40	(1)1878.7	2.1	8.63580	49	(3)40.623	91	8.63621	49	1.66502			20
50	(1)1880.8	2.1	8.63629	49	(3)40.714	91	8.63670	48	1.66454			10
<b>29'</b>	(1)1882.9	2.1	8.63678	48	(3)40.805	92	8.63718	49	1.66405			<b>31'</b>
10	(1)1885.0	2.1	8.63726	49	(3)40.897	91	8.63767	49	1.66356			50
20	(1)1887.1	2.1	8.63775	48	(3)40.988	92	8.63816	48	1.66308			40
30	(1)1889.2	2.2	8.63823	48	(3)41.080	91	8.63864	49	1.66259			30
40	(1)1891.4	2.1	8.63871	49	(3)41.171	92	8.63913	48	1.66211			20
50	(1)1893.5	2.1	8.63920	48	(3)41.263	92	8.63961	48	1.66163			10
<b>30'</b>	(1)1895.6	2.1	8.63968	48	(3)41.355	92	8.64009	48	1.66114			<b>30'</b>

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.      z'      Diff.       $\omega$   
log sec z      log Cotg. z      l. Cossec z

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg. $\omega$	Diff.				
<b>30'</b>	(1)1895.6	2.1	8.63968	48	(3)11.355	92	8.64009	49	1.66114	48	<b>30'</b>	
10	(1)1897.7	2.1	8.64016	48	(3)11.447	92	8.64058	48	1.66066	48	50	
20	(1)1899.8	2.1	8.64064	48	(3)11.539	92	8.64106	48	1.66018	48	40	
30	(1)1901.9	2.1	8.64112	48	(3)11.631	92	8.64154	48	1.65970	48	30	
40	(1)1904.0	2.1	8.64160	48	(3)11.723	93	8.64202	48	1.65922	48	20	
50	(1)1906.1	2.1	8.64208	48	(3)11.816	92	8.64250	48	1.65874	48	10	
<b>31'</b>	(1)1908.2	2.1	8.64256	48	(3)11.908	93	8.64298	48	1.65826	48	<b>29'</b>	
10	(1)1910.3	2.1	8.64304	48	(3)12.001	93	8.64346	48	1.65778	48	50	
20	(1)1912.4	2.1	8.64352	48	(3)12.094	92	8.64394	48	1.65730	48	40	
30	(1)1914.5	2.1	8.64400	48	(3)12.186	93	8.64442	48	1.65682	48	30	
40	(1)1916.6	2.2	8.64448	47	(3)12.279	93	8.64490	48	1.65634	47	20	
50	(1)1918.8	2.1	8.64495	48	(3)12.372	93	8.64538	47	1.65587	48	10	
<b>32'</b>	(1)1920.9	2.1	8.64543	47	(3)12.465	94	8.64585	48	1.65539	48	<b>28'</b>	
10	(1)1923.0	2.1	8.64590	48	(3)12.559	93	8.64633	48	1.65491	47	50	
20	(1)1925.1	2.1	8.64638	47	(3)12.652	93	8.64681	47	1.65444	48	40	
30	(1)1927.2	2.1	8.64685	48	(3)12.745	94	8.64728	48	1.65396	47	30	
40	(1)1929.3	2.1	8.64733	47	(3)12.839	93	8.64776	47	1.65349	47	20	
50	(1)1931.4	2.1	8.64780	47	(3)12.932	94	8.64823	47	1.65301	47	10	
<b>33'</b>	(1)1933.5	2.1	8.64827	48	(3)13.026	94	8.64870	48	1.65254	47	<b>27'</b>	
10	(1)1935.6	2.1	8.64875	48	(3)13.120	94	8.64918	48	1.65207	47	50	
20	(1)1937.7	2.1	8.64922	47	(3)13.214	94	8.64965	47	1.65160	48	40	
30	(1)1939.8	2.1	8.64969	47	(3)13.308	94	8.65012	48	1.65112	47	30	
40	(1)1941.9	2.1	8.65016	47	(3)13.402	94	8.65060	47	1.65065	47	20	
50	(1)1944.0	2.2	8.65063	47	(3)13.496	95	8.65107	47	1.65018	47	10	
<b>34'</b>	(1)1946.2	2.1	8.65110	47	(3)13.591	94	8.65154	47	1.64971	47	<b>26'</b>	
10	(1)1948.3	2.1	8.65157	47	(3)13.685	95	8.65201	47	1.64924	47	50	
20	(1)1950.4	2.1	8.65204	47	(3)13.780	94	8.65248	47	1.64877	47	40	
30	(1)1952.5	2.1	8.65251	47	(3)13.874	95	8.65295	47	1.64830	47	30	
40	(1)1954.6	2.1	8.65298	46	(3)13.969	95	8.65342	47	1.64783	46	20	
50	(1)1956.7	2.1	8.65344	47	(3)14.064	95	8.65388	47	1.64737	47	10	
<b>35'</b>	(1)1958.8	2.1	8.65391	47	(3)14.159	95	8.65435	47	1.64690	47	<b>25'</b>	
10	(1)1960.9	2.1	8.65438	46	(3)14.254	95	8.65482	47	1.64643	46	50	
20	(1)1963.0	2.1	8.65484	47	(3)14.349	95	8.65529	46	1.64597	47	40	
30	(1)1965.1	2.1	8.65531	46	(3)14.444	96	8.65575	47	1.64550	47	30	
40	(1)1967.2	2.1	8.65577	47	(3)14.540	95	8.65622	47	1.64503	46	20	
50	(1)1969.3	2.1	8.65624	46	(3)14.635	96	8.65668	46	1.64457	46	10	
<b>36'</b>	(1)1971.4	2.2	8.65670	47	(3)14.731	95	8.65715	46	1.64410	46	<b>24'</b>	
10	(1)1973.6	2.1	8.65717	46	(3)14.826	96	8.65761	47	1.64364	46	50	
20	(1)1975.7	2.1	8.65763	46	(3)14.922	96	8.65808	47	1.64318	46	40	
30	(1)1977.8	2.1	8.65809	46	(3)15.018	96	8.65854	46	1.64271	46	30	
40	(1)1979.9	2.1	8.65855	46	(3)15.114	96	8.65900	47	1.64225	46	20	
50	(1)1982.0	2.1	8.65901	46	(3)15.210	96	8.65947	46	1.64179	46	10	
<b>37'</b>	(1)1984.1	2.1	8.65947	47	(3)15.306	96	8.65993	46	1.64133	46	<b>23'</b>	
10	(1)1986.2	2.1	8.65994	46	(3)15.402	97	8.66039	46	1.64087	46	50	
20	(1)1988.3	2.1	8.66040	45	(3)15.499	96	8.66085	46	1.64041	46	40	
30	(1)1990.4	2.1	8.66085	46	(3)15.595	97	8.66131	46	1.63995	46	30	
40	(1)1992.5	2.1	8.66131	46	(3)15.692	97	8.66177	46	1.63949	46	20	
50	(1)1994.6	2.1	8.66177	46	(3)15.789	96	8.66223	46	1.63903	46	10	
<b>38'</b>	(1)1996.7	2.1	8.66223	46	(3)15.885	97	8.66269	46	1.63857	46	<b>22'</b>	
10	(1)1998.8	2.2	8.66269	45	(3)15.982	97	8.66315	46	1.63811	46	50	
20	(1)2001.0	2.1	8.66314	46	(3)16.079	97	8.66361	45	1.63765	45	40	
30	(1)2003.1	2.1	8.66360	46	(3)16.176	97	8.66406	46	1.63720	46	30	
40	(1)2005.2	2.1	8.66406	45	(3)16.273	98	8.66452	46	1.63674	46	20	
50	(1)2007.3	2.1	8.66451	46	(3)16.371	98	8.66498	45	1.63628	45	10	
<b>39'</b>	(1)2009.4	2.1	8.66497	45	(3)16.468	97	8.66543	46	1.63583	46	<b>21'</b>	
10	(1)2011.5	2.1	8.66542	46	(3)16.566	97	8.66589	45	1.63537	45	50	
20	(1)2013.6	2.1	8.66588	45	(3)16.663	97	8.66634	46	1.63492	45	40	
30	(1)2015.7	2.1	8.66633	45	(3)16.761	98	8.66680	45	1.63447	46	30	
40	(1)2017.8	2.1	8.66678	46	(3)16.859	98	8.66725	46	1.63401	45	20	
50	(1)2019.9	2.1	8.66724	45	(3)16.957	98	8.66771	45	1.63356	45	10	
<b>40'</b>	(1)2022.0	2.1	8.66769	45	(3)17.055	98	8.66816	45	1.63311	45	<b>20'</b>	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z log Cotg. z



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega'$	Diff.	log Cos z log sec $\omega'$	Diff.	log Sin z log tg $\omega'$	Diff.	$\omega'$	
<b>40'</b>	(1)2022.0	2.1	8.66769	45	(3)47.055	98	8.66816	45	1.63311	<b>20'</b>
10	(1)2024.1	2.1	8.66814	45	(3)47.153	98	8.66861	45	1.63265	50
20	(1)2026.2	2.2	8.66859	45	(3)47.251	98	8.66906	46	1.63220	40
30	(1)2028.4	2.1	8.66904	45	(3)47.349	99	8.66952	45	1.63175	30
40	(1)2030.5	2.1	8.66949	45	(3)47.448	98	8.66997	45	1.63130	20
50	(1)2032.6	2.1	8.66994	45	(3)47.546	99	8.67042	45	1.63085	10
<b>41'</b>	(1)2034.7	2.1	8.67039	45	(3)47.645	99	8.67087	45	1.63040	<b>19'</b>
10	(1)2036.8	2.1	8.67084	45	(3)47.744	99	8.67132	45	1.62995	50
20	(1)2038.9	2.1	8.67129	45	(3)47.843	98	8.67177	45	1.62950	40
30	(1)2041.0	2.1	8.67174	45	(3)47.941	99	8.67222	45	1.62905	30
40	(1)2043.1	2.1	8.67219	44	(3)48.040	100	8.67267	45	1.62860	20
50	(1)2045.2	2.1	8.67263	45	(3)48.140	99	8.67312	44	1.62816	10
<b>42'</b>	(1)2047.3	2.1	8.67308	45	(3)48.239	99	8.67356	45	1.62771	<b>18'</b>
10	(1)2049.4	2.1	8.67353	44	(3)48.338	100	8.67401	45	1.62726	50
20	(1)2051.5	2.1	8.67397	45	(3)48.438	99	8.67446	44	1.62682	40
30	(1)2053.6	2.2	8.67442	44	(3)48.537	100	8.67490	45	1.62637	30
40	(1)2055.8	2.1	8.67486	45	(3)48.637	100	8.67535	44	1.62592	20
50	(1)2057.9	2.1	8.67531	44	(3)48.737	100	8.67579	45	1.62548	10
<b>43'</b>	(1)2060.0	2.1	8.67575	44	(3)48.837	99	8.67624	44	1.62503	<b>17'</b>
10	(1)2062.1	2.1	8.67619	45	(3)48.936	101	8.67668	45	1.62459	50
20	(1)2064.2	2.1	8.67664	44	(3)49.037	100	8.67713	44	1.62415	40
30	(1)2066.3	2.1	8.67708	44	(3)49.137	100	8.67757	44	1.62370	30
40	(1)2068.4	2.1	8.67752	44	(3)49.237	100	8.67801	45	1.62326	20
50	(1)2070.5	2.1	8.67796	45	(3)49.337	101	8.67846	44	1.62282	10
<b>44'</b>	(1)2072.6	2.1	8.67841	44	(3)49.438	100	8.67890	44	1.62238	<b>16'</b>
10	(1)2074.7	2.1	8.67885	44	(3)49.538	101	8.67934	44	1.62194	50
20	(1)2076.8	2.1	8.67929	44	(3)49.639	101	8.67978	44	1.62150	40
30	(1)2078.9	2.1	8.67973	44	(3)49.740	101	8.68022	44	1.62106	30
40	(1)2081.0	2.2	8.68017	43	(3)49.841	101	8.68066	44	1.62062	20
50	(1)2083.2	2.1	8.68060	44	(3)49.942	101	8.68110	44	1.62018	10
<b>45'</b>	(1)2085.3	2.1	8.68104	44	(3)50.043	101	8.68154	44	1.61974	<b>15'</b>
10	(1)2087.4	2.1	8.68148	44	(3)50.144	101	8.68198	44	1.61930	50
20	(1)2089.5	2.1	8.68192	44	(3)50.245	102	8.68242	44	1.61886	40
30	(1)2091.6	2.1	8.68236	43	(3)50.347	101	8.68286	44	1.61842	30
40	(1)2093.7	2.1	8.68279	44	(3)50.448	102	8.68330	43	1.61798	20
50	(1)2095.8	2.1	8.68323	44	(3)50.550	101	8.68373	44	1.61755	10
<b>46'</b>	(1)2097.9	2.1	8.68367	43	(3)50.651	102	8.68417	44	1.61711	<b>14'</b>
10	(1)2100.0	2.1	8.68410	44	(3)50.753	102	8.68461	43	1.61668	50
20	(1)2102.1	2.1	8.68454	43	(3)50.855	102	8.68504	44	1.61624	40
30	(1)2104.2	2.1	8.68497	43	(3)50.957	102	8.68548	44	1.61580	30
40	(1)2106.3	2.2	8.68540	44	(3)51.059	102	8.68592	43	1.61537	20
50	(1)2108.5	2.1	8.68584	43	(3)51.161	103	8.68635	43	1.61494	10
<b>47'</b>	(1)2110.6	2.1	8.68627	43	(3)51.264	102	8.68678	44	1.61450	<b>13'</b>
10	(1)2112.7	2.1	8.68670	44	(3)51.366	103	8.68722	43	1.61407	50
20	(1)2114.8	2.1	8.68714	43	(3)51.469	102	8.68765	43	1.61364	40
30	(1)2116.9	2.1	8.68757	43	(3)51.571	103	8.68808	44	1.61320	30
40	(1)2119.0	2.1	8.68800	43	(3)51.674	103	8.68852	43	1.61277	20
50	(1)2121.1	2.1	8.68843	43	(3)51.777	103	8.68895	43	1.61234	10
<b>48'</b>	(1)2123.2	2.1	8.68886	43	(3)51.880	103	8.68938	43	1.61191	<b>12'</b>
10	(1)2125.3	2.1	8.68929	43	(3)51.983	103	8.68981	43	1.61148	50
20	(1)2127.4	2.1	8.68972	43	(3)52.086	103	8.69024	43	1.61105	40
30	(1)2129.5	2.1	8.69015	43	(3)52.189	103	8.69067	43	1.61062	30
40	(1)2131.6	2.1	8.69058	43	(3)52.292	104	8.69110	43	1.61019	20
50	(1)2133.7	2.2	8.69101	43	(3)52.396	103	8.69153	43	1.60976	10
<b>49'</b>	(1)2135.9	2.1	8.69144	43	(3)52.499	104	8.69196	43	1.60933	<b>11'</b>
10	(1)2138.0	2.1	8.69187	42	(3)52.603	104	8.69239	43	1.60890	50
20	(1)2140.1	2.1	8.69229	43	(3)52.707	104	8.69282	43	1.60847	40
30	(1)2142.2	2.1	8.69272	43	(3)52.811	104	8.69325	43	1.60805	30
40	(1)2144.3	2.1	8.69315	42	(3)52.915	104	8.69368	42	1.60762	20
50	(1)2146.4	2.1	8.69357	43	(3)53.019	104	8.69410	43	1.60719	10
<b>50'</b>	(1)2148.5	2.1	8.69400	43	(3)53.123	104	8.69453	43	1.60677	<b>10'</b>

log cos  $\omega'$     Diff.    l. cosec  $\omega'$     Diff.    log cotg  $\omega'$     Diff.     $z'$     Diff.



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>50'</b>	(1)2148.5	2.1	8.69400	42	(3)53.123	104	8.69453	43	1.60677	43	<b>10'</b>
10	(1)2150.6	2.1	8.69442	43	(3)53.227	104	8.69496	42	1.60634	42	50
20	(1)2152.7	2.1	8.69485	42	(3)53.331	105	8.69538	43	1.60592	43	40
30	(1)2154.8	2.1	8.69527	43	(3)53.436	105	8.69581	42	1.60549	42	30
40	(1)2156.9	2.1	8.69570	42	(3)53.541	104	8.69623	43	1.60507	43	20
50	(1)2159.0	2.2	8.69612	42	(3)53.645	105	8.69666	42	1.60464	42	10
<b>51'</b>	(1)2161.2	2.1	8.69654	43	(3)53.750	105	8.69708	42	1.60422	43	<b>9'</b>
10	(1)2163.3	2.1	8.69697	42	(3)53.855	105	8.69750	43	1.60379	42	50
20	(1)2165.4	2.1	8.69739	42	(3)53.960	105	8.69793	42	1.60337	42	40
30	(1)2167.5	2.1	8.69781	42	(3)54.065	105	8.69835	42	1.60295	42	30
40	(1)2169.6	2.1	8.69823	42	(3)54.170	105	8.69877	43	1.60253	42	20
50	(1)2171.7	2.1	8.69865	42	(3)54.275	106	8.69920	42	1.60211	43	10
<b>52'</b>	(1)2173.8	2.1	8.69907	42	(3)54.381	105	8.69962	42	1.60168	42	<b>8'</b>
10	(1)2175.9	2.1	8.69949	42	(3)54.486	106	8.70004	42	1.60126	42	50
20	(1)2178.0	2.1	8.69991	42	(3)54.592	105	8.70046	42	1.60084	42	40
30	(1)2180.1	2.1	8.70033	42	(3)54.697	106	8.70088	42	1.60042	42	30
40	(1)2182.2	2.1	8.70075	42	(3)54.803	106	8.70130	42	1.60000	42	20
50	(1)2184.3	2.2	8.70117	42	(3)54.909	106	8.70172	42	1.59958	42	10
<b>53'</b>	(1)2186.5	2.1	8.70159	42	(3)55.015	106	8.70214	42	1.59917	42	<b>7'</b>
10	(1)2188.6	2.1	8.70201	41	(3)55.121	106	8.70256	42	1.59875	42	50
20	(1)2190.7	2.1	8.70242	42	(3)55.227	107	8.70298	42	1.59833	42	40
30	(1)2192.8	2.1	8.70284	42	(3)55.334	106	8.70339	42	1.59791	41	30
40	(1)2194.9	2.1	8.70326	41	(3)55.440	107	8.70381	42	1.59750	42	20
50	(1)2197.0	2.1	8.70367	42	(3)55.547	106	8.70423	42	1.59708	42	10
<b>54'</b>	(1)2199.1	2.1	8.70409	42	(3)55.653	107	8.70465	41	1.59666	41	<b>6'</b>
10	(1)2201.2	2.1	8.70451	41	(3)55.760	107	8.70506	42	1.59625	42	50
20	(1)2203.3	2.1	8.70492	42	(3)55.867	107	8.70548	41	1.59583	41	40
30	(1)2205.4	2.1	8.70534	41	(3)55.974	107	8.70589	42	1.59542	42	30
40	(1)2207.5	2.1	8.70575	41	(3)56.081	107	8.70631	42	1.59500	42	20
50	(1)2209.6	2.2	8.70616	42	(3)56.188	107	8.70673	41	1.59459	42	10
<b>55'</b>	(1)2211.8	2.1	8.70658	41	(3)56.295	107	8.70714	41	1.59417	41	<b>5'</b>
10	(1)2213.9	2.1	8.70699	41	(3)56.402	108	8.70755	42	1.59376	41	50
20	(1)2216.0	2.1	8.70740	41	(3)56.510	107	8.70797	42	1.59335	42	40
30	(1)2218.1	2.1	8.70781	42	(3)56.617	108	8.70838	41	1.59293	41	30
40	(1)2220.2	2.1	8.70823	41	(3)56.725	108	8.70879	42	1.59252	41	20
50	(1)2222.3	2.1	8.70864	41	(3)56.833	108	8.70921	42	1.59211	41	10
<b>56'</b>	(1)2224.4	2.1	8.70905	41	(3)56.941	107	8.70962	41	1.59170	41	<b>4'</b>
10	(1)2226.5	2.1	8.70946	41	(3)57.048	109	8.71003	41	1.59129	41	50
20	(1)2228.6	2.1	8.70987	41	(3)57.157	108	8.71044	41	1.59087	41	40
30	(1)2230.7	2.1	8.71028	41	(3)57.265	108	8.71085	41	1.59046	41	30
40	(1)2232.8	2.1	8.71069	41	(3)57.373	108	8.71126	41	1.59005	41	20
50	(1)2234.9	2.1	8.71110	41	(3)57.481	109	8.71167	41	1.58964	41	10
<b>57'</b>	(1)2237.0	2.2	8.71151	41	(3)57.590	108	8.71208	41	1.58923	40	<b>3'</b>
10	(1)2239.2	2.1	8.71192	40	(3)57.698	109	8.71249	41	1.58883	41	50
20	(1)2241.3	2.1	8.71233	41	(3)57.807	109	8.71290	41	1.58842	41	40
30	(1)2243.4	2.1	8.71273	41	(3)57.916	109	8.71331	41	1.58801	41	30
40	(1)2245.5	2.1	8.71314	41	(3)58.025	109	8.71372	41	1.58760	41	20
50	(1)2247.6	2.1	8.71355	40	(3)58.134	109	8.71413	40	1.58719	40	10
<b>58'</b>	(1)2249.7	2.1	8.71395	41	(3)58.243	109	8.71453	41	1.58679	41	<b>2'</b>
10	(1)2251.8	2.1	8.71436	40	(3)58.352	109	8.71494	41	1.58638	41	50
20	(1)2253.9	2.1	8.71476	41	(3)58.461	109	8.71535	40	1.58597	41	40
30	(1)2256.0	2.1	8.71517	40	(3)58.570	110	8.71575	41	1.58557	41	30
40	(1)2258.1	2.1	8.71557	41	(3)58.680	109	8.71616	41	1.58516	40	20
50	(1)2260.2	2.1	8.71598	40	(3)58.789	110	8.71657	40	1.58476	41	10
<b>59'</b>	(1)2262.3	2.2	8.71638	41	(3)58.899	110	8.71697	41	1.58435	40	<b>1'</b>
10	(1)2264.5	2.1	8.71679	40	(3)59.009	110	8.71738	40	1.58395	41	50
20	(1)2266.6	2.1	8.71719	40	(3)59.119	110	8.71778	41	1.58354	40	40
30	(1)2268.7	2.1	8.71759	41	(3)59.229	110	8.71819	40	1.58314	40	30
40	(1)2270.8	2.1	8.71800	40	(3)59.339	110	8.71859	40	1.58274	41	20
50	(1)2272.9	2.1	8.71840	40	(3)59.449	110	8.71899	41	1.58233	41	10
<b>60'</b>	(1)2275.0	2.1	8.71880	40	(3)59.559	110	8.71940	41	1.58193	40	<b>0'</b>

log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$
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$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>0'</b>	(1)2275.0		8.71880	40	(3)59.559	111	8.71940		1.58193		<b>60'</b>
10	(1)2277.1	2.1	8.71920	40	(3)59.670	110	8.71980	40	1.58153	40	50
20	(1)2279.2	2.1	8.71960	40	(3)59.780	111	8.72020	40	1.58113	40	40
30	(1)2281.3	2.1	8.72000	40	(3)59.891	111	8.72060	40	1.58073	40	30
40	(1)2283.4	2.1	8.72040	40	(3)60.002	110	8.72100	41	1.58033	40	20
50	(1)2285.5	2.2	8.72080	40	(3)60.112	111	8.72141	40	1.57993	40	10
<b>1'</b>	(1)2287.7	2.1	8.72120	40	(3)60.223	111	8.72181	40	1.57952	39	<b>59'</b>
10	(1)2289.8	2.1	8.72160	40	(3)60.334	111	8.72221	40	1.57913	40	50
20	(1)2291.9	2.1	8.72200	40	(3)60.445	112	8.72261	40	1.57873	40	40
30	(1)2294.0	2.1	8.72240	40	(3)60.557	111	8.72301	40	1.57833	40	30
40	(1)2296.1	2.1	8.72280	40	(3)60.668	111	8.72341	39	1.57793	40	20
50	(1)2298.2	2.1	8.72320	39	(3)60.779	112	8.72380	40	1.57753	40	10
<b>2'</b>	(1)2300.3	2.1	8.72359	40	(3)60.891	112	8.72420	40	1.57713	40	<b>58'</b>
10	(1)2302.4	2.1	8.72399	40	(3)61.003	111	8.72460	40	1.57673	40	50
20	(1)2304.5	2.1	8.72439	39	(3)61.114	112	8.72500	40	1.57634	40	40
30	(1)2306.6	2.1	8.72478	40	(3)61.226	112	8.72540	39	1.57594	40	30
40	(1)2308.7	2.1	8.72518	40	(3)61.338	112	8.72579	40	1.57554	40	20
50	(1)2310.8	2.2	8.72558	39	(3)61.450	112	8.72619	40	1.57515	40	10
<b>3'</b>	(1)2313.0	2.1	8.72597	40	(3)61.562	112	8.72659	39	1.57475	40	<b>57'</b>
10	(1)2315.1	2.1	8.72637	39	(3)61.674	113	8.72698	40	1.57435	39	50
20	(1)2317.2	2.1	8.72676	40	(3)61.787	112	8.72738	39	1.57396	40	40
30	(1)2319.3	2.1	8.72716	39	(3)61.899	113	8.72777	40	1.57356	39	30
40	(1)2321.4	2.1	8.72755	39	(3)62.012	112	8.72817	39	1.57317	39	20
50	(1)2323.5	2.1	8.72794	40	(3)62.124	113	8.72856	40	1.57278	40	10
<b>4'</b>	(1)2325.6	2.1	8.72834	39	(3)62.237	113	8.72896	39	1.57238	39	<b>56'</b>
10	(1)2327.7	2.1	8.72873	39	(3)62.350	113	8.72935	40	1.57199	39	50
20	(1)2329.8	2.1	8.72912	39	(3)62.463	113	8.72975	39	1.57160	40	40
30	(1)2331.9	2.1	8.72951	40	(3)62.576	113	8.73014	39	1.57120	39	30
40	(1)2334.0	2.1	8.72991	39	(3)62.689	113	8.73053	40	1.57081	39	20
50	(1)2336.1	2.2	8.73030	39	(3)62.802	114	8.73093	39	1.57042	39	10
<b>5'</b>	(1)2338.3	2.1	8.73069	39	(3)62.916	113	8.73132	39	1.57003	39	<b>55'</b>
10	(1)2340.4	2.1	8.73108	39	(3)63.029	114	8.73171	39	1.56964	39	50
20	(1)2342.5	2.1	8.73147	39	(3)63.143	114	8.73210	39	1.56925	40	40
30	(1)2344.6	2.1	8.73186	39	(3)63.257	113	8.73249	39	1.56885	39	30
40	(1)2346.7	2.1	8.73225	39	(3)63.370	114	8.73288	39	1.56846	39	20
50	(1)2348.8	2.1	8.73264	39	(3)63.484	114	8.73327	39	1.56807	39	10
<b>6'</b>	(1)2350.9	2.1	8.73303	39	(3)63.598	114	8.73366	39	1.56768	38	<b>54'</b>
10	(1)2353.0	2.1	8.73342	38	(3)63.712	114	8.73405	39	1.56730	39	50
20	(1)2355.1	2.1	8.73380	39	(3)63.826	115	8.73444	39	1.56691	39	40
30	(1)2357.2	2.1	8.73419	39	(3)63.941	114	8.73483	39	1.56652	39	30
40	(1)2359.3	2.1	8.73458	39	(3)64.055	115	8.73522	39	1.56613	39	20
50	(1)2361.4	2.2	8.73497	38	(3)64.170	114	8.73561	39	1.56574	38	10
<b>7'</b>	(1)2363.6	2.1	8.73535	39	(3)64.284	115	8.73600	38	1.56535	39	<b>53'</b>
10	(1)2365.7	2.1	8.73574	39	(3)64.399	115	8.73638	39	1.56497	39	50
20	(1)2367.8	2.1	8.73613	38	(3)64.514	115	8.73677	39	1.56458	39	40
30	(1)2369.9	2.1	8.73651	39	(3)64.629	115	8.73716	38	1.56419	38	30
40	(1)2372.0	2.1	8.73690	39	(3)64.744	115	8.73754	39	1.56381	39	20
50	(1)2374.1	2.1	8.73728	39	(3)64.859	115	8.73793	39	1.56342	38	10
<b>8'</b>	(1)2376.2	2.1	8.73767	38	(3)64.974	115	8.73832	38	1.56304	39	<b>52'</b>
10	(1)2378.3	2.1	8.73805	39	(3)65.089	116	8.73870	39	1.56265	38	50
20	(1)2380.4	2.1	8.73844	38	(3)65.205	115	8.73909	38	1.56227	39	40
30	(1)2382.5	2.1	8.73882	38	(3)65.320	116	8.73947	39	1.56188	38	30
40	(1)2384.6	2.2	8.73920	39	(3)65.436	115	8.73986	38	1.56150	38	20
50	(1)2386.8	2.1	8.73959	38	(3)65.551	116	8.74024	39	1.56112	39	10
<b>9'</b>	(1)2388.9	2.1	8.73997	38	(3)65.667	116	8.74063	38	1.56073	38	<b>51'</b>
10	(1)2391.0	2.1	8.74035	38	(3)65.783	116	8.74101	38	1.56035	38	50
20	(1)2393.1	2.1	8.74073	39	(3)65.899	116	8.74139	39	1.55997	39	40
30	(1)2395.2	2.1	8.74112	38	(3)66.015	117	8.74178	38	1.55958	38	30
40	(1)2397.3	2.1	8.74150	38	(3)66.132	116	8.74216	38	1.55920	38	20
50	(1)2399.4	2.1	8.74188	38	(3)66.248	116	8.74254	38	1.55882	38	10
<b>10'</b>	(1)2401.5	2.1	8.74226	38	(3)66.364	116	8.74292	38	1.55844	38	<b>50'</b>

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
 log Sec z log Cotg z l. Cosec z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>10'</b>	(1)2401.5		8.74226		(3)66.364		8.74292		1.55844			<b>50'</b>
10	(1)2403.6	2.1	8.74264	38	(3)66.481	117	8.74330	38	1.55806	38	38	50
20	(1)2405.7	2.1	8.74302	38	(3)66.598	117	8.74369	38	1.55768	38	38	40
30	(1)2407.8	2.1	8.74340	38	(3)66.714	116	8.74407	38	1.55730	38	38	30
40	(1)2409.9	2.1	8.74378	38	(3)66.831	117	8.74445	38	1.55692	38	38	20
50	(1)2412.1	2.2	8.74416	38	(3)66.948	117	8.74483	38	1.55654	38	38	10
		2.1		38		117		38		38		
<b>11'</b>	(1)2414.2		8.74454		(3)67.065		8.74521		1.55616			<b>49'</b>
10	(1)2416.3	2.1	8.74491	37	(3)67.182	117	8.74559	38	1.55578	38	38	50
20	(1)2418.4	2.1	8.74529	38	(3)67.300	118	8.74597	38	1.55540	38	38	40
30	(1)2420.5	2.1	8.74567	38	(3)67.417	117	8.74634	38	1.55502	38	38	30
40	(1)2422.6	2.1	8.74605	38	(3)67.534	117	8.74672	38	1.55464	38	38	20
50	(1)2424.7	2.1	8.74642	38	(3)67.652	118	8.74710	38	1.55427	38	37	10
		2.1		38		118		38		38		
<b>12'</b>	(1)2426.8		8.74680		(3)67.770		8.74748		1.55389			<b>48'</b>
10	(1)2428.9	2.1	8.74718	38	(3)67.887	117	8.74786	38	1.55351	38	38	50
20	(1)2431.0	2.1	8.74755	37	(3)68.005	118	8.74823	37	1.55314	37	37	40
30	(1)2433.1	2.1	8.74793	38	(3)68.123	118	8.74861	38	1.55276	38	38	30
40	(1)2435.3	2.2	8.74831	38	(3)68.241	118	8.74899	38	1.55238	38	38	20
50	(1)2437.4	2.1	8.74868	37	(3)68.359	118	8.74936	37	1.55201	37	38	10
		2.1		38		119		38		38		
<b>13'</b>	(1)2439.5		8.74906		(3)68.478		8.74974		1.55163			<b>47'</b>
10	(1)2441.6	2.1	8.74943	37	(3)68.596	118	8.75012	38	1.55126	38	37	50
20	(1)2443.7	2.1	8.74980	37	(3)68.715	119	8.75049	37	1.55088	37	38	40
30	(1)2445.8	2.1	8.75018	38	(3)68.833	118	8.75087	38	1.55051	38	38	30
40	(1)2447.9	2.1	8.75055	37	(3)68.952	119	8.75124	37	1.55013	37	38	20
50	(1)2450.0	2.1	8.75092	37	(3)69.071	119	8.75162	38	1.54976	37	37	10
		2.1		38		119		38		37		
<b>14'</b>	(1)2452.1		8.75130		(3)69.190		8.75199		1.54939			<b>46'</b>
10	(1)2454.2	2.1	8.75167	37	(3)69.309	119	8.75236	37	1.54901	37	38	50
20	(1)2456.3	2.1	8.75204	37	(3)69.428	119	8.75274	38	1.54864	38	37	40
30	(1)2458.5	2.1	8.75241	37	(3)69.547	119	8.75311	37	1.54827	37	37	30
40	(1)2460.6	2.1	8.75279	38	(3)69.666	120	8.75348	37	1.54790	37	38	20
50	(1)2462.7	2.1	8.75316	37	(3)69.786	119	8.75385	38	1.54752	37	37	10
		2.1		37		119		38		37		
<b>15'</b>	(1)2464.8		8.75353		(3)69.905		8.75423		1.54715			<b>45'</b>
10	(1)2466.9	2.1	8.75390	37	(3)70.025	120	8.75460	37	1.54678	37	37	50
20	(1)2469.0	2.1	8.75427	37	(3)70.144	120	8.75497	37	1.54641	37	37	40
30	(1)2471.1	2.1	8.75464	37	(3)70.264	120	8.75534	37	1.54604	37	37	30
40	(1)2473.2	2.1	8.75501	37	(3)70.384	120	8.75571	37	1.54567	37	37	20
50	(1)2475.3	2.1	8.75538	37	(3)70.504	120	8.75608	37	1.54530	37	37	10
		2.1		37		120		37		37		
<b>16'</b>	(1)2477.4		8.75575		(3)70.624		8.75645		1.54493			<b>44'</b>
10	(1)2479.5	2.1	8.75612	37	(3)70.744	120	8.75682	37	1.54456	37	37	50
20	(1)2481.7	2.2	8.75648	36	(3)70.865	121	8.75719	37	1.54419	37	37	40
30	(1)2483.8	2.1	8.75685	37	(3)70.985	120	8.75756	37	1.54382	37	37	30
40	(1)2485.9	2.1	8.75722	37	(3)71.106	121	8.75793	37	1.54345	37	37	20
50	(1)2488.0	2.1	8.75759	37	(3)71.226	120	8.75830	37	1.54309	37	36	10
		2.1		36		121		37		37		
<b>17'</b>	(1)2490.1		8.75795		(3)71.347		8.75867		1.54272			<b>43'</b>
10	(1)2492.2	2.1	8.75832	37	(3)71.468	121	8.75904	37	1.54235	37	37	50
20	(1)2494.3	2.1	8.75869	37	(3)71.589	121	8.75940	36	1.54198	36	37	40
30	(1)2496.4	2.1	8.75905	36	(3)71.710	121	8.75977	37	1.54162	37	37	30
40	(1)2498.5	2.1	8.75942	37	(3)71.831	121	8.76014	37	1.54125	37	37	20
50	(1)2500.6	2.1	8.75979	37	(3)71.952	122	8.76051	36	1.54088	36	36	10
		2.1		36		122		36		36		
<b>18'</b>	(1)2502.7		8.76015		(3)72.074		8.76087		1.54052			<b>42'</b>
10	(1)2504.8	2.1	8.76052	37	(3)72.195	121	8.76124	37	1.54015	37	37	50
20	(1)2507.0	2.2	8.76088	36	(3)72.317	122	8.76160	36	1.53979	36	36	40
30	(1)2509.1	2.1	8.76125	37	(3)72.438	121	8.76197	37	1.53942	37	36	30
40	(1)2511.2	2.1	8.76161	36	(3)72.560	122	8.76233	36	1.53906	36	37	20
50	(1)2513.3	2.1	8.76197	36	(3)72.682	122	8.76270	37	1.53869	37	36	10
		2.1		37		122		36		36		
<b>19'</b>	(1)2515.4		8.76234		(3)72.804		8.76306		1.53833			<b>41'</b>
10	(1)2517.5	2.1	8.76270	36	(3)72.926	122	8.76343	37	1.53797	36	36	50
20	(1)2519.6	2.1	8.76306	36	(3)73.048	122	8.76379	36	1.53760	36	37	40
30	(1)2521.7	2.1	8.76343	36	(3)73.171	123	8.76416	37	1.53724	36	36	30
40	(1)2523.8	2.1	8.76379	36	(3)73.293	122	8.76452	36	1.53688	36	37	20
50	(1)2525.9	2.1	8.76415	36	(3)73.415	122	8.76488	36	1.53651	36	37	10
		2.1		36		123		37		36		
<b>20'</b>	(1)2528.0		8.76451		(3)73.538		8.76525		1.53615			<b>40'</b>



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>20'</b>	(1)2528.0	2.2	8.76451	36	(3)73.538	123	8.76525	36	1.53615	36	<b>40'</b>	
10	(1)2530.2	2.1	8.76487	36	(3)73.661	122	8.76561	36	1.53579	36		50
20	(1)2532.3	2.1	8.76523	36	(3)73.783	123	8.76597	36	1.53543	36		40
30	(1)2534.4	2.1	8.76559	36	(3)73.906	123	8.76633	36	1.53507	36		30
40	(1)2536.5	2.1	8.76595	36	(3)74.029	123	8.76669	36	1.53471	36		20
50	(1)2538.6	2.1	8.76631	36	(3)74.152	124	8.76706	36	1.53434	36		10
<b>21'</b>	(1)2540.7	2.1	8.76667	36	(3)74.276	123	8.76742	36	1.53398	36	<b>39'</b>	
10	(1)2542.8	2.1	8.76703	36	(3)74.399	123	8.76778	36	1.53362	36		50
20	(1)2544.9	2.1	8.76739	36	(3)74.522	124	8.76814	36	1.53326	36		40
30	(1)2547.0	2.1	8.76775	36	(3)74.646	123	8.76850	36	1.53290	36		30
40	(1)2549.1	2.1	8.76811	36	(3)74.769	124	8.76886	36	1.53255	36		20
50	(1)2551.2	2.2	8.76847	36	(3)74.893	124	8.76922	36	1.53219	36		10
<b>22'</b>	(1)2553.4	2.1	8.76883	36	(3)75.017	124	8.76958	36	1.53183	36	<b>38'</b>	
10	(1)2555.5	2.1	8.76919	35	(3)75.141	124	8.76994	36	1.53147	36		50
20	(1)2557.6	2.1	8.76954	36	(3)75.265	124	8.77030	35	1.53111	36		40
30	(1)2559.7	2.1	8.76990	36	(3)75.389	124	8.77065	36	1.53075	36		30
40	(1)2561.8	2.1	8.77026	35	(3)75.513	125	8.77101	36	1.53040	35		20
50	(1)2563.9	2.1	8.77061	36	(3)75.638	124	8.77137	36	1.53004	36		10
<b>23'</b>	(1)2566.0	2.1	8.77097	36	(3)75.762	124	8.77173	35	1.52968	36	<b>37'</b>	
10	(1)2568.1	2.1	8.77133	35	(3)75.886	125	8.77208	36	1.52932	36		50
20	(1)2570.2	2.1	8.77168	36	(3)76.011	125	8.77244	36	1.52897	36		40
30	(1)2572.3	2.2	8.77204	35	(3)76.136	125	8.77280	35	1.52861	35		30
40	(1)2574.5	2.1	8.77239	36	(3)76.261	125	8.77315	36	1.52826	36		20
50	(1)2576.6	2.1	8.77275	35	(3)76.386	125	8.77351	36	1.52790	36		10
<b>24'</b>	(1)2578.7	2.1	8.77310	36	(3)76.511	125	8.77387	35	1.52755	35	<b>36'</b>	
10	(1)2580.8	2.1	8.77346	35	(3)76.636	125	8.77422	36	1.52719	35		50
20	(1)2582.9	2.1	8.77381	35	(3)76.761	125	8.77458	35	1.52684	36		40
30	(1)2585.0	2.1	8.77416	36	(3)76.886	126	8.77493	36	1.52648	35		30
40	(1)2587.1	2.1	8.77452	35	(3)77.012	125	8.77529	35	1.52613	36		20
50	(1)2589.2	2.1	8.77487	35	(3)77.137	126	8.77564	36	1.52577	35		10
<b>25'</b>	(1)2591.3	2.1	8.77522	36	(3)77.263	126	8.77600	35	1.52542	35	<b>35'</b>	
10	(1)2593.4	2.1	8.77558	35	(3)77.389	126	8.77635	35	1.52507	35		50
20	(1)2595.5	2.2	8.77593	35	(3)77.515	126	8.77670	36	1.52472	36		40
30	(1)2597.7	2.1	8.77628	35	(3)77.641	126	8.77706	35	1.52436	35		30
40	(1)2599.8	2.1	8.77663	35	(3)77.767	126	8.77741	35	1.52401	35		20
50	(1)2601.9	2.1	8.77698	35	(3)77.893	126	8.77776	35	1.52366	35		10
<b>26'</b>	(1)2604.0	2.1	8.77733	35	(3)78.019	126	8.77811	36	1.52331	35	<b>34'</b>	
10	(1)2606.1	2.1	8.77768	35	(3)78.145	127	8.77847	35	1.52296	36		50
20	(1)2608.2	2.1	8.77803	35	(3)78.272	127	8.77882	35	1.52260	35		40
30	(1)2610.3	2.1	8.77838	35	(3)78.399	126	8.77917	35	1.52225	35		30
40	(1)2612.4	2.1	8.77873	35	(3)78.525	127	8.77952	35	1.52190	35		20
50	(1)2614.5	2.1	8.77908	35	(3)78.652	127	8.77987	35	1.52155	35		10
<b>27'</b>	(1)2616.6	2.1	8.77943	35	(3)78.779	127	8.78022	35	1.52120	35	<b>33'</b>	
10	(1)2618.7	2.2	8.77978	35	(3)78.906	127	8.78057	35	1.52085	35		50
20	(1)2620.9	2.1	8.78013	35	(3)79.033	127	8.78092	35	1.52050	35		40
30	(1)2623.0	2.1	8.78048	35	(3)79.160	127	8.78127	35	1.52015	35		30
40	(1)2625.1	2.1	8.78083	35	(3)79.287	128	8.78162	35	1.51980	34		20
50	(1)2627.2	2.1	8.78118	34	(3)79.415	127	8.78197	35	1.51946	35		10
<b>28'</b>	(1)2629.3	2.1	8.78152	35	(3)79.542	128	8.78232	35	1.51911	35	<b>32'</b>	
10	(1)2631.4	2.1	8.78187	35	(3)79.670	128	8.78267	35	1.51876	35		50
20	(1)2633.5	2.1	8.78222	35	(3)79.798	127	8.78302	35	1.51841	35		40
30	(1)2635.6	2.1	8.78257	34	(3)79.925	128	8.78337	34	1.51806	34		30
40	(1)2637.7	2.1	8.78291	35	(3)80.053	128	8.78371	35	1.51772	35		20
50	(1)2639.8	2.1	8.78326	34	(3)80.181	128	8.78406	35	1.51737	35		10
<b>29'</b>	(1)2641.9	2.2	8.78360	35	(3)80.309	129	8.78441	34	1.51702	34	<b>31'</b>	
10	(1)2644.1	2.1	8.78395	35	(3)80.438	128	8.78475	35	1.51668	35		50
20	(1)2646.2	2.1	8.78430	34	(3)80.566	128	8.78510	35	1.51633	34		40
30	(1)2648.3	2.1	8.78464	35	(3)80.694	129	8.78545	34	1.51599	35		30
40	(1)2650.4	2.1	8.78499	34	(3)80.823	129	8.78579	35	1.51564	35		20
50	(1)2652.5	2.1	8.78533	35	(3)80.952	128	8.78614	35	1.51529	35		10
<b>30'</b>	(1)2654.6	2.1	8.78568	35	(3)81.080	128	8.78649	35	1.51495	34	<b>30'</b>	

log cos  $\omega$  Diff. 1. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
 log Sec z log Cotg z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>30'</b>	(1)2654.6	2.1	8.78568	34	(3)81.080	129	8.78649	34	1.51495	35	<b>30'</b>	50
10	(1)2656.7	2.1	8.78602	34	(3)81.209	129	8.78683	35	1.51460	34	40	
20	(1)2658.8	2.1	8.78636	35	(3)81.338	129	8.78718	34	1.51426	34	30	
30	(1)2660.9	2.1	8.78671	34	(3)81.467	129	8.78752	35	1.51392	35	20	
40	(1)2663.0	2.2	8.78705	35	(3)81.596	130	8.78787	34	1.51357	34	10	
50	(1)2665.2	2.1	8.78739	34	(3)81.726	129	8.78821	34	1.51323	34		
<b>31'</b>	(1)2667.3	2.1	8.78774	34	(3)81.855	129	8.78855	35	1.51289	35	<b>29'</b>	50
10	(1)2669.4	2.1	8.78808	34	(3)81.984	130	8.78890	34	1.51254	34	40	
20	(1)2671.5	2.1	8.78842	34	(3)82.114	129	8.78924	34	1.51220	34	30	
30	(1)2673.6	2.1	8.78876	34	(3)82.243	130	8.78958	35	1.51186	35	20	
40	(1)2675.7	2.1	8.78910	35	(3)82.373	130	8.78993	34	1.51151	34	10	
50	(1)2677.8	2.1	8.78945	34	(3)82.503	130	8.79027	34	1.51117	34		
<b>32'</b>	(1)2679.9	2.1	8.78979	34	(3)82.633	130	8.79061	35	1.51083	34	<b>28'</b>	50
10	(1)2682.0	2.1	8.79013	34	(3)82.763	130	8.79096	34	1.51049	34	40	
20	(1)2684.1	2.1	8.79047	34	(3)82.893	131	8.79130	34	1.51015	34	30	
30	(1)2686.2	2.2	8.79081	34	(3)83.024	130	8.79164	34	1.50981	34	20	
40	(1)2688.4	2.1	8.79115	34	(3)83.154	130	8.79198	34	1.50947	34	10	
50	(1)2690.5	2.1	8.79149	34	(3)83.284	131	8.79232	34	1.50913	34		
<b>33'</b>	(1)2692.6	2.1	8.79183	34	(3)83.415	131	8.79266	34	1.50879	34	<b>27'</b>	50
10	(1)2694.7	2.1	8.79217	34	(3)83.546	130	8.79300	34	1.50845	34	40	
20	(1)2696.8	2.1	8.79251	33	(3)83.676	131	8.79334	34	1.50811	34	30	
30	(1)2698.9	2.1	8.79284	34	(3)83.807	131	8.79368	34	1.50777	34	20	
40	(1)2701.0	2.1	8.79318	34	(3)83.938	131	8.79402	34	1.50743	34	10	
50	(1)2703.1	2.1	8.79352	34	(3)84.069	132	8.79436	34	1.50709	34		
<b>34'</b>	(1)2705.2	2.1	8.79386	34	(3)84.201	131	8.79470	34	1.50675	34	<b>26'</b>	50
10	(1)2707.3	2.2	8.79420	33	(3)84.332	131	8.79504	34	1.50641	34	40	
20	(1)2709.5	2.1	8.79453	34	(3)84.463	132	8.79538	34	1.50607	33	30	
30	(1)2711.6	2.1	8.79487	34	(3)84.595	131	8.79572	34	1.50574	34	20	
40	(1)2713.7	2.1	8.79521	34	(3)84.726	132	8.79606	33	1.50540	34	10	
50	(1)2715.8	2.1	8.79555	33	(3)84.858	132	8.79639	34	1.50506	34		
<b>35'</b>	(1)2717.9	2.1	8.79588	34	(3)84.990	132	8.79673	34	1.50472	33	<b>25'</b>	50
10	(1)2720.0	2.1	8.79622	33	(3)85.122	132	8.79707	34	1.50439	34	40	
20	(1)2722.1	2.1	8.79655	34	(3)85.254	132	8.79741	33	1.50405	34	30	
30	(1)2724.2	2.1	8.79689	33	(3)85.386	132	8.79774	34	1.50371	33	20	
40	(1)2726.3	2.1	8.79722	34	(3)85.518	132	8.79808	34	1.50338	34	10	
50	(1)2728.4	2.1	8.79756	33	(3)85.650	133	8.79842	33	1.50304	33		
<b>36'</b>	(1)2730.5	2.2	8.79789	34	(3)85.783	132	8.79875	34	1.50271	34	<b>24'</b>	50
10	(1)2732.7	2.1	8.79823	33	(3)85.915	133	8.79909	33	1.50237	33	40	
20	(1)2734.8	2.1	8.79856	34	(3)86.048	133	8.79942	34	1.50204	34	30	
30	(1)2736.9	2.1	8.79890	33	(3)86.181	132	8.79976	33	1.50170	33	20	
40	(1)2739.0	2.1	8.79923	33	(3)86.313	133	8.80009	34	1.50137	34	10	
50	(1)2741.1	2.1	8.79956	34	(3)86.446	133	8.80043	33	1.50103	33		
<b>37'</b>	(1)2743.2	2.1	8.79990	33	(3)86.579	134	8.80076	34	1.50070	33	<b>23'</b>	50
10	(1)2745.3	2.1	8.80023	33	(3)86.713	133	8.80110	33	1.50037	34	40	
20	(1)2747.4	2.1	8.80056	34	(3)86.846	133	8.80143	34	1.50003	33	30	
30	(1)2749.5	2.1	8.80090	33	(3)86.979	134	8.80177	33	1.49970	33	20	
40	(1)2751.6	2.2	8.80123	33	(3)87.113	133	8.80210	33	1.49937	34	10	
50	(1)2753.8	2.1	8.80156	33	(3)87.246	134	8.80243	34	1.49903	33		
<b>38'</b>	(1)2755.9	2.1	8.80189	33	(3)87.380	134	8.80277	33	1.49870	33	<b>22'</b>	50
10	(1)2758.0	2.1	8.80222	33	(3)87.514	133	8.80310	33	1.49837	33	40	
20	(1)2760.1	2.1	8.80255	34	(3)87.647	134	8.80343	33	1.49804	33	30	
30	(1)2762.2	2.1	8.80289	33	(3)87.781	134	8.80376	33	1.49771	34	20	
40	(1)2764.3	2.1	8.80322	33	(3)87.915	135	8.80409	34	1.49737	33	10	
50	(1)2766.4	2.1	8.80355	33	(3)88.050	134	8.80443	33	1.49704	33		
<b>39'</b>	(1)2768.5	2.1	8.80388	33	(3)88.184	134	8.80476	33	1.49671	33	<b>21'</b>	50
10	(1)2770.6	2.1	8.80421	33	(3)88.318	135	8.80509	33	1.49638	33	40	
20	(1)2772.7	2.2	8.80454	33	(3)88.453	134	8.80542	33	1.49605	33	30	
30	(1)2774.9	2.1	8.80487	32	(3)88.587	135	8.80575	33	1.49572	33	20	
40	(1)2777.0	2.1	8.80519	33	(3)88.722	135	8.80608	33	1.49539	33	10	
50	(1)2779.1	2.1	8.80552	33	(3)88.857	135	8.80641	33	1.49506	33		
<b>40'</b>	(1)2781.2	2.1	8.80585	33	(3)88.992	135	8.80674	33	1.49473	33	<b>20'</b>	50



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>40'</b>	(1)2781.2	2.1	8.80585	33	(3)88.992	134	8.80674	33	1.49473	33	<b>20'</b>
10	(1)2783.3	2.1	8.80618	33	(3)89.126	136	8.80707	33	1.49440	33	50
20	(1)2785.4	2.1	8.80651	33	(3)89.262	135	8.80740	33	1.49407	33	40
30	(1)2787.5	2.1	8.80684	32	(3)89.397	135	8.80773	33	1.49375	33	30
40	(1)2789.6	2.1	8.80716	33	(3)89.532	135	8.80806	33	1.49342	33	20
50	(1)2791.7	2.1	8.80749	33	(3)89.667	136	8.80839	33	1.49309	33	10
<b>41'</b>	(1)2793.8	2.2	8.80782	33	(3)89.803	136	8.80872	33	1.49276	33	<b>19'</b>
10	(1)2796.0	2.1	8.80815	32	(3)89.939	135	8.80905	32	1.49243	32	50
20	(1)2798.1	2.1	8.80847	33	(3)90.074	136	8.80937	33	1.49211	33	40
30	(1)2800.2	2.1	8.80880	33	(3)90.210	136	8.80970	33	1.49178	33	30
40	(1)2802.3	2.1	8.80913	32	(3)90.346	136	8.81003	33	1.49145	32	20
50	(1)2804.4	2.1	8.80945	33	(3)90.482	136	8.81036	32	1.49113	33	10
<b>42'</b>	(1)2806.5	2.1	8.80978	32	(3)90.618	136	8.81068	33	1.49080	33	<b>18'</b>
10	(1)2808.6	2.1	8.81010	33	(3)90.754	137	8.81101	33	1.49047	32	50
20	(1)2810.7	2.1	8.81043	32	(3)90.891	136	8.81134	32	1.49015	33	40
30	(1)2812.8	2.1	8.81075	33	(3)91.027	136	8.81166	33	1.48982	32	30
40	(1)2814.9	2.2	8.81108	32	(3)91.163	137	8.81199	33	1.48950	33	20
50	(1)2817.1	2.1	8.81140	33	(3)91.300	137	8.81232	32	1.48917	32	10
<b>43'</b>	(1)2819.2	2.1	8.81173	32	(3)91.437	137	8.81264	33	1.48885	33	<b>17'</b>
10	(1)2821.3	2.1	8.81205	32	(3)91.574	137	8.81297	32	1.48852	32	50
20	(1)2823.4	2.1	8.81237	33	(3)91.711	137	8.81329	33	1.48820	33	40
30	(1)2825.5	2.1	8.81270	32	(3)91.848	137	8.81362	32	1.48787	32	30
40	(1)2827.6	2.1	8.81302	32	(3)91.985	137	8.81394	33	1.48755	32	20
50	(1)2829.7	2.1	8.81334	33	(3)92.122	137	8.81427	32	1.48723	32	10
<b>44'</b>	(1)2831.8	2.1	8.81367	32	(3)92.259	138	8.81459	32	1.48690	32	<b>16'</b>
10	(1)2833.9	2.1	8.81399	32	(3)92.397	137	8.81491	33	1.48658	32	50
20	(1)2836.0	2.2	8.81431	32	(3)92.534	138	8.81524	32	1.48626	32	40
30	(1)2838.2	2.1	8.81463	33	(3)92.672	138	8.81556	32	1.48593	32	30
40	(1)2840.3	2.1	8.81496	32	(3)92.810	138	8.81588	33	1.48561	32	20
50	(1)2842.4	2.1	8.81528	32	(3)92.948	137	8.81621	32	1.48529	32	10
<b>45'</b>	(1)2844.5	2.1	8.81560	32	(3)93.085	139	8.81653	32	1.48497	32	<b>15'</b>
10	(1)2846.6	2.1	8.81592	32	(3)93.224	138	8.81685	32	1.48464	32	50
20	(1)2848.7	2.1	8.81624	32	(3)93.362	138	8.81717	33	1.48432	32	40
30	(1)2850.8	2.1	8.81656	32	(3)93.500	138	8.81750	32	1.48400	32	30
40	(1)2852.9	2.1	8.81688	32	(3)93.638	139	8.81782	32	1.48368	32	20
50	(1)2855.0	2.1	8.81720	32	(3)93.777	138	8.81814	32	1.48336	32	10
<b>46'</b>	(1)2857.1	2.2	8.81752	32	(3)93.915	139	8.81846	32	1.48304	32	<b>14'</b>
10	(1)2859.3	2.1	8.81784	32	(3)94.054	139	8.81878	32	1.48272	32	50
20	(1)2861.4	2.1	8.81816	32	(3)94.193	139	8.81910	32	1.48240	32	40
30	(1)2863.5	2.1	8.81848	32	(3)94.332	139	8.81942	32	1.48208	32	30
40	(1)2865.6	2.1	8.81880	32	(3)94.471	139	8.81974	32	1.48176	32	20
50	(1)2867.7	2.1	8.81912	32	(3)94.610	139	8.82006	32	1.48144	32	10
<b>47'</b>	(1)2869.8	2.1	8.81944	31	(3)94.749	139	8.82038	32	1.48112	32	<b>13'</b>
10	(1)2871.9	2.1	8.81975	32	(3)94.888	140	8.82070	32	1.48080	32	50
20	(1)2874.0	2.1	8.82007	32	(3)95.028	139	8.82102	32	1.48048	32	40
30	(1)2876.1	2.1	8.82039	32	(3)95.167	140	8.82134	32	1.48016	31	30
40	(1)2878.2	2.2	8.82071	32	(3)95.307	139	8.82166	32	1.47985	31	20
50	(1)2880.4	2.1	8.82103	31	(3)95.446	140	8.82198	32	1.47953	32	10
<b>48'</b>	(1)2882.5	2.1	8.82134	32	(3)95.586	140	8.82230	32	1.47921	32	<b>12'</b>
10	(1)2884.6	2.1	8.82166	32	(3)95.726	140	8.82262	31	1.47889	32	50
20	(1)2886.7	2.1	8.82198	31	(3)95.866	140	8.82293	32	1.47857	31	40
30	(1)2888.8	2.1	8.82229	32	(3)96.006	140	8.82325	32	1.47826	32	30
40	(1)2890.9	2.1	8.82261	31	(3)96.146	141	8.82357	32	1.47794	32	20
50	(1)2893.0	2.1	8.82292	32	(3)96.287	140	8.82389	31	1.47762	31	10
<b>49'</b>	(1)2895.1	2.1	8.82324	32	(3)96.427	141	8.82420	32	1.47731	32	<b>11'</b>
10	(1)2897.2	2.1	8.82356	31	(3)96.568	140	8.82452	32	1.47699	31	50
20	(1)2899.3	2.2	8.82387	32	(3)96.708	141	8.82484	31	1.47668	32	40
30	(1)2901.5	2.1	8.82419	31	(3)96.849	141	8.82515	32	1.47636	32	30
40	(1)2903.6	2.1	8.82450	32	(3)96.990	141	8.82547	32	1.47604	32	20
50	(1)2905.7	2.1	8.82482	31	(3)97.131	141	8.82579	32	1.47573	31	10
<b>50'</b>	(1)2907.8	2.1	8.82513	31	(3)97.272	141	8.82610	31	1.47541	32	<b>10'</b>
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
<b>50'</b>	(1)2907.8	2.1	8.82513	31	(3)97.272	141	8.82610	32	1.47541	31	<b>10'</b>		
10	(1)2909.9	2.1	8.82544	32	(3)97.413	141	8.82642	31	1.47510	32		50	
20	(1)2912.0	2.1	8.82576	31	(3)97.554	141	8.82673	32	1.47478	31		40	
30	(1)2914.1	2.1	8.82607	32	(3)97.695	142	8.82705	31	1.47447	31		30	
40	(1)2916.2	2.1	8.82639	31	(3)97.837	141	8.82736	32	1.47416	32		20	
50	(1)2918.3	2.1	8.82670	31	(3)97.978	142	8.82768	31	1.47384	31		10	
<b>51'</b>	(1)2920.4	2.2	8.82701	31	(3)98.120	142	8.82799	32	1.47353	32		<b>9'</b>	
10	(1)2922.6	2.1	8.82732	32	(3)98.262	142	8.82831	31	1.47321	31		50	
20	(1)2924.7	2.1	8.82764	31	(3)98.404	142	8.82862	31	1.47290	31		40	
30	(1)2926.8	2.1	8.82795	31	(3)98.546	142	8.82893	32	1.47259	31		30	
40	(1)2928.9	2.1	8.82826	31	(3)98.688	142	8.82925	31	1.47228	32		20	
50	(1)2931.0	2.1	8.82857	31	(3)98.830	142	8.82956	31	1.47196	31		10	
<b>52'</b>	(1)2933.1	2.1	8.82888	32	(3)98.972	142	8.82987	32	1.47165	31		<b>8'</b>	
10	(1)2935.2	2.1	8.82920	31	(3)99.114	143	8.83019	31	1.47134	31		50	
20	(1)2937.3	2.1	8.82951	31	(3)99.257	142	8.83050	31	1.47103	31		40	
30	(1)2939.4	2.2	8.82982	31	(3)99.399	143	8.83081	31	1.47072	32		30	
40	(1)2941.6	2.1	8.83013	31	(3)99.542	143	8.83112	32	1.47040	31		20	
50	(1)2943.7	2.1	8.83044	31	(3)99.685	143	8.83144	31	1.47009	31		10	
<b>53'</b>	(1)2945.8	2.1	8.83075	31	(3)99.828	143	8.83175	31	1.46978	31		<b>7'</b>	
10	(1)2947.9	2.1	8.83106	31	(3)99.971	14	8.83206	31	1.46947	31		50	
20	(1)2950.0	2.1	8.83137	31	(2)100.11	15	8.83237	31	1.46916	31		40	
30	(1)2952.1	2.1	8.83168	31	(2)100.26	14	8.83268	31	1.46885	31		30	
40	(1)2954.2	2.1	8.83199	31	(2)100.40	14	8.83299	31	1.46854	31		20	
50	(1)2956.3	2.1	8.83230	31	(2)100.54	15	8.83330	31	1.46823	31		10	
<b>54'</b>	(1)2958.4	2.1	8.83261	31	(2)100.69	14	8.83361	31	1.46792	31		<b>6'</b>	
10	(1)2960.5	2.2	8.83292	30	(2)100.83	14	8.83392	31	1.46761	31		50	
20	(1)2962.7	2.1	8.83322	31	(2)100.97	15	8.83423	31	1.46730	31		40	
30	(1)2964.8	2.1	8.83353	31	(2)101.12	14	8.83454	31	1.46699	31		30	
40	(1)2966.9	2.1	8.83384	31	(2)101.26	15	8.83485	31	1.46668	30		20	
50	(1)2969.0	2.1	8.83415	31	(2)101.41	14	8.83516	31	1.46638	31		10	
<b>55'</b>	(1)2971.1	2.1	8.83446	30	(2)101.55	14	8.83547	31	1.46607	31		<b>5'</b>	
10	(1)2973.2	2.1	8.83476	31	(2)101.69	15	8.83578	31	1.46576	31		50	
20	(1)2975.3	2.1	8.83507	31	(2)101.84	14	8.83609	31	1.46545	31		40	
30	(1)2977.4	2.1	8.83538	30	(2)101.98	15	8.83640	31	1.46514	30		30	
40	(1)2979.5	2.1	8.83568	31	(2)102.13	14	8.83671	30	1.46484	31		20	
50	(1)2981.6	2.2	8.83599	31	(2)102.27	15	8.83701	31	1.46453	31		10	
<b>56'</b>	(1)2983.8	2.1	8.83630	30	(2)102.42	14	8.83732	31	1.46422	31		<b>4'</b>	
10	(1)2985.9	2.1	8.83660	31	(2)102.56	15	8.83763	31	1.46391	30		50	
20	(1)2988.0	2.1	8.83691	30	(2)102.71	14	8.83794	30	1.46361	31		40	
30	(1)2990.1	2.1	8.83721	31	(2)102.85	15	8.83824	31	1.46330	30		30	
40	(1)2992.2	2.1	8.83752	31	(2)103.00	14	8.83855	31	1.46300	31		20	
50	(1)2994.3	2.1	8.83783	30	(2)103.14	15	8.83886	30	1.46269	31		10	
<b>57'</b>	(1)2996.4	2.1	8.83813	31	(2)103.29	14	8.83916	31	1.46238	30		<b>3'</b>	
10	(1)2998.5	2.1	8.83844	30	(2)103.43	15	8.83947	31	1.46208	31		50	
20	(1)3000.6	2.2	8.83874	30	(2)103.58	14	8.83978	30	1.46177	30		40	
30	(1)3002.8	2.1	8.83904	31	(2)103.72	15	8.84008	31	1.46147	31		30	
40	(1)3004.9	2.1	8.83935	30	(2)103.87	15	8.84039	30	1.46116	30		20	
50	(1)3007.0	2.1	8.83965	31	(2)104.02	14	8.84069	31	1.46086	30		10	
<b>58'</b>	(1)3009.1	2.1	8.83996	30	(2)104.16	15	8.84100	30	1.46055	30		<b>2'</b>	
10	(1)3011.2	2.1	8.84026	30	(2)104.31	14	8.84130	31	1.46025	30		50	
20	(1)3013.3	2.1	8.84056	31	(2)104.45	15	8.84161	30	1.45995	31		40	
30	(1)3015.4	2.1	8.84087	30	(2)104.60	15	8.84191	31	1.45964	30		30	
40	(1)3017.5	2.1	8.84117	30	(2)104.75	14	8.84222	30	1.45934	31		20	
50	(1)3019.6	2.1	8.84147	30	(2)104.89	15	8.84252	30	1.45903	30		10	
<b>59'</b>	(1)3021.7	2.2	8.84177	31	(2)105.04	15	8.84282	31	1.45873	30		<b>1'</b>	
10	(1)3023.9	2.1	8.84208	30	(2)105.19	14	8.84313	30	1.45843	30		50	
20	(1)3026.0	2.1	8.84238	30	(2)105.33	15	8.84343	31	1.45813	31		40	
30	(1)3028.1	2.1	8.84268	30	(2)105.48	15	8.84374	30	1.45782	30		30	
40	(1)3030.2	2.1	8.84298	30	(2)105.63	14	8.84404	30	1.45752	30		20	
50	(1)3032.3	2.1	8.84328	30	(2)105.77	15	8.84434	30	1.45722	30		10	
<b>60'</b>	(1)3034.4	2.1	8.84358	30	(2)105.92	15	8.84464	30	1.45692	30		<b>0'</b>	

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>0'</b>	(13034.4		8.84358		(2)105.92		8.84464		1.45692			<b>60'</b>
10	(13036.5	2.1	8.84389	31	(2)106.07	15	8.84495	31	1.45661	31	50	
20	(13038.6	2.1	8.84419	30	(2)106.22	15	8.84525	30	1.45631	30	40	
30	(13040.7	2.2	8.84449	30	(2)106.36	14	8.84555	30	1.45601	30	30	
40	(13042.9	2.1	8.84479	30	(2)106.51	15	8.84585	30	1.45571	30	20	
50	(13045.0	2.1	8.84509	30	(2)106.66	15	8.84615	30	1.45541	30	10	
		2.1	8.84539	30	(2)106.81	14	8.84646	31	1.45511	30		<b>59'</b>
<b>1'</b>	(13047.1	2.1	8.84569	30	(2)106.95	15	8.84676	30	1.45481	30	50	
10	(13049.2	2.1	8.84599	30	(2)107.10	15	8.84706	30	1.45451	30	40	
20	(13051.3	2.1	8.84629	30	(2)107.25	15	8.84736	30	1.45421	30	30	
30	(13053.4	2.1	8.84659	29	(2)107.40	15	8.84766	30	1.45391	30	20	
40	(13055.5	2.1	8.84688	30	(2)107.55	15	8.84796	30	1.45361	30	10	
50	(13057.6	2.1	8.84718	30	(2)107.70	14	8.84826	30	1.45331	30		<b>58'</b>
		2.2	8.84748	30	(2)107.84	15	8.84856	30	1.45301	30	50	
<b>2'</b>	(13061.9	2.1	8.84778	30	(2)107.99	15	8.84886	30	1.45271	30	40	
10	(13064.0	2.1	8.84808	30	(2)108.14	15	8.84916	30	1.45241	30	30	
20	(13066.1	2.1	8.84838	29	(2)108.29	15	8.84946	30	1.45211	30	20	
30	(13068.2	2.1	8.84867	30	(2)108.44	15	8.84976	30	1.45181	29	10	
40	(13070.3	2.1	8.84897	30	(2)108.59	15	8.85006	30	1.45152	30		<b>57'</b>
50	(13072.4	2.1	8.84927	30	(2)108.74	15	8.85036	29	1.45122	30	50	
		2.1	8.84957	29	(2)108.89	15	8.85065	30	1.45092	30	40	
<b>3'</b>	(13078.7	2.1	8.84986	30	(2)109.04	14	8.85095	30	1.45062	29	30	
10	(13080.8	2.2	8.85016	29	(2)109.18	15	8.85125	30	1.45033	30	20	
20	(13083.0	2.1	8.85045	30	(2)109.33	15	8.85155	30	1.45003	30	10	
		2.1	8.85075	30	(2)109.48	15	8.85185	29	1.44973	30		<b>56'</b>
<b>4'</b>	(13085.1	2.1	8.85105	29	(2)109.63	15	8.85214	30	1.44943	29	50	
10	(13087.2	2.1	8.85134	30	(2)109.78	15	8.85244	30	1.44914	30	40	
20	(13089.3	2.1	8.85164	29	(2)109.93	15	8.85274	30	1.44884	29	30	
30	(13091.4	2.1	8.85193	30	(2)110.08	15	8.85304	29	1.44855	30	20	
40	(13093.5	2.1	8.85223	29	(2)110.23	15	8.85333	30	1.44825	30	10	
50	(13095.6	2.1	8.85252	30	(2)110.38	15	8.85363	29	1.44795	29		<b>55'</b>
		2.1	8.85282	29	(2)110.53	15	8.85392	30	1.44766	30	50	
<b>5'</b>	(13097.7	2.1	8.85311	30	(2)110.68	16	8.85422	30	1.44736	29	40	
10	(13099.8	2.2	8.85341	29	(2)110.84	15	8.85452	29	1.44707	30	30	
20	(13102.0	2.1	8.85370	30	(2)110.99	15	8.85481	30	1.44677	29	20	
30	(13104.1	2.1	8.85400	29	(2)111.14	15	8.85511	29	1.44648	30	10	
40	(13106.2	2.1	8.85429	29	(2)111.29	15	8.85540	30	1.44618	29		<b>54'</b>
50	(13108.3	2.1	8.85458	29	(2)111.44	15	8.85570	30	1.44589	29	50	
		2.1	8.85488	29	(2)111.59	15	8.85599	30	1.44559	30	40	
<b>6'</b>	(13110.4	2.1	8.85517	29	(2)111.74	15	8.85629	29	1.44530	29	30	
10	(13112.5	2.1	8.85546	30	(2)111.89	15	8.85658	30	1.44501	30	20	
20	(13114.6	2.1	8.85576	29	(2)112.04	16	8.85688	29	1.44471	29	10	
		2.1	8.85605	29	(2)112.20	15	8.85717	30	1.44442	29		<b>53'</b>
<b>7'</b>	(13123.1	2.1	8.85634	29	(2)112.35	15	8.85747	29	1.44413	30	50	
10	(13125.2	2.1	8.85663	30	(2)112.50	15	8.85776	29	1.44383	29	40	
20	(13127.3	2.1	8.85693	29	(2)112.65	15	8.85805	30	1.44354	29	30	
30	(13129.4	2.1	8.85722	29	(2)112.80	15	8.85835	29	1.44325	29	20	
40	(13131.5	2.1	8.85751	29	(2)112.95	16	8.85864	29	1.44296	30	10	
50	(13133.6	2.1	8.85780	29	(2)113.11	15	8.85893	29	1.44266	29		<b>52'</b>
		2.1	8.85809	29	(2)113.26	15	8.85922	30	1.44237	29	50	
<b>8'</b>	(13135.7	2.1	8.85838	29	(2)113.41	15	8.85952	29	1.44208	29	40	
10	(13137.8	2.2	8.85867	29	(2)113.56	16	8.85981	29	1.44179	29	30	
20	(13140.0	2.1	8.85896	30	(2)113.72	15	8.86010	29	1.44150	29	20	
30	(13142.1	2.1	8.85926	29	(2)113.87	15	8.86039	30	1.44121	30	10	
40	(13144.2	2.1	8.85955	29	(2)114.02	15	8.86069	29	1.44091	29		<b>51'</b>
50	(13146.3	2.1	8.85984	29	(2)114.17	16	8.86098	29	1.44062	29	50	
		2.1	8.86013	29	(2)114.33	15	8.86127	29	1.44033	29	40	
<b>9'</b>	(13148.4	2.1	8.86042	28	(2)114.48	15	8.86156	29	1.44004	29	30	
10	(13150.5	2.1	8.86070	29	(2)114.63	16	8.86185	29	1.43975	29	20	
20	(13152.6	2.1	8.86099	29	(2)114.79	15	8.86214	29	1.43946	29	10	
30	(13154.7	2.1	8.86128	29	(2)114.94	15	8.86243	29	1.43917	29		<b>50'</b>
40	(13156.8	2.2										
50	(13159.0	2.1										
<b>10'</b>	(13161.1	2.1										
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$	



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>10'</b>	(13161.6)	2.1	8.86128	29	(2)114.94	15	8.86243	29	1.43917	29	<b>50'</b>	50
10	(13163.2)	2.1	8.86157	29	(2)115.09	16	8.86272	29	1.43888	29		40
20	(13165.3)	2.1	8.86186	29	(2)115.25	15	8.86301	29	1.43859	29		30
30	(13167.4)	2.1	8.86215	29	(2)115.40	15	8.86330	29	1.43830	29		20
40	(13169.5)	2.1	8.86244	29	(2)115.55	16	8.86359	29	1.43801	29		10
50	(13171.6)	2.1	8.86273	28	(2)115.71	15	8.86388	29	1.43773	29		
<b>11'</b>	(13173.7)	2.1	8.86301	29	(2)115.86	16	8.86417	29	1.43744	29	<b>49'</b>	50
10	(13175.8)	2.2	8.86330	29	(2)116.02	15	8.86446	29	1.43715	29		40
20	(13178.0)	2.1	8.86359	29	(2)116.17	15	8.86475	29	1.43686	29		30
30	(13180.1)	2.1	8.86388	28	(2)116.32	16	8.86504	29	1.43657	29		20
40	(13182.2)	2.1	8.86416	29	(2)116.48	15	8.86533	29	1.43628	29		10
50	(13184.3)	2.1	8.86445	29	(2)116.63	16	8.86562	29	1.43600	29		
<b>12'</b>	(13186.4)	2.1	8.86474	28	(2)116.79	15	8.86591	28	1.43571	29	<b>48'</b>	50
10	(13188.5)	2.1	8.86502	29	(2)116.94	16	8.86619	29	1.43542	29		40
20	(13190.6)	2.1	8.86531	29	(2)117.10	15	8.86648	29	1.43513	28		30
30	(13192.7)	2.1	8.86560	28	(2)117.25	16	8.86677	29	1.43485	29		20
40	(13194.8)	2.2	8.86588	29	(2)117.41	15	8.86706	28	1.43456	29		10
50	(13197.0)	2.1	8.86617	28	(2)117.56	16	8.86734	29	1.43427	28		
<b>13'</b>	(13199.1)	2.1	8.86645	29	(2)117.72	15	8.86763	29	1.43399	29	<b>47'</b>	50
10	(13201.2)	2.1	8.86674	29	(2)117.87	16	8.86792	29	1.43370	29		40
20	(13203.3)	2.1	8.86703	28	(2)118.03	15	8.86821	28	1.43341	28		30
30	(13205.4)	2.1	8.86731	29	(2)118.18	16	8.86849	29	1.43313	29		20
40	(13207.5)	2.1	8.86760	28	(2)118.34	15	8.86878	29	1.43284	28		10
50	(13209.6)	2.1	8.86788	28	(2)118.49	16	8.86907	28	1.43256	29		
<b>14'</b>	(13211.7)	2.1	8.86816	29	(2)118.65	16	8.86935	29	1.43227	28	<b>46'</b>	50
10	(13213.8)	2.2	8.86845	28	(2)118.81	15	8.86964	28	1.43199	29		40
20	(13216.0)	2.1	8.86873	29	(2)118.96	16	8.86992	29	1.43170	28		30
30	(13218.1)	2.1	8.86902	28	(2)119.12	15	8.87021	28	1.43142	29		20
40	(13220.2)	2.1	8.86930	28	(2)119.27	16	8.87049	29	1.43113	28		10
50	(13222.3)	2.1	8.86958	29	(2)119.43	16	8.87078	28	1.43085	29		
<b>15'</b>	(13224.4)	2.1	8.86987	28	(2)119.59	15	8.87106	29	1.43056	28	<b>45'</b>	50
10	(13226.5)	2.1	8.87015	28	(2)119.74	16	8.87135	28	1.43028	28		40
20	(13228.6)	2.1	8.87043	29	(2)119.90	16	8.87163	29	1.43000	29		30
30	(13230.7)	2.1	8.87072	28	(2)120.06	15	8.87192	28	1.42971	28		20
40	(13232.8)	2.2	8.87100	28	(2)120.21	16	8.87220	29	1.42943	28		10
50	(13235.0)	2.1	8.87128	28	(2)120.37	16	8.87249	28	1.42915	29		
<b>16'</b>	(13237.1)	2.1	8.87156	29	(2)120.53	16	8.87277	28	1.42886	28	<b>44'</b>	50
10	(13239.2)	2.1	8.87185	28	(2)120.69	15	8.87305	29	1.42858	28		40
20	(13241.3)	2.1	8.87213	28	(2)120.84	16	8.87334	28	1.42830	29		30
30	(13243.4)	2.1	8.87241	28	(2)121.00	16	8.87362	28	1.42801	29		20
40	(13245.5)	2.1	8.87269	28	(2)121.16	15	8.87390	29	1.42773	28		10
50	(13247.6)	2.1	8.87297	29	(2)121.31	16	8.87419	28	1.42745	28		
<b>17'</b>	(13249.7)	2.2	8.87325	28	(2)121.47	16	8.87447	28	1.42717	28	<b>43'</b>	50
10	(13251.9)	2.1	8.87354	28	(2)121.63	16	8.87475	28	1.42689	29		40
20	(13254.0)	2.1	8.87382	28	(2)121.79	16	8.87503	29	1.42660	28		30
30	(13256.1)	2.1	8.87410	28	(2)121.95	15	8.87532	28	1.42632	28		20
40	(13258.2)	2.1	8.87438	28	(2)122.10	16	8.87560	28	1.42604	28		10
50	(13260.3)	2.1	8.87466	28	(2)122.26	16	8.87588	28	1.42576	28		
<b>18'</b>	(13262.4)	2.1	8.87494	28	(2)122.42	16	8.87616	28	1.42548	28	<b>42'</b>	50
10	(13264.5)	2.1	8.87522	28	(2)122.58	16	8.87644	29	1.42520	28		40
20	(13266.6)	2.1	8.87550	28	(2)122.74	16	8.87673	28	1.42492	28		30
30	(13268.7)	2.2	8.87578	28	(2)122.90	15	8.87701	28	1.42464	28		20
40	(13270.9)	2.1	8.87606	28	(2)123.05	16	8.87729	28	1.42436	28		10
50	(13273.0)	2.1	8.87634	27	(2)123.21	16	8.87757	28	1.42408	28		
<b>19'</b>	(13275.1)	2.1	8.87661	28	(2)123.37	16	8.87785	28	1.42380	28	<b>41'</b>	50
10	(13277.2)	2.1	8.87689	28	(2)123.53	16	8.87813	28	1.42352	28		40
20	(13279.3)	2.1	8.87717	28	(2)123.69	16	8.87841	28	1.42324	28		30
30	(13281.4)	2.1	8.87745	28	(2)123.85	16	8.87869	28	1.42296	28		20
40	(13283.5)	2.1	8.87773	28	(2)124.01	16	8.87897	28	1.42268	28		10
50	(13285.6)	2.1	8.87801	28	(2)124.17	16	8.87925	28	1.42240	28		
<b>20'</b>	(13287.7)	2.1	8.87829	28	(2)124.33	16	8.87953	28	1.42212	28	<b>40'</b>	50

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z log Cotg z l. Cosc z



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>30'</b>	(13287.7		8.87829	27	(2)124.33		8.87953		1.42212			<b>40'</b>
10	(13289.9	2.1	8.87856	28	(2)124.49	16	8.87981	28	1.42184	28	28	50
20	(13292.0	2.1	8.87884	28	(2)124.65	16	8.88009	28	1.42157	28	28	40
30	(13294.1	2.1	8.87912	28	(2)124.81	16	8.88037	28	1.42129	28	28	30
40	(13296.2	2.1	8.87940	27	(2)124.97	16	8.88065	27	1.42101	27	27	20
50	(13298.3	2.1	8.87967	28	(2)125.13	16	8.88092	28	1.42073	28	28	10
<b>21'</b>	(13300.4	2.1	8.87995	28	(2)125.29	16	8.88120	28	1.42045	28		<b>39'</b>
10	(13302.5	2.1	8.88023	27	(2)125.45	16	8.88148	28	1.42018	28	28	50
20	(13304.6	2.1	8.88050	28	(2)125.61	16	8.88176	28	1.41990	28	28	40
30	(13306.7	2.2	8.88078	28	(2)125.77	16	8.88204	27	1.41962	27	27	30
40	(13308.9	2.1	8.88106	27	(2)125.93	16	8.88231	28	1.41935	28	28	20
50	(13311.0	2.1	8.88133	28	(2)126.09	16	8.88259	28	1.41907	28	28	10
<b>22'</b>	(13313.1	2.1	8.88161	27	(2)126.25	16	8.88287	28	1.41879	27		<b>38'</b>
10	(13315.2	2.1	8.88188	28	(2)126.41	16	8.88315	27	1.41852	28	28	50
20	(13317.3	2.1	8.88216	27	(2)126.57	16	8.88342	28	1.41824	28	28	40
30	(13319.4	2.1	8.88243	28	(2)126.73	16	8.88370	28	1.41796	27	27	30
40	(13321.5	2.1	8.88271	27	(2)126.89	16	8.88398	27	1.41769	28	28	20
50	(13323.6	2.2	8.88298	28	(2)127.05	17	8.88425	28	1.41741	27	27	10
<b>23'</b>	(13325.8	2.1	8.88326	27	(2)127.22	16	8.88453	28	1.41714	28		<b>37'</b>
10	(13327.9	2.1	8.88353	28	(2)127.38	16	8.88481	27	1.41686	28	28	50
20	(13330.0	2.1	8.88381	27	(2)127.54	16	8.88508	28	1.41659	28	28	40
30	(13332.1	2.1	8.88408	28	(2)127.70	16	8.88536	27	1.41631	27	27	30
40	(13334.2	2.1	8.88436	27	(2)127.86	16	8.88563	28	1.41604	28	28	20
50	(13336.3	2.1	8.88463	27	(2)128.02	17	8.88591	27	1.41576	28	28	10
<b>24'</b>	(13338.4	2.1	8.88490	28	(2)128.19	16	8.88618	28	1.41549	28		<b>36'</b>
10	(13340.5	2.1	8.88518	27	(2)128.35	16	8.88646	28	1.41521	27	27	50
20	(13342.6	2.2	8.88545	27	(2)128.51	16	8.88674	27	1.41494	28	28	40
30	(13344.8	2.1	8.88572	28	(2)128.67	17	8.88701	27	1.41466	27	27	30
40	(13346.9	2.1	8.88600	27	(2)128.84	16	8.88728	28	1.41439	28	28	20
50	(13349.0	2.1	8.88627	27	(2)129.00	16	8.88756	27	1.41412	28	28	10
<b>25'</b>	(13351.1	2.1	8.88654	27	(2)129.16	16	8.88783	28	1.41384	27		<b>35'</b>
10	(13353.2	2.1	8.88681	28	(2)129.32	17	8.88811	27	1.41357	27	27	50
20	(13355.3	2.1	8.88709	27	(2)129.49	16	8.88838	28	1.41330	28	28	40
30	(13357.4	2.1	8.88736	27	(2)129.65	16	8.88866	27	1.41302	27	27	30
40	(13359.5	2.2	8.88763	27	(2)129.81	16	8.88893	27	1.41275	27	27	20
50	(13361.7	2.1	8.88790	27	(2)129.97	17	8.88920	28	1.41248	27	27	10
<b>26'</b>	(13363.8	2.1	8.88817	28	(2)130.14	16	8.88948	27	1.41221	28		<b>34'</b>
10	(13365.9	2.1	8.88845	27	(2)130.30	16	8.88975	27	1.41193	27	27	50
20	(13368.0	2.1	8.88872	27	(2)130.46	16	8.89002	27	1.41166	27	27	40
30	(13370.1	2.1	8.88899	27	(2)130.63	16	8.89029	28	1.41139	27	27	30
40	(13372.2	2.1	8.88926	27	(2)130.79	17	8.89057	27	1.41112	27	27	20
50	(13374.3	2.1	8.88953	27	(2)130.96	16	8.89084	27	1.41085	28	28	10
<b>27'</b>	(13376.4	2.1	8.88980	27	(2)131.12	16	8.89111	27	1.41057	27		<b>33'</b>
10	(13378.5	2.2	8.89007	27	(2)131.28	17	8.89138	28	1.41030	27	27	50
20	(13380.7	2.1	8.89034	27	(2)131.45	16	8.89166	27	1.41003	27	27	40
30	(13382.8	2.1	8.89061	27	(2)131.61	17	8.89193	27	1.40976	27	27	30
40	(13384.9	2.1	8.89088	27	(2)131.78	16	8.89220	27	1.40949	27	27	20
50	(13387.0	2.1	8.89115	27	(2)131.94	16	8.89247	27	1.40922	27	27	10
<b>28'</b>	(13389.1	2.1	8.89142	27	(2)132.10	17	8.89274	27	1.40895	27		<b>32'</b>
10	(13391.2	2.1	8.89169	27	(2)132.27	16	8.89301	27	1.40868	27	27	50
20	(13393.3	2.1	8.89196	27	(2)132.43	17	8.89328	27	1.40841	27	27	40
30	(13395.4	2.2	8.89223	27	(2)132.60	16	8.89355	28	1.40814	27	27	30
40	(13397.6	2.1	8.89250	27	(2)132.76	17	8.89383	27	1.40787	27	27	20
50	(13399.7	2.1	8.89277	27	(2)132.93	16	8.89410	27	1.40760	27	27	10
<b>29'</b>	(13401.8	2.1	8.89304	26	(2)133.09	17	8.89437	27	1.40733	27		<b>31'</b>
10	(13403.9	2.1	8.89330	27	(2)133.26	16	8.89464	27	1.40706	27	27	50
20	(13406.0	2.1	8.89357	27	(2)133.42	17	8.89491	27	1.40679	27	27	40
30	(13408.1	2.1	8.89384	27	(2)133.59	16	8.89518	27	1.40652	27	27	30
40	(13410.2	2.1	8.89411	27	(2)133.75	17	8.89545	26	1.40625	27	27	20
50	(13412.3	2.2	8.89438	26	(2)133.92	17	8.89571	26	1.40599	26	26	10
<b>30'</b>	(13414.5		8.89464		(2)134.09	17	8.89598		1.40572			<b>30'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

z'

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.						
<b>30'</b>	(13411.5		8.89464	27	(2)131.09	16	8.89598	27	1.40572					<b>30'</b>
10	(13116.6	2.1	8.89491	27	(2)131.25	17	8.89625	27	1.40545					50
20	(13118.7	2.1	8.89518	27	(2)131.42	17	8.89652	27	1.40518					40
30	(13420.8	2.1	8.89545	26	(2)131.58	17	8.89679	27	1.40491					30
40	(13422.9	2.1	8.89571	27	(2)131.75	17	8.89706	27	1.40464					20
50	(13425.0	2.1	8.89598	27	(2)131.92	17	8.89733	27	1.40438					10
<b>31'</b>	(13427.1	2.1	8.89625	26	(2)135.08	17	8.89760	26	1.40411					<b>29'</b>
10	(13429.2	2.1	8.89651	27	(2)135.25	16	8.89786	27	1.40384					50
20	(13431.3	2.2	8.89678	26	(2)135.41	17	8.89813	27	1.40358					40
30	(13433.5	2.1	8.89704	27	(2)135.58	17	8.89840	27	1.40331					30
40	(13435.6	2.1	8.89731	27	(2)135.75	16	8.89867	27	1.40304					20
50	(13437.7	2.1	8.89758	26	(2)135.91	17	8.89894	26	1.40277					10
<b>32'</b>	(13439.8	2.1	8.89784	27	(2)136.08	17	8.89920	27	1.40251					<b>28'</b>
10	(13441.9	2.1	8.89811	26	(2)136.25	17	8.89947	27	1.40224					50
20	(13444.0	2.1	8.89837	27	(2)136.42	16	8.89974	26	1.40198					40
30	(13446.1	2.1	8.89864	26	(2)136.58	17	8.90000	27	1.40171					30
40	(13448.2	2.2	8.89890	27	(2)136.75	17	8.90027	27	1.40144					20
50	(13450.4	2.1	8.89917	26	(2)136.92	16	8.90054	26	1.40118					10
<b>33'</b>	(13452.5	2.1	8.89943	27	(2)137.08	17	8.90080	27	1.40091					<b>27'</b>
10	(13454.6	2.1	8.89970	26	(2)137.25	17	8.90107	27	1.40065					50
20	(13456.7	2.1	8.89996	27	(2)137.42	17	8.90134	26	1.40038					40
30	(13458.8	2.1	8.90023	26	(2)137.59	17	8.90160	27	1.40012					30
40	(13460.9	2.1	8.90049	26	(2)137.76	16	8.90187	26	1.39985					20
50	(13463.0	2.1	8.90075	27	(2)137.92	17	8.90213	27	1.39959					10
<b>34'</b>	(13465.1	2.2	8.90102	26	(2)138.09	17	8.90240	26	1.39932					<b>26'</b>
10	(13467.3	2.1	8.90128	26	(2)138.26	17	8.90266	27	1.39906					50
20	(13469.4	2.1	8.90154	27	(2)138.43	17	8.90293	26	1.39879					40
30	(13471.5	2.1	8.90181	26	(2)138.60	17	8.90319	27	1.39853					30
40	(13473.6	2.1	8.90207	26	(2)138.77	16	8.90346	26	1.39827					20
50	(13475.7	2.1	8.90233	27	(2)138.93	17	8.90372	27	1.39800					10
<b>35'</b>	(13477.8	2.1	8.90260	26	(2)139.10	17	8.90399	26	1.39774					<b>25'</b>
10	(13479.9	2.1	8.90286	26	(2)139.27	17	8.90425	26	1.39748					50
20	(13482.0	2.2	8.90312	26	(2)139.44	17	8.90451	27	1.39721					40
30	(13484.2	2.1	8.90338	26	(2)139.61	17	8.90478	26	1.39695					30
40	(13486.3	2.1	8.90364	27	(2)139.78	17	8.90504	26	1.39669					20
50	(13488.4	2.1	8.90391	26	(2)139.95	17	8.90531	27	1.39642					10
<b>36'</b>	(13490.5	2.1	8.90417	26	(2)140.12	17	8.90557	26	1.39616					<b>24'</b>
10	(13492.6	2.1	8.90443	26	(2)140.29	17	8.90583	27	1.39590					50
20	(13494.7	2.1	8.90469	26	(2)140.46	17	8.90610	26	1.39564					40
30	(13496.8	2.1	8.90495	26	(2)140.63	17	8.90636	26	1.39537					30
40	(13498.9	2.2	8.90521	27	(2)140.80	17	8.90662	26	1.39511					20
50	(13501.1	2.1	8.90548	26	(2)140.97	17	8.90688	27	1.39485					10
<b>37'</b>	(13503.2	2.1	8.90574	26	(2)141.14	17	8.90715	26	1.39459					<b>23'</b>
10	(13505.3	2.1	8.90600	26	(2)141.31	17	8.90741	26	1.39433					50
20	(13507.4	2.1	8.90626	26	(2)141.48	17	8.90767	26	1.39407					40
30	(13509.5	2.1	8.90652	26	(2)141.65	17	8.90793	27	1.39380					30
40	(13511.6	2.1	8.90678	26	(2)141.82	17	8.90820	27	1.39354					20
50	(13513.7	2.1	8.90704	26	(2)141.99	17	8.90846	26	1.39328					10
<b>38'</b>	(13515.8	2.2	8.90730	26	(2)142.16	17	8.90872	26	1.39302					<b>22'</b>
10	(13518.0	2.1	8.90756	26	(2)142.33	17	8.90898	26	1.39276					50
20	(13520.1	2.1	8.90782	26	(2)142.50	17	8.90924	26	1.39250					40
30	(13522.2	2.1	8.90808	26	(2)142.67	17	8.90950	26	1.39224					30
40	(13524.3	2.1	8.90834	25	(2)142.84	17	8.90976	26	1.39198					20
50	(13526.4	2.1	8.90859	26	(2)143.01	17	8.91002	27	1.39172					10
<b>39'</b>	(13528.5	2.1	8.90885	26	(2)143.18	17	8.91029	26	1.39146					<b>21'</b>
10	(13530.6	2.1	8.90911	26	(2)143.35	17	8.91055	26	1.39120					50
20	(13532.7	2.2	8.90937	26	(2)143.53	18	8.91081	26	1.39094					40
30	(13534.9	2.1	8.90963	26	(2)143.70	17	8.91107	26	1.39068					30
40	(13537.0	2.1	8.90989	26	(2)143.87	17	8.91133	26	1.39042					20
50	(13539.1	2.1	8.91015	26	(2)144.04	17	8.91159	26	1.39016					10
<b>40'</b>	(13541.2	2.1	8.91040	25	(2)144.21	17	8.91185	26	1.38991					<b>20'</b>

log cos  $\omega$  / log Sec z      Diff.      l. cosec  $\omega$  / log Cotg z      Diff.      log cotg  $\omega$  / l. Cosc z      Diff.      z'      Diff.       $\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>40'</b>	(1)3541.2	2.1	8.91040	26	(2)141.21	17	8.91185	26	1.38991	26	<b>20'</b>	
10	(1)3543.3	2.1	8.91066	26	(2)144.38	18	8.91211	26	1.38965	26	50	
20	(1)3545.4	2.1	8.91092	26	(2)144.56	17	8.91236	25	1.38939	26	40	
30	(1)3547.5	2.1	8.91118	25	(2)144.73	17	8.91262	26	1.38913	26	30	
40	(1)3549.6	2.2	8.91143	26	(2)144.90	17	8.91288	26	1.38887	26	20	
50	(1)3551.8	2.1	8.91169	26	(2)145.07	18	8.91314	26	1.38861	26	10	
<b>41'</b>	(1)3553.9	2.1	8.91195	26	(2)145.25	17	8.91340	26	1.38836	26	<b>19'</b>	
10	(1)3556.0	2.1	8.91221	25	(2)145.42	17	8.91366	26	1.38810	26	50	
20	(1)3558.1	2.1	8.91246	26	(2)145.59	17	8.91392	26	1.38784	26	40	
30	(1)3560.2	2.1	8.91272	26	(2)145.76	18	8.91418	25	1.38758	26	30	
40	(1)3562.3	2.1	8.91298	25	(2)145.94	17	8.91443	26	1.38733	26	20	
50	(1)3564.4	2.1	8.91323	25	(2)146.11	17	8.91469	26	1.38707	26	10	
<b>42'</b>	(1)3566.5	2.2	8.91349	25	(2)146.28	18	8.91495	26	1.38681	26	<b>18'</b>	
10	(1)3568.7	2.1	8.91374	26	(2)146.46	17	8.91521	26	1.38655	26	50	
20	(1)3570.8	2.1	8.91400	26	(2)146.63	17	8.91547	25	1.38630	26	40	
30	(1)3572.9	2.1	8.91425	25	(2)146.80	18	8.91572	26	1.38604	26	30	
40	(1)3575.0	2.1	8.91451	26	(2)146.98	17	8.91598	26	1.38578	26	20	
50	(1)3577.1	2.1	8.91477	25	(2)147.15	17	8.91624	26	1.38553	26	10	
<b>43'</b>	(1)3579.2	2.1	8.91502	26	(2)147.32	18	8.91650	25	1.38527	26	<b>17'</b>	
10	(1)3581.3	2.1	8.91528	25	(2)147.50	17	8.91675	26	1.38502	26	50	
20	(1)3583.4	2.2	8.91553	26	(2)147.67	17	8.91701	26	1.38476	26	40	
30	(1)3585.6	2.1	8.91579	25	(2)147.84	18	8.91727	25	1.38450	26	30	
40	(1)3587.7	2.1	8.91604	26	(2)148.02	17	8.91752	26	1.38425	26	20	
50	(1)3589.8	2.1	8.91630	25	(2)148.19	18	8.91778	25	1.38399	26	10	
<b>44'</b>	(1)3591.9	2.1	8.91655	25	(2)148.37	17	8.91803	26	1.38374	26	<b>16'</b>	
10	(1)3594.0	2.1	8.91680	26	(2)148.54	18	8.91829	26	1.38348	26	50	
20	(1)3596.1	2.1	8.91706	25	(2)148.72	17	8.91855	25	1.38323	26	40	
30	(1)3598.2	2.1	8.91731	26	(2)148.89	18	8.91880	26	1.38297	26	30	
40	(1)3600.3	2.2	8.91757	25	(2)149.07	17	8.91906	25	1.38272	26	20	
50	(1)3602.5	2.1	8.91782	25	(2)149.24	18	8.91931	26	1.38246	26	10	
<b>45'</b>	(1)3604.6	2.1	8.91807	26	(2)149.42	17	8.91957	25	1.38221	26	<b>15'</b>	
10	(1)3606.7	2.1	8.91833	25	(2)149.59	18	8.91982	26	1.38196	26	50	
20	(1)3608.8	2.1	8.91858	25	(2)149.77	17	8.92008	25	1.38170	26	40	
30	(1)3610.9	2.1	8.91883	26	(2)149.94	18	8.92033	26	1.38145	26	30	
40	(1)3613.0	2.1	8.91909	25	(2)150.12	17	8.92059	25	1.38119	26	20	
50	(1)3615.1	2.1	8.91934	25	(2)150.29	18	8.92084	26	1.38094	26	10	
<b>46'</b>	(1)3617.2	2.2	8.91959	25	(2)150.47	17	8.92110	25	1.38069	26	<b>14'</b>	
10	(1)3619.4	2.1	8.91984	26	(2)150.64	18	8.92135	25	1.38043	26	50	
20	(1)3621.5	2.1	8.92010	25	(2)150.82	17	8.92160	26	1.38018	26	40	
30	(1)3623.6	2.1	8.92035	25	(2)150.99	18	8.92186	25	1.37993	26	30	
40	(1)3625.7	2.1	8.92060	25	(2)151.17	18	8.92211	26	1.37967	26	20	
50	(1)3627.8	2.1	8.92085	25	(2)151.35	17	8.92237	25	1.37942	26	10	
<b>47'</b>	(1)3629.9	2.1	8.92110	26	(2)151.52	18	8.92262	25	1.37917	26	<b>13'</b>	
10	(1)3632.0	2.1	8.92135	26	(2)151.70	17	8.92287	26	1.37892	26	50	
20	(1)3634.1	2.2	8.92161	25	(2)151.87	18	8.92313	25	1.37866	26	40	
30	(1)3636.3	2.1	8.92186	25	(2)152.05	18	8.92338	25	1.37841	26	30	
40	(1)3638.4	2.1	8.92211	25	(2)152.23	17	8.92363	25	1.37816	26	20	
50	(1)3640.5	2.1	8.92236	25	(2)152.40	18	8.92388	26	1.37791	26	10	
<b>48'</b>	(1)3642.6	2.1	8.92261	25	(2)152.58	18	8.92414	25	1.37766	26	<b>12'</b>	
10	(1)3644.7	2.1	8.92286	25	(2)152.76	17	8.92439	25	1.37741	26	50	
20	(1)3646.8	2.1	8.92311	25	(2)152.93	18	8.92464	25	1.37715	26	40	
30	(1)3648.9	2.2	8.92336	25	(2)153.11	18	8.92489	26	1.37690	26	30	
40	(1)3651.1	2.1	8.92361	25	(2)153.29	18	8.92515	25	1.37665	26	20	
50	(1)3653.2	2.1	8.92386	25	(2)153.47	17	8.92540	25	1.37640	26	10	
<b>49'</b>	(1)3655.3	2.1	8.92411	25	(2)153.64	18	8.92565	25	1.37615	26	<b>11'</b>	
10	(1)3657.4	2.1	8.92436	25	(2)153.82	18	8.92590	25	1.37590	26	50	
20	(1)3659.5	2.1	8.92461	25	(2)154.00	18	8.92615	25	1.37565	26	40	
30	(1)3661.6	2.1	8.92486	25	(2)154.18	17	8.92640	25	1.37540	26	30	
40	(1)3663.7	2.1	8.92511	25	(2)154.35	18	8.92665	26	1.37515	26	20	
50	(1)3665.8	2.2	8.92536	25	(2)154.53	18	8.92691	26	1.37490	26	10	
<b>50'</b>	(1)3668.0	2.2	8.92561	25	(2)154.71	18	8.92716	25	1.37465	26	<b>10'</b>	

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.    l. Cosec z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.	$z'$	Diff.	$\omega$
<b>50'</b>	(1)3668.0	2.1	8.92561	25	(2)151.71	18	8.92716	25	1.37465	25	<b>10'</b>
10	(1)3670.1	2.1	8.92586	25	(2)151.89	18	8.92741	25	1.37440	25	50
20	(1)3672.2	2.1	8.92611	25	(2)155.07	17	8.92766	25	1.37415	25	40
30	(1)3674.3	2.1	8.92636	24	(2)155.24	18	8.92791	25	1.37390	25	30
40	(1)3676.4	2.1	8.92660	25	(2)155.42	18	8.92816	25	1.37365	25	20
50	(1)3678.5	2.1	8.92685	25	(2)155.60	18	8.92841	25	1.37340	25	10
<b>51'</b>	(1)3680.6	2.1	8.92710	25	(2)155.78	18	8.92866	25	1.37315	25	<b>9'</b>
10	(1)3682.7	2.2	8.92735	25	(2)155.96	18	8.92891	25	1.37290	25	50
20	(1)3684.9	2.1	8.92760	21	(2)156.14	18	8.92916	25	1.37265	25	40
30	(1)3687.0	2.1	8.92784	25	(2)156.32	18	8.92941	25	1.37240	24	30
40	(1)3689.1	2.1	8.92809	25	(2)156.50	17	8.92966	25	1.37216	25	10
50	(1)3691.2	2.1	8.92834	25	(2)156.67	18	8.92991	25	1.37191	25	<b>8'</b>
<b>52'</b>	(1)3693.3	2.1	8.92859	21	(2)156.85	18	8.93016	21	1.37166	25	50
10	(1)3695.4	2.1	8.92883	25	(2)157.03	18	8.93040	25	1.37141	25	40
20	(1)3697.5	2.2	8.92908	25	(2)157.21	18	8.93065	25	1.37116	24	30
30	(1)3699.7	2.1	8.92933	24	(2)157.39	18	8.93090	25	1.37092	25	20
40	(1)3701.8	2.1	8.92957	25	(2)157.57	18	8.93115	25	1.37067	25	10
50	(1)3703.9	2.1	8.92982	25	(2)157.75	18	8.93140	25	1.37042	25	<b>7'</b>
<b>53'</b>	(1)3706.0	2.1	8.93007	24	(2)157.93	18	8.93165	25	1.37017	24	50
10	(1)3708.1	2.1	8.93031	25	(2)158.11	18	8.93190	24	1.36993	25	40
20	(1)3710.2	2.1	8.93056	25	(2)158.29	18	8.93214	25	1.36968	25	30
30	(1)3712.3	2.1	8.93081	24	(2)158.47	18	8.93239	25	1.36943	24	20
40	(1)3714.4	2.2	8.93105	25	(2)158.65	18	8.93264	25	1.36919	25	10
50	(1)3716.6	2.1	8.93130	24	(2)158.83	18	8.93289	24	1.36894	25	<b>6'</b>
<b>54'</b>	(1)3718.7	2.1	8.93154	25	(2)159.01	18	8.93313	25	1.36869	24	50
10	(1)3720.8	2.1	8.93179	25	(2)159.19	18	8.93338	25	1.36845	25	40
20	(1)3722.9	2.1	8.93203	25	(2)159.37	18	8.93363	25	1.36820	25	30
30	(1)3725.0	2.1	8.93228	25	(2)159.55	19	8.93388	24	1.36795	24	20
40	(1)3727.1	2.1	8.93253	24	(2)159.74	18	8.93412	25	1.36771	25	10
50	(1)3729.2	2.2	8.93277	24	(2)159.92	18	8.93437	25	1.36746	24	<b>5'</b>
<b>55'</b>	(1)3731.4	2.1	8.93301	25	(2)160.10	18	8.93462	24	1.36722	25	50
10	(1)3733.5	2.1	8.93326	25	(2)160.28	18	8.93486	25	1.36697	25	40
20	(1)3735.6	2.1	8.93350	24	(2)160.46	18	8.93511	25	1.36672	24	30
30	(1)3737.7	2.1	8.93375	24	(2)160.64	18	8.93536	24	1.36648	25	20
40	(1)3739.8	2.1	8.93399	25	(2)160.82	18	8.93560	25	1.36623	24	10
50	(1)3741.9	2.1	8.93424	24	(2)161.00	19	8.93585	24	1.36599	25	<b>4'</b>
<b>56'</b>	(1)3744.0	2.1	8.93448	24	(2)161.19	18	8.93609	25	1.36574	24	50
10	(1)3746.1	2.2	8.93472	25	(2)161.37	18	8.93634	24	1.36550	25	40
20	(1)3748.3	2.1	8.93497	24	(2)161.55	18	8.93658	25	1.36525	24	30
30	(1)3750.4	2.1	8.93521	25	(2)161.73	18	8.93683	24	1.36501	24	20
40	(1)3752.5	2.1	8.93546	24	(2)161.91	19	8.93707	25	1.36477	25	10
50	(1)3754.6	2.1	8.93570	24	(2)162.10	18	8.93732	24	1.36452	24	<b>3'</b>
<b>57'</b>	(1)3756.7	2.1	8.93594	25	(2)162.28	18	8.93756	25	1.36428	25	50
10	(1)3758.8	2.1	8.93619	25	(2)162.46	18	8.93781	24	1.36403	24	40
20	(1)3760.9	2.2	8.93643	24	(2)162.64	19	8.93805	25	1.36379	24	30
30	(1)3763.1	2.1	8.93667	24	(2)162.83	18	8.93830	24	1.36355	25	20
40	(1)3765.2	2.1	8.93691	25	(2)163.01	18	8.93854	25	1.36330	24	10
50	(1)3767.3	2.1	8.93716	25	(2)163.19	18	8.93879	24	1.36306	24	<b>2'</b>
<b>58'</b>	(1)3769.4	2.1	8.93740	24	(2)163.37	19	8.93903	25	1.36282	25	50
10	(1)3771.5	2.1	8.93764	24	(2)163.56	18	8.93928	24	1.36257	24	40
20	(1)3773.6	2.1	8.93788	21	(2)163.74	18	8.93952	24	1.36233	24	30
30	(1)3775.7	2.1	8.93812	25	(2)163.92	19	8.93976	25	1.36209	25	20
40	(1)3777.8	2.2	8.93837	24	(2)164.11	18	8.94001	24	1.36184	24	10
50	(1)3780.0	2.1	8.93861	24	(2)164.29	18	8.94025	24	1.36160	24	<b>1'</b>
<b>59'</b>	(1)3782.1	2.1	8.93885	24	(2)164.47	19	8.94049	25	1.36136	24	50
10	(1)3784.2	2.1	8.93909	24	(2)164.66	18	8.94074	24	1.36112	25	40
20	(1)3786.3	2.1	8.93933	21	(2)164.84	19	8.94098	24	1.36087	24	30
30	(1)3788.4	2.1	8.93957	24	(2)165.03	18	8.94122	25	1.36063	24	20
40	(1)3790.5	2.1	8.93981	25	(2)165.21	18	8.94147	24	1.36039	24	10
50	(1)3792.6	2.2	8.94006	21	(2)165.39	19	8.94171	24	1.36015	24	<b>0'</b>
<b>60'</b>	(1)3794.8		8.94030		(2)165.58		8.94195		1.35991		



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>0'</b>	(1)3794.8	2.1	8.94030		(2)165.58		8.94195		1.35991		<b>60'</b>
10	(1)3796.9	2.1	8.94054	24	(2)165.76	18	8.94219	24	1.35967	24	50
20	(1)3799.0	2.1	8.94078	24	(2)165.95	18	8.94244	24	1.35942	24	40
30	(1)3801.1	2.1	8.94102	24	(2)166.13	19	8.94268	24	1.35918	24	30
40	(1)3803.2	2.1	8.94126	24	(2)166.32	18	8.94292	24	1.35894	24	20
50	(1)3805.3	2.1	8.94150	24	(2)166.50	18	8.94316	24	1.35870	24	10
<b>1'</b>	(1)3807.4	2.1	8.94174	24	(2)166.68	19	8.94340	25	1.35846	24	<b>59'</b>
10	(1)3809.5	2.2	8.94198	24	(2)166.87	18	8.94365	24	1.35822	24	50
20	(1)3811.7	2.1	8.94222	24	(2)167.05	19	8.94389	24	1.35798	24	40
30	(1)3813.8	2.1	8.94246	24	(2)167.24	18	8.94413	24	1.35774	24	30
40	(1)3815.9	2.1	8.94270	24	(2)167.42	19	8.94437	24	1.35750	24	20
50	(1)3818.0	2.1	8.94294	24	(2)167.61	19	8.94461	24	1.35726	24	10
<b>2'</b>	(1)3820.1	2.1	8.94317	23	(2)167.80	18	8.94485	24	1.35702	24	<b>58'</b>
10	(1)3822.2	2.1	8.94341	24	(2)167.98	19	8.94509	24	1.35678	24	50
20	(1)3824.3	2.2	8.94365	24	(2)168.17	18	8.94533	24	1.35654	24	40
30	(1)3826.5	2.1	8.94389	24	(2)168.35	19	8.94557	24	1.35630	24	30
40	(1)3828.6	2.1	8.94413	24	(2)168.54	18	8.94581	25	1.35606	24	20
50	(1)3830.7	2.1	8.94437	24	(2)168.72	19	8.94606	24	1.35582	24	10
<b>3'</b>	(1)3832.8	2.1	8.94461	23	(2)168.91	19	8.94630	24	1.35558	24	<b>57'</b>
10	(1)3834.9	2.1	8.94484	24	(2)169.10	18	8.94654	24	1.35534	24	50
20	(1)3837.0	2.1	8.94508	24	(2)169.28	19	8.94678	24	1.35510	24	40
30	(1)3839.1	2.2	8.94532	24	(2)169.47	18	8.94702	23	1.35486	24	30
40	(1)3841.3	2.1	8.94556	24	(2)169.65	19	8.94725	24	1.35462	24	20
50	(1)3843.4	2.1	8.94580	23	(2)169.84	19	8.94749	24	1.35439	24	10
<b>4'</b>	(1)3845.5	2.1	8.94603	24	(2)170.03	18	8.94773	24	1.35415	24	<b>56'</b>
10	(1)3847.6	2.1	8.94627	24	(2)170.21	19	8.94797	24	1.35391	24	50
20	(1)3849.7	2.1	8.94651	24	(2)170.40	19	8.94821	24	1.35367	24	40
30	(1)3851.8	2.1	8.94675	23	(2)170.59	19	8.94845	24	1.35343	24	30
40	(1)3853.9	2.1	8.94698	24	(2)170.78	18	8.94869	24	1.35319	24	20
50	(1)3856.0	2.2	8.94722	24	(2)170.96	19	8.94893	24	1.35296	24	10
<b>5'</b>	(1)3858.2	2.1	8.94746	23	(2)171.15	19	8.94917	24	1.35272	24	<b>55'</b>
10	(1)3860.3	2.1	8.94769	23	(2)171.34	18	8.94941	23	1.35248	24	50
20	(1)3862.4	2.1	8.94793	24	(2)171.52	19	8.94964	24	1.35224	24	40
30	(1)3864.5	2.1	8.94817	24	(2)171.71	19	8.94988	24	1.35201	24	30
40	(1)3866.6	2.1	8.94840	23	(2)171.90	19	8.95012	24	1.35177	24	20
50	(1)3868.7	2.1	8.94864	23	(2)172.09	19	8.95036	24	1.35153	24	10
<b>6'</b>	(1)3870.8	2.2	8.94887	24	(2)172.28	18	8.95060	23	1.35130	24	<b>54'</b>
10	(1)3873.0	2.1	8.94911	24	(2)172.46	19	8.95083	24	1.35106	24	50
20	(1)3875.1	2.1	8.94935	23	(2)172.65	19	8.95107	24	1.35082	24	40
30	(1)3877.2	2.1	8.94958	24	(2)172.84	19	8.95131	24	1.35059	24	30
40	(1)3879.3	2.1	8.94982	23	(2)173.03	19	8.95155	23	1.35035	24	20
50	(1)3881.4	2.1	8.95005	23	(2)173.22	18	8.95178	24	1.35011	24	10
<b>7'</b>	(1)3883.5	2.1	8.95029	23	(2)173.40	19	8.95202	24	1.34988	24	<b>53'</b>
10	(1)3885.6	2.2	8.95052	24	(2)173.59	19	8.95226	23	1.34964	24	50
20	(1)3887.8	2.1	8.95076	23	(2)173.78	19	8.95249	24	1.34940	24	40
30	(1)3889.9	2.1	8.95099	23	(2)173.97	19	8.95273	24	1.34917	24	30
40	(1)3892.0	2.1	8.95123	23	(2)174.16	19	8.95297	23	1.34893	24	20
50	(1)3894.1	2.1	8.95146	24	(2)174.35	19	8.95320	24	1.34870	24	10
<b>8'</b>	(1)3896.2	2.1	8.95170	23	(2)174.54	19	8.95344	24	1.34846	24	<b>52'</b>
10	(1)3898.3	2.1	8.95193	23	(2)174.73	19	8.95368	23	1.34823	24	50
20	(1)3900.4	2.2	8.95216	24	(2)174.92	19	8.95391	24	1.34799	24	40
30	(1)3902.6	2.1	8.95240	23	(2)175.11	19	8.95415	24	1.34776	24	30
40	(1)3904.7	2.1	8.95263	23	(2)175.30	18	8.95439	23	1.34752	24	20
50	(1)3906.8	2.1	8.95287	24	(2)175.48	19	8.95462	24	1.34729	24	10
<b>9'</b>	(1)3908.9	2.1	8.95310	23	(2)175.67	19	8.95486	23	1.34705	24	<b>51'</b>
10	(1)3911.0	2.1	8.95333	24	(2)175.86	19	8.95509	24	1.34682	24	50
20	(1)3913.1	2.1	8.95357	23	(2)176.05	19	8.95533	23	1.34658	24	40
30	(1)3915.2	2.2	8.95380	23	(2)176.24	19	8.95556	24	1.34635	24	30
40	(1)3917.4	2.1	8.95403	24	(2)176.43	19	8.95580	23	1.34612	24	20
50	(1)3919.5	2.1	8.95427	23	(2)176.62	20	8.95603	24	1.34588	24	10
<b>10'</b>	(1)3921.6	2.1	8.95450	23	(2)176.82		8.95627		1.34565		<b>50'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg z

Diff.

log cotg  $\omega$   
l. Cosc z

Diff.

z'

Diff.

$\omega$

$\omega = 5 \text{ Grad.}$

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$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
10'	(1)3921.6		8.95450		(2)176.82		8.95627		1.34565			50'
10	(1)3923.7	2.1	8.95473	23	(2)177.01	19	8.95650	23	1.34541	21	50	
20	(1)3925.8	2.1	8.95496	21	(2)177.20	19	8.95674	23	1.34518	23	40	
30	(1)3927.9	2.1	8.95520	23	(2)177.39	19	8.95697	21	1.34495	21	30	
40	(1)3930.0	2.2	8.95543	23	(2)177.58	19	8.95721	23	1.34471	23	20	
50	(1)3932.2	2.1	8.95566	23	(2)177.77	19	8.95744	23	1.34448	23	10	
11'	(1)3934.3		8.95589		(2)177.96		8.95767		1.34425			49'
10	(1)3936.4	2.1	8.95613	24	(2)178.15	19	8.95791	24	1.34401	24	50	
20	(1)3938.5	2.1	8.95636	23	(2)178.34	19	8.95814	23	1.34378	23	40	
30	(1)3940.6	2.1	8.95659	23	(2)178.53	19	8.95838	23	1.34355	23	30	
40	(1)3942.7	2.1	8.95682	23	(2)178.72	20	8.95861	23	1.34332	24	20	
50	(1)3944.8	2.2	8.95705	23	(2)178.92	19	8.95884	21	1.34308	23	10	
12'	(1)3947.0		8.95728		(2)179.11		8.95908		1.34285			48'
10	(1)3949.1	2.1	8.95752	24	(2)179.30	19	8.95931	23	1.34262	23	50	
20	(1)3951.2	2.1	8.95775	23	(2)179.49	19	8.95954	23	1.34239	24	40	
30	(1)3953.3	2.1	8.95798	23	(2)179.68	19	8.95977	24	1.34215	23	30	
40	(1)3955.4	2.1	8.95821	23	(2)179.87	20	8.96001	23	1.34192	23	20	
50	(1)3957.5	2.1	8.95844	23	(2)180.07	19	8.96024	23	1.34169	23	10	
13'	(1)3959.6		8.95867		(2)180.26		8.96047		1.34146			47'
10	(1)3961.8	2.2	8.95890	23	(2)180.45	19	8.96071	24	1.34123	23	50	
20	(1)3963.9	2.1	8.95913	23	(2)180.64	20	8.96094	23	1.34100	23	40	
30	(1)3966.0	2.1	8.95936	23	(2)180.84	19	8.96117	23	1.34077	24	30	
40	(1)3968.1	2.1	8.95959	23	(2)181.03	19	8.96140	23	1.34053	23	20	
50	(1)3970.2	2.1	8.95982	23	(2)181.22	20	8.96163	24	1.34030	23	10	
14'	(1)3972.3		8.96005		(2)181.41		8.96187		1.34007			46'
10	(1)3974.4	2.2	8.96028	23	(2)181.61	19	8.96210	23	1.33984	23	50	
20	(1)3976.6	2.1	8.96051	23	(2)181.80	19	8.96233	23	1.33961	23	40	
30	(1)3978.7	2.1	8.96074	23	(2)181.99	20	8.96256	23	1.33938	23	30	
40	(1)3980.8	2.1	8.96097	23	(2)182.19	19	8.96279	23	1.33915	23	20	
50	(1)3982.9	2.1	8.96120	23	(2)182.38	19	8.96302	23	1.33892	23	10	
15'	(1)3985.0		8.96143		(2)182.57		8.96325		1.33869			45'
10	(1)3987.1	2.1	8.96166	23	(2)182.77	20	8.96349	24	1.33846	23	50	
20	(1)3989.2	2.2	8.96189	23	(2)182.96	19	8.96372	23	1.33823	23	40	
30	(1)3991.4	2.1	8.96212	22	(2)183.15	20	8.96395	23	1.33800	23	30	
40	(1)3993.5	2.1	8.96234	23	(2)183.35	19	8.96418	23	1.33777	23	20	
50	(1)3995.6	2.1	8.96257	23	(2)183.54	20	8.96441	23	1.33754	23	10	
16'	(1)3997.7		8.96280		(2)183.74		8.96464		1.33731			44'
10	(1)3999.8	2.1	8.96303	23	(2)183.93	19	8.96487	23	1.33708	23	50	
20	(1)4001.0	2.1	8.96326	23	(2)184.12	20	8.96510	23	1.33685	23	40	
30	(1)4004.0	2.2	8.96349	22	(2)184.32	19	8.96533	23	1.33662	23	30	
40	(1)4006.2	2.1	8.96371	23	(2)184.51	20	8.96556	23	1.33639	22	20	
50	(1)4008.3	2.1	8.96394	23	(2)184.71	19	8.96579	23	1.33617	23	10	
17'	(1)4010.4		8.96417		(2)184.90		8.96602		1.33594			43'
10	(1)4012.5	2.1	8.96440	23	(2)185.10	20	8.96625	23	1.33571	23	50	
20	(1)4014.6	2.1	8.96462	23	(2)185.29	19	8.96648	23	1.33548	23	40	
30	(1)4016.7	2.1	8.96485	23	(2)185.49	19	8.96671	23	1.33525	23	30	
40	(1)4018.8	2.2	8.96508	23	(2)185.68	20	8.96694	23	1.33502	23	20	
50	(1)4021.0	2.1	8.96531	22	(2)185.88	19	8.96717	22	1.33479	22	10	
18'	(1)4023.1		8.96553		(2)186.07		8.96739		1.33457			42'
10	(1)4025.2	2.1	8.96576	23	(2)186.27	20	8.96762	23	1.33434	23	50	
20	(1)4027.3	2.1	8.96599	23	(2)186.46	19	8.96785	23	1.33411	23	40	
30	(1)4029.4	2.1	8.96621	23	(2)186.66	19	8.96808	23	1.33388	22	30	
40	(1)4031.5	2.1	8.96644	23	(2)186.85	20	8.96831	23	1.33366	23	20	
50	(1)4033.6	2.2	8.96667	22	(2)187.05	20	8.96854	23	1.33343	23	10	
19'	(1)4035.8		8.96689		(2)187.25		8.96877		1.33320			41'
10	(1)4037.9	2.1	8.96712	23	(2)187.44	19	8.96899	22	1.33297	23	50	
20	(1)4040.0	2.1	8.96735	22	(2)187.64	20	8.96922	23	1.33275	23	40	
30	(1)4042.1	2.1	8.96757	23	(2)187.83	19	8.96945	23	1.33252	23	30	
40	(1)4044.2	2.1	8.96780	22	(2)188.03	20	8.96968	23	1.33229	23	20	
50	(1)4046.3	2.1	8.96802	23	(2)188.23	20	8.96991	22	1.33207	22	10	
20'	(1)4048.4	2.1	8.96825	23	(2)188.42	19	8.97013	22	1.33184	23		40'
			log cos $\omega$ log Sec z	Diff.	1. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ 1. Cosec z	Diff.	$z'$	Diff.	$\omega$	



$\omega$	$z'$	Diff.	log Tg $z'$ log sin $\omega$	Diff.	log Cos $z'$ log sec $\omega$	Diff.	log Sin $z'$ log tg $\omega$	Diff.			
<b>20'</b>	(1)4048.4		8.96825		(2)188.42		8.97013		1.33184		<b>40'</b>
10	(1)4050.6	2.2	8.96847	22	(2)188.62	20	8.97036	23	1.33161	23	50
20	(1)4052.7	2.1	8.96870	22	(2)188.82	19	8.97059	22	1.33139	22	40
30	(1)4054.8	2.1	8.96892	22	(2)189.01	20	8.97081	23	1.33116	23	30
40	(1)4056.9	2.1	8.96915	22	(2)189.21	20	8.97104	23	1.33094	23	20
50	(1)4059.0	2.1	8.96937	23	(2)189.41	19	8.97127	23	1.33071	23	10
<b>21'</b>	(1)4061.1	2.2	8.96960	22	(2)189.60	20	8.97150	22	1.33048	22	<b>39'</b>
10	(1)4063.3	2.1	8.96982	22	(2)189.80	20	8.97172	23	1.33026	23	50
20	(1)4065.4	2.1	8.97005	23	(2)190.00	20	8.97195	23	1.33003	23	40
30	(1)4067.5	2.1	8.97027	22	(2)190.20	19	8.97218	22	1.32981	22	30
40	(1)4069.6	2.1	8.97050	22	(2)190.39	20	8.97240	23	1.32958	23	20
50	(1)4071.7	2.1	8.97072	23	(2)190.59	20	8.97263	23	1.32936	23	10
<b>22'</b>	(1)4073.8	2.1	8.97095	22	(2)190.79	20	8.97285	22	1.32913	22	<b>38'</b>
10	(1)4075.9	2.2	8.97117	22	(2)190.99	20	8.97308	23	1.32891	23	50
20	(1)4078.1	2.1	8.97139	23	(2)191.19	19	8.97331	22	1.32868	22	40
30	(1)4080.2	2.1	8.97162	22	(2)191.38	20	8.97353	23	1.32846	23	30
40	(1)4082.3	2.1	8.97184	23	(2)191.58	20	8.97376	22	1.32823	22	20
50	(1)4084.4	2.1	8.97207	22	(2)191.78	20	8.97398	23	1.32801	23	10
<b>23'</b>	(1)4086.5	2.1	8.97229	22	(2)191.98	20	8.97421	22	1.32778	22	<b>37'</b>
10	(1)4088.6	2.1	8.97251	23	(2)192.18	20	8.97443	23	1.32756	23	50
20	(1)4090.7	2.2	8.97274	22	(2)192.38	19	8.97466	22	1.32733	22	40
30	(1)4092.9	2.1	8.97296	22	(2)192.57	20	8.97488	23	1.32711	23	30
40	(1)4095.0	2.1	8.97318	23	(2)192.77	20	8.97511	22	1.32688	22	20
50	(1)4097.1	2.1	8.97341	22	(2)192.97	20	8.97533	23	1.32666	23	10
<b>24'</b>	(1)4099.2	2.1	8.97363	22	(2)193.17	20	8.97556	22	1.32644	22	<b>36'</b>
10	(1)4101.3	2.1	8.97385	22	(2)193.37	20	8.97578	23	1.32621	23	50
20	(1)4103.4	2.1	8.97407	23	(2)193.57	20	8.97601	22	1.32599	22	40
30	(1)4105.5	2.2	8.97430	22	(2)193.77	20	8.97623	23	1.32577	23	30
40	(1)4107.7	2.1	8.97452	22	(2)193.97	20	8.97646	22	1.32554	22	20
50	(1)4109.8	2.1	8.97474	22	(2)194.17	20	8.97668	23	1.32532	23	10
<b>25'</b>	(1)4111.9	2.1	8.97496	22	(2)194.37	20	8.97691	22	1.32510	22	<b>35'</b>
10	(1)4114.0	2.1	8.97518	23	(2)194.57	20	8.97713	22	1.32487	22	50
20	(1)4116.1	2.1	8.97541	22	(2)194.77	20	8.97735	23	1.32465	23	40
30	(1)4118.2	2.2	8.97563	22	(2)194.97	20	8.97758	22	1.32443	22	30
40	(1)4120.4	2.1	8.97585	22	(2)195.17	20	8.97780	22	1.32421	22	20
50	(1)4122.5	2.1	8.97607	22	(2)195.37	20	8.97802	23	1.32398	23	10
<b>26'</b>	(1)4124.6	2.1	8.97629	22	(2)195.57	20	8.97825	22	1.32376	22	<b>34'</b>
10	(1)4126.7	2.1	8.97651	23	(2)195.77	20	8.97847	22	1.32354	22	50
20	(1)4128.8	2.1	8.97674	22	(2)195.97	20	8.97869	23	1.32332	23	40
30	(1)4130.9	2.1	8.97696	22	(2)196.17	20	8.97892	22	1.32309	22	30
40	(1)4133.0	2.2	8.97718	22	(2)196.37	20	8.97914	22	1.32287	22	20
50	(1)4135.2	2.1	8.97740	22	(2)196.57	20	8.97936	23	1.32265	23	10
<b>27'</b>	(1)4137.3	2.1	8.97762	22	(2)196.77	20	8.97959	22	1.32243	22	<b>33'</b>
10	(1)4139.4	2.1	8.97784	23	(2)196.97	20	8.97981	22	1.32221	22	50
20	(1)4141.5	2.1	8.97806	22	(2)197.17	20	8.98003	22	1.32199	22	40
30	(1)4143.6	2.1	8.97828	22	(2)197.37	20	8.98025	23	1.32176	23	30
40	(1)4145.7	2.1	8.97850	22	(2)197.57	21	8.98048	22	1.32154	22	20
50	(1)4147.8	2.2	8.97872	22	(2)197.78	20	8.98070	22	1.32132	22	10
<b>28'</b>	(1)4150.0	2.1	8.97894	22	(2)197.98	20	8.98092	22	1.32110	22	<b>32'</b>
10	(1)4152.1	2.1	8.97916	22	(2)198.18	20	8.98114	22	1.32088	22	50
20	(1)4154.2	2.1	8.97938	22	(2)198.38	20	8.98136	23	1.32066	23	40
30	(1)4156.3	2.1	8.97960	22	(2)198.58	20	8.98159	22	1.32044	22	30
40	(1)4158.4	2.1	8.97982	22	(2)198.78	21	8.98181	22	1.32022	22	20
50	(1)4160.5	2.2	8.98004	22	(2)198.99	20	8.98203	22	1.32000	22	10
<b>29'</b>	(1)4162.7	2.1	8.98026	22	(2)199.19	20	8.98225	22	1.31978	22	<b>31'</b>
10	(1)4164.8	2.1	8.98048	22	(2)199.39	20	8.98247	22	1.31956	22	50
20	(1)4166.9	2.1	8.98070	22	(2)199.59	20	8.98269	22	1.31934	22	40
30	(1)4169.0	2.1	8.98092	22	(2)199.79	21	8.98291	23	1.31912	23	30
40	(1)4171.1	2.1	8.98114	21	(2)200.00	20	8.98314	22	1.31890	22	20
50	(1)4173.2	2.1	8.98135	22	(2)200.20	20	8.98336	22	1.31868	22	10
<b>30'</b>	(1)4175.3	2.1	8.98157	22	(2)200.40	20	8.98358	22	1.31846	22	<b>30'</b>

log cos  $\omega$   
log Sec  $z$

Diff.

l. cosec  $\omega$   
log Cotg  $z$

Diff.

log cotg  $\omega$   
Cosec  $z$

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>30'</b>	(1)4175.3	2.2	8.98157	22	(2)200.40	21	8.98358	22	1.31846	22	<b>30'</b>
10	(1)4177.5	2.1	8.98179	22	(2)200.61	20	8.98380	22	1.31821	22	50
20	(1)4179.6	2.1	8.98201	22	(2)200.81	20	8.98402	22	1.31802	22	40
30	(1)4181.7	2.1	8.98223	22	(2)201.01	20	8.98424	22	1.31780	22	30
40	(1)4183.8	2.1	8.98245	21	(2)201.21	21	8.98446	22	1.31758	22	20
50	(1)4185.9	2.1	8.98266	22	(2)201.42	20	8.98468	22	1.31736	22	10
<b>31'</b>	(1)4188.0	2.2	8.98288	22	(2)201.62	20	8.98490	22	1.31714	22	<b>29'</b>
10	(1)4190.2	2.1	8.98310	22	(2)201.82	21	8.98512	22	1.31692	22	50
20	(1)4192.3	2.1	8.98332	22	(2)202.03	20	8.98534	22	1.31670	22	40
30	(1)4194.4	2.1	8.98354	21	(2)202.23	20	8.98556	22	1.31648	21	30
40	(1)4196.5	2.1	8.98375	22	(2)202.43	21	8.98578	22	1.31627	22	20
50	(1)4198.6	2.1	8.98397	22	(2)202.64	20	8.98600	22	1.31605	22	10
<b>32'</b>	(1)4200.7	2.1	8.98419	22	(2)202.84	21	8.98622	22	1.31583	22	<b>28'</b>
10	(1)4202.8	2.2	8.98441	21	(2)203.05	20	8.98644	22	1.31561	22	50
20	(1)4205.0	2.1	8.98462	22	(2)203.25	20	8.98666	21	1.31539	22	40
30	(1)4207.1	2.1	8.98484	22	(2)203.45	21	8.98687	22	1.31517	21	30
40	(1)4209.2	2.1	8.98506	22	(2)203.66	20	8.98709	22	1.31496	22	20
50	(1)4211.3	2.1	8.98527	21	(2)203.86	21	8.98731	22	1.31474	22	10
<b>33'</b>	(1)4213.4	2.1	8.98549	22	(2)204.07	20	8.98753	22	1.31452	22	<b>27'</b>
10	(1)4215.5	2.2	8.98571	21	(2)204.27	21	8.98775	22	1.31430	22	50
20	(1)4217.7	2.1	8.98592	22	(2)204.48	20	8.98797	22	1.31408	22	40
30	(1)4219.8	2.1	8.98614	22	(2)204.68	21	8.98819	22	1.31387	22	30
40	(1)4221.9	2.1	8.98636	21	(2)204.89	20	8.98841	21	1.31365	22	20
50	(1)4224.0	2.1	8.98657	22	(2)205.09	21	8.98862	22	1.31343	21	10
<b>34'</b>	(1)4226.1	2.1	8.98679	22	(2)205.30	20	8.98884	22	1.31322	22	<b>26'</b>
10	(1)4228.2	2.1	8.98701	21	(2)205.50	21	8.98906	22	1.31300	22	50
20	(1)4230.3	2.2	8.98722	22	(2)205.71	20	8.98928	22	1.31278	22	40
30	(1)4232.5	2.1	8.98744	21	(2)205.91	21	8.98950	21	1.31256	21	30
40	(1)4234.6	2.1	8.98765	22	(2)206.12	20	8.98971	22	1.31235	22	20
50	(1)4236.7	2.1	8.98787	21	(2)206.32	21	8.98993	22	1.31213	21	10
<b>35'</b>	(1)4238.8	2.1	8.98808	22	(2)206.53	21	8.99015	22	1.31192	22	<b>25'</b>
10	(1)4240.9	2.1	8.98830	22	(2)206.74	20	8.99037	21	1.31170	22	50
20	(1)4243.0	2.2	8.98851	21	(2)206.94	21	8.99058	22	1.31148	21	40
30	(1)4245.2	2.1	8.98873	21	(2)207.15	20	8.99080	22	1.31127	22	30
40	(1)4247.3	2.1	8.98894	22	(2)207.35	21	8.99102	22	1.31105	22	20
50	(1)4249.4	2.1	8.98916	22	(2)207.56	21	8.99123	22	1.31083	21	10
<b>36'</b>	(1)4251.5	2.1	8.98937	22	(2)207.77	20	8.99145	22	1.31062	22	<b>24'</b>
10	(1)4253.6	2.1	8.98959	21	(2)207.97	21	8.99167	21	1.31040	21	50
20	(1)4255.7	2.1	8.98980	22	(2)208.18	21	8.99188	22	1.31019	22	40
30	(1)4257.8	2.2	8.99002	22	(2)208.39	20	8.99210	22	1.30997	21	30
40	(1)4260.0	2.1	8.99023	22	(2)208.59	21	8.99232	21	1.30976	22	20
50	(1)4262.1	2.1	8.99045	21	(2)208.80	21	8.99253	22	1.30954	21	10
<b>37'</b>	(1)4264.2	2.1	8.99066	22	(2)209.01	21	8.99275	22	1.30933	22	<b>23'</b>
10	(1)4266.3	2.1	8.99087	21	(2)209.22	20	8.99297	21	1.30911	21	50
20	(1)4268.4	2.1	8.99109	21	(2)209.42	21	8.99318	22	1.30890	22	40
30	(1)4270.5	2.2	8.99130	22	(2)209.63	21	8.99340	21	1.30868	21	30
40	(1)4272.7	2.1	8.99152	22	(2)209.84	20	8.99361	22	1.30847	22	20
50	(1)4274.8	2.1	8.99173	21	(2)210.04	21	8.99383	22	1.30825	21	10
<b>38'</b>	(1)4276.9	2.1	8.99194	22	(2)210.25	21	8.99405	21	1.30804	22	<b>22'</b>
10	(1)4279.0	2.1	8.99216	21	(2)210.46	21	8.99426	22	1.30782	21	50
20	(1)4281.1	2.1	8.99237	21	(2)210.67	21	8.99448	21	1.30761	22	40
30	(1)4283.2	2.2	8.99258	22	(2)210.88	20	8.99469	22	1.30739	21	30
40	(1)4285.4	2.1	8.99280	21	(2)211.08	21	8.99491	21	1.30718	21	20
50	(1)4287.5	2.1	8.99301	21	(2)211.29	21	8.99512	22	1.30697	22	10
<b>39'</b>	(1)4289.6	2.1	8.99322	21	(2)211.50	21	8.99534	21	1.30675	21	<b>21'</b>
10	(1)4291.7	2.1	8.99343	22	(2)211.71	21	8.99555	22	1.30654	22	50
20	(1)4293.8	2.1	8.99365	21	(2)211.92	21	8.99577	21	1.30632	22	40
30	(1)4295.9	2.1	8.99386	21	(2)212.13	20	8.99598	22	1.30611	21	30
40	(1)4298.0	2.2	8.99407	21	(2)212.33	21	8.99620	21	1.30590	22	20
50	(1)4300.2	2.1	8.99428	22	(2)212.54	21	8.99641	22	1.30568	21	10
<b>40'</b>	(1)4302.3	2.1	8.99450	22	(2)212.75	21	8.99662	22	1.30547	21	<b>20'</b>
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cossec z	Diff.	$z'$	Diff.	$\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>40'</b>	(1)4302.3		8.99450		(2)212.75		8.99662		1.30547			<b>20'</b>
10	(1)4304.4	2.1	8.99471	21	(2)212.96	21	8.99684	22	1.30526	21	22	50
20	(1)4306.5	2.1	8.99492	21	(2)213.17	21	8.99705	22	1.30504	21	21	40
30	(1)4308.6	2.1	8.99513	21	(2)213.38	21	8.99727	21	1.30483	21	21	30
40	(1)4310.7	2.1	8.99534	21	(2)213.59	21	8.99748	21	1.30462	21	21	20
50	(1)4312.9	2.2	8.99556	22	(2)213.80	21	8.99769	21	1.30441	21	22	10
<b>41'</b>	(1)4315.0		8.99577		(2)214.01		8.99791		1.30419			<b>19'</b>
10	(1)4317.1	2.1	8.99598	21	(2)214.22	21	8.99812	21	1.30398	21	21	50
20	(1)4319.2	2.1	8.99619	21	(2)214.43	21	8.99834	21	1.30377	21	21	40
30	(1)4321.3	2.1	8.99640	21	(2)214.64	21	8.99855	21	1.30356	21	22	30
40	(1)4323.4	2.2	8.99661	21	(2)214.85	21	8.99876	22	1.30334	21	21	20
50	(1)4325.6	2.1	8.99682	22	(2)215.06	21	8.99898	21	1.30313	21	21	10
<b>42'</b>	(1)4327.7		8.99704		(2)215.27		8.99919		1.30292			<b>18'</b>
10	(1)4329.8	2.1	8.99725	21	(2)215.48	21	8.99940	21	1.30271	21	21	50
20	(1)4331.9	2.1	8.99746	21	(2)215.69	21	8.99961	22	1.30250	21	22	40
30	(1)4334.0	2.1	8.99767	21	(2)215.90	21	8.99983	21	1.30228	21	21	30
40	(1)4336.1	2.1	8.99788	21	(2)216.11	21	9.00004	21	1.30207	21	21	20
50	(1)4338.2	2.2	8.99809	21	(2)216.32	21	9.00025	21	1.30186	21	21	10
<b>43'</b>	(1)4340.4		8.99830		(2)216.53		9.00046		1.30165			<b>17'</b>
10	(1)4342.5	2.1	8.99851	21	(2)216.74	21	9.00068	22	1.30144	21	21	50
20	(1)4344.6	2.1	8.99872	21	(2)216.95	21	9.00089	21	1.30123	21	21	40
30	(1)4346.7	2.1	8.99893	21	(2)217.16	21	9.00110	21	1.30102	22	22	30
40	(1)4348.8	2.1	8.99914	21	(2)217.37	21	9.00131	22	1.30080	21	21	20
50	(1)4350.9	2.2	8.99935	21	(2)217.58	22	9.00153	21	1.30059	21	21	10
<b>44'</b>	(1)4353.1		8.99956		(2)217.80		9.00174		1.30038			<b>16'</b>
10	(1)4355.2	2.1	8.99977	21	(2)218.01	21	9.00195	21	1.30017	21	21	50
20	(1)4357.3	2.1	8.99998	21	(2)218.22	21	9.00216	21	1.29996	21	21	40
30	(1)4359.4	2.1	9.00019	21	(2)218.43	21	9.00237	21	1.29975	21	21	30
40	(1)4361.5	2.1	9.00040	21	(2)218.64	21	9.00258	22	1.29954	21	22	20
50	(1)4363.6	2.2	9.00061	21	(2)218.85	22	9.00280	21	1.29933	21	21	10
<b>45'</b>	(1)4365.8		9.00082		(2)219.07		9.00301		1.29912			<b>15'</b>
10	(1)4367.9	2.1	9.00103	21	(2)219.28	21	9.00322	21	1.29891	21	21	50
20	(1)4370.0	2.1	9.00123	20	(2)219.49	21	9.00343	21	1.29870	21	21	40
30	(1)4372.1	2.1	9.00144	21	(2)219.70	21	9.00364	21	1.29849	21	21	30
40	(1)4374.2	2.1	9.00165	21	(2)219.91	22	9.00385	21	1.29828	21	21	20
50	(1)4376.3	2.2	9.00186	21	(2)220.13	21	9.00406	21	1.29807	21	21	10
<b>46'</b>	(1)4378.5		9.00207		(2)220.34		9.00427		1.29786			<b>14'</b>
10	(1)4380.6	2.1	9.00228	21	(2)220.55	21	9.00448	21	1.29765	21	21	50
20	(1)4382.7	2.1	9.00249	20	(2)220.77	21	9.00469	21	1.29744	21	21	40
30	(1)4384.8	2.1	9.00269	21	(2)220.98	21	9.00490	21	1.29723	21	21	30
40	(1)4386.9	2.1	9.00290	21	(2)221.19	21	9.00511	21	1.29702	21	21	20
50	(1)4389.0	2.2	9.00311	21	(2)221.40	22	9.00532	21	1.29681	20	21	10
<b>47'</b>	(1)4391.2		9.00332		(2)221.62		9.00553		1.29661			<b>13'</b>
10	(1)4393.3	2.1	9.00353	21	(2)221.83	21	9.00574	21	1.29640	21	21	50
20	(1)4395.4	2.1	9.00373	21	(2)222.04	22	9.00595	21	1.29619	21	21	40
30	(1)4397.5	2.1	9.00394	21	(2)222.26	21	9.00616	21	1.29598	21	21	30
40	(1)4399.6	2.1	9.00415	21	(2)222.47	22	9.00637	21	1.29577	21	21	20
50	(1)4401.7	2.2	9.00436	20	(2)222.69	21	9.00658	21	1.29556	21	21	10
<b>48'</b>	(1)4403.9		9.00456		(2)222.90		9.00679		1.29535			<b>12'</b>
10	(1)4406.0	2.1	9.00477	21	(2)223.11	22	9.00700	21	1.29515	21	21	50
20	(1)4408.1	2.1	9.00498	20	(2)223.33	21	9.00721	21	1.29494	21	21	40
30	(1)4410.2	2.1	9.00518	21	(2)223.54	22	9.00742	21	1.29473	21	21	30
40	(1)4412.3	2.1	9.00539	21	(2)223.76	21	9.00763	21	1.29452	21	21	20
50	(1)4414.4	2.1	9.00560	21	(2)223.97	21	9.00784	21	1.29431	20	21	10
<b>49'</b>	(1)4416.5		9.00581		(2)224.18		9.00805		1.29411			<b>11'</b>
10	(1)4418.7	2.2	9.00601	20	(2)224.40	22	9.00826	21	1.29390	21	21	50
20	(1)4420.8	2.1	9.00622	21	(2)224.61	22	9.00846	21	1.29369	21	21	40
30	(1)4422.9	2.1	9.00642	21	(2)224.83	21	9.00867	21	1.29348	21	21	30
40	(1)4425.0	2.1	9.00663	21	(2)225.04	22	9.00888	21	1.29327	21	21	20
50	(1)4427.1	2.1	9.00684	21	(2)225.26	21	9.00909	21	1.29307	20	21	10
<b>50'</b>	(1)4429.2		9.00704		(2)225.47		9.00930		1.29286			<b>10'</b>

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff.  $z'$  Diff.  $\omega$   
 log Sec z Diff. log Cotg z Diff. l. Cosec z Diff.

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>50'</b>	(1)4429.2	2.2	9.00704	21	(2)225.47	22	9.00930	21	1.29286	21	<b>10'</b>	
10	(1)4431.4	2.1	9.00725	20	(2)225.69	21	9.00951	20	1.29265	20	50	
20	(1)4433.5	2.1	9.00746	20	(2)225.90	22	9.00971	21	1.29245	21	40	
30	(1)4435.6	2.1	9.00766	21	(2)226.12	21	9.00992	21	1.29224	21	30	
40	(1)4437.7	2.1	9.00787	20	(2)226.33	22	9.01013	21	1.29203	20	20	
50	(1)4439.8	2.1	9.00807	21	(2)226.55	22	9.01034	21	1.29183	21	10	
<b>51'</b>	(1)4441.9	2.2	9.00828	20	(2)226.77	21	9.01055	20	1.29162	21	<b>9'</b>	
10	(1)4444.1	2.1	9.00848	21	(2)226.98	22	9.01075	21	1.29141	20	50	
20	(1)4446.2	2.1	9.00869	20	(2)227.20	21	9.01096	21	1.29121	21	40	
30	(1)4448.3	2.1	9.00889	20	(2)227.41	22	9.01117	21	1.29100	21	30	
40	(1)4450.4	2.1	9.00910	21	(2)227.63	22	9.01138	20	1.29079	20	20	
50	(1)4452.5	2.1	9.00930	21	(2)227.85	21	9.01158	21	1.29059	21	10	
<b>52'</b>	(1)4454.6	2.2	9.00951	20	(2)228.06	22	9.01179	21	1.29038	20	<b>8'</b>	
10	(1)4456.8	2.1	9.00971	21	(2)228.28	21	9.01200	20	1.29018	21	50	
20	(1)4458.9	2.1	9.00992	20	(2)228.49	22	9.01220	21	1.28997	21	40	
30	(1)4461.0	2.1	9.01012	21	(2)228.71	22	9.01241	21	1.28976	20	30	
40	(1)4463.1	2.1	9.01033	20	(2)228.93	21	9.01262	20	1.28956	21	20	
50	(1)4465.2	2.1	9.01053	21	(2)229.14	22	9.01282	21	1.28935	20	10	
<b>53'</b>	(1)4467.3	2.2	9.01074	20	(2)229.36	22	9.01303	21	1.28915	21	<b>7'</b>	
10	(1)4469.5	2.1	9.01094	21	(2)229.58	22	9.01324	20	1.28894	20	50	
20	(1)4471.6	2.1	9.01115	20	(2)229.80	21	9.01344	21	1.28874	21	40	
30	(1)4473.7	2.1	9.01135	20	(2)230.01	22	9.01365	21	1.28853	20	30	
40	(1)4475.8	2.1	9.01155	21	(2)230.23	22	9.01386	20	1.28833	21	20	
50	(1)4477.9	2.1	9.01176	20	(2)230.45	22	9.01406	21	1.28812	20	10	
<b>54'</b>	(1)4480.0	2.2	9.01196	21	(2)230.67	21	9.01427	20	1.28792	21	<b>6'</b>	
10	(1)4482.2	2.1	9.01217	20	(2)230.88	22	9.01447	21	1.28771	20	50	
20	(1)4484.3	2.1	9.01237	20	(2)231.10	22	9.01468	21	1.28751	21	40	
30	(1)4486.4	2.1	9.01257	21	(2)231.32	22	9.01489	20	1.28730	20	30	
40	(1)4488.5	2.1	9.01278	20	(2)231.54	21	9.01509	21	1.28710	21	20	
50	(1)4490.6	2.1	9.01298	20	(2)231.75	22	9.01530	20	1.28689	20	10	
<b>55'</b>	(1)4492.7	2.2	9.01318	21	(2)231.97	22	9.01550	21	1.28669	20	<b>5'</b>	
10	(1)4494.9	2.1	9.01339	20	(2)232.19	22	9.01571	20	1.28649	21	50	
20	(1)4497.0	2.1	9.01359	20	(2)232.41	22	9.01591	21	1.28628	20	40	
30	(1)4499.1	2.1	9.01379	20	(2)232.63	22	9.01612	20	1.28608	21	30	
40	(1)4501.2	2.1	9.01399	21	(2)232.85	21	9.01632	21	1.28587	20	20	
50	(1)4503.3	2.1	9.01420	20	(2)233.06	22	9.01653	20	1.28567	20	10	
<b>56'</b>	(1)4505.4	2.2	9.01440	20	(2)233.28	22	9.01673	21	1.28547	21	<b>4'</b>	
10	(1)4507.6	2.1	9.01460	20	(2)233.50	22	9.01694	20	1.28526	20	50	
20	(1)4509.7	2.1	9.01480	21	(2)233.72	22	9.01714	21	1.28506	21	40	
30	(1)4511.8	2.1	9.01501	20	(2)233.94	22	9.01735	20	1.28485	20	30	
40	(1)4513.9	2.1	9.01521	20	(2)234.16	22	9.01755	21	1.28465	20	20	
50	(1)4516.0	2.1	9.01541	20	(2)234.38	22	9.01776	20	1.28445	20	10	
<b>57'</b>	(1)4518.1	2.2	9.01561	21	(2)234.60	22	9.01796	20	1.28425	21	<b>3'</b>	
10	(1)4520.3	2.1	9.01582	20	(2)234.82	22	9.01816	21	1.28404	20	50	
20	(1)4522.4	2.1	9.01602	20	(2)235.04	22	9.01837	20	1.28384	20	40	
30	(1)4524.5	2.1	9.01622	20	(2)235.26	22	9.01857	21	1.28364	21	30	
40	(1)4526.6	2.1	9.01642	20	(2)235.48	22	9.01878	20	1.28343	20	20	
50	(1)4528.7	2.2	9.01662	20	(2)235.70	22	9.01898	20	1.28323	20	10	
<b>58'</b>	(1)4530.9	2.1	9.01682	21	(2)235.92	22	9.01918	21	1.28303	20	<b>2'</b>	
10	(1)4533.0	2.1	9.01703	20	(2)236.14	22	9.01939	20	1.28283	21	50	
20	(1)4535.1	2.1	9.01723	20	(2)236.36	22	9.01959	20	1.28262	21	40	
30	(1)4537.2	2.1	9.01743	20	(2)236.58	22	9.01979	21	1.28242	20	30	
40	(1)4539.3	2.1	9.01763	20	(2)236.80	22	9.02000	20	1.28222	20	20	
50	(1)4541.4	2.2	9.01783	20	(2)237.02	22	9.02020	20	1.28202	21	10	
<b>59'</b>	(1)4543.6	2.1	9.01803	20	(2)237.24	22	9.02040	21	1.28181	20	<b>1'</b>	
10	(1)4545.7	2.1	9.01823	20	(2)237.46	22	9.02061	20	1.28161	20	50	
20	(1)4547.8	2.1	9.01843	20	(2)237.68	22	9.02081	20	1.28141	20	40	
30	(1)4549.9	2.1	9.01863	20	(2)237.90	22	9.02101	20	1.28121	20	30	
40	(1)4552.0	2.1	9.01883	20	(2)238.12	22	9.02121	21	1.28101	20	20	
50	(1)4554.1	2.2	9.01903	20	(2)238.34	23	9.02142	20	1.28081	20	10	
<b>60'</b>	(1)4556.3	2.2	9.01923	20	(2)238.57		9.02162	20	1.28060	21	<b>0'</b>	

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	$z'$	Diff.	$\omega$
log Sec z		log Cotg z		l. Cosec z				



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	(1)4556.3	12.7	9.01923	120	(2)238.57	1.32	9.02162	121	1.28060	120	60		
1	(1)4569.0	12.7	9.02040	120	(2)239.89	1.34	9.02283	121	1.27940	121	59		
2	(1)4581.7	12.7	9.02163	120	(2)241.23	1.34	9.02404	121	1.27819	120	58		
3	(1)4594.4	12.7	9.02283	119	(2)242.57	1.34	9.02525	120	1.27699	119	57		
4	(1)4607.1	12.7	9.02402	118	(2)243.91	1.34	9.02645	121	1.27580	120	56		
5	(1)4619.8	12.7	9.02520	119	(2)245.25	1.35	9.02766	119	1.27460	119	55		
6	(1)4632.5	12.7	9.02639	118	(2)246.60	1.35	9.02885	120	1.27341	118	54		
7	(1)4645.2	12.7	9.02757	117	(2)247.95	1.36	9.03005	119	1.27223	119	53		
8	(1)4657.9	12.7	9.02874	118	(2)249.31	1.36	9.03124	118	1.27104	118	52		
9	(1)4670.6	12.7	9.02992	117	(2)250.67	1.36	9.03242	119	1.26986	118	51		
10	(1)4683.3	12.7	9.03109	117	(2)252.03	1.37	9.03361	118	1.26868	117	50		
11	(1)4696.0	12.7	9.03226	116	(2)253.40	1.37	9.03479	118	1.26751	117	49		
12	(1)4708.7	12.7	9.03342	116	(2)254.77	1.37	9.03597	117	1.26634	117	48		
13	(1)4721.4	12.7	9.03458	116	(2)256.14	1.38	9.03714	118	1.26517	117	47		
14	(1)4734.1	12.7	9.03574	116	(2)257.52	1.38	9.03832	116	1.26400	116	46		
15	(1)4746.8	12.7	9.03690	115	(2)258.90	1.39	9.03948	117	1.26284	116	45		
16	(1)4759.5	12.8	9.03805	115	(2)260.29	1.38	9.04065	116	1.26168	115	44		
17	(1)4772.3	12.7	9.03920	114	(2)261.67	1.40	9.04181	116	1.26053	116	43		
18	(1)4785.0	12.7	9.04034	115	(2)263.07	1.39	9.04297	116	1.25937	115	42		
19	(1)4797.7	12.7	9.04149	113	(2)264.46	1.40	9.04413	115	1.25822	114	41		
20	(1)4810.4	12.7	9.04262	114	(2)265.86	1.41	9.04528	115	1.25708	115	40		
21	(1)4823.1	12.7	9.04376	114	(2)267.27	1.41	9.04643	115	1.25593	114	39		
22	(1)4835.8	12.7	9.04490	113	(2)268.68	1.41	9.04758	115	1.25479	113	38		
23	(1)4848.5	12.7	9.04603	112	(2)270.09	1.41	9.04873	114	1.25366	114	37		
24	(1)4861.2	12.7	9.04715	113	(2)271.50	1.42	9.04987	114	1.25252	113	36		
25	(1)4873.9	12.8	9.04828	112	(2)272.92	1.42	9.05101	113	1.25139	113	35		
26	(1)4886.7	12.7	9.04940	112	(2)274.31	1.43	9.05214	114	1.25026	113	34		
27	(1)4899.4	12.7	9.05052	112	(2)275.77	1.43	9.05328	113	1.24913	112	33		
28	(1)4912.1	12.7	9.05164	111	(2)277.20	1.43	9.05441	112	1.24801	112	32		
29	(1)4924.8	12.7	9.05275	111	(2)278.63	1.41	9.05553	113	1.24689	112	31		
30	(1)4937.5	12.7	9.05386	111	(2)280.07	1.44	9.05666	112	1.24577	111	30		
31	(1)4950.2	12.7	9.05497	110	(2)281.51	1.45	9.05778	112	1.24466	111	29		
32	(1)4962.9	12.8	9.05607	110	(2)282.96	1.45	9.05890	112	1.24355	111	28		
33	(1)4975.7	12.7	9.05717	110	(2)284.41	1.45	9.06002	111	1.24244	111	27		
34	(1)4988.4	12.7	9.05827	110	(2)285.86	1.46	9.06113	111	1.24133	110	26		
35	(1)5001.1	12.7	9.05937	109	(2)287.32	1.46	9.06224	111	1.24023	110	25		
36	(1)5013.8	12.7	9.06046	109	(2)288.78	1.46	9.06335	110	1.23913	110	24		
37	(1)5026.5	12.7	9.06155	109	(2)290.24	1.47	9.06445	111	1.23803	109	23		
38	(1)5039.2	12.8	9.06264	108	(2)291.71	1.47	9.06556	110	1.23694	110	22		
39	(1)5052.0	12.7	9.06372	109	(2)293.18	1.47	9.06666	109	1.23584	109	21		
40	(1)5064.7	12.7	9.06481	108	(2)294.65	1.48	9.06775	110	1.23475	108	20		
41	(1)5077.4	12.7	9.06589	107	(2)296.13	1.48	9.06885	109	1.23367	109	19		
42	(1)5090.1	12.7	9.06696	108	(2)297.61	1.49	9.06994	109	1.23258	108	18		
43	(1)5102.8	12.8	9.06804	107	(2)299.10	1.49	9.07103	108	1.23150	108	17		
44	(1)5115.6	12.7	9.06911	107	(2)300.59	1.49	9.07211	109	1.23042	107	16		
45	(1)5128.3	12.7	9.07018	106	(2)302.08	1.50	9.07320	108	1.22935	108	15		
46	(1)5141.0	12.7	9.07124	107	(2)303.58	1.50	9.07428	108	1.22827	107	14		
47	(1)5153.7	12.8	9.07231	106	(2)305.08	1.50	9.07536	107	1.22720	107	13		
48	(1)5166.5	12.7	9.07337	105	(2)306.58	1.51	9.07643	108	1.22613	106	12		
49	(1)5179.2	12.7	9.07442	106	(2)308.09	1.51	9.07751	107	1.22507	107	11		
50	(1)5191.9	12.7	9.07548	105	(2)309.60	1.52	9.07858	106	1.22400	106	10		
51	(1)5204.6	12.7	9.07653	105	(2)311.12	1.52	9.07964	107	1.22294	105	9		
52	(1)5217.3	12.8	9.07758	105	(2)312.64	1.52	9.08071	106	1.22189	106	8		
53	(1)5230.1	12.7	9.07863	105	(2)314.16	1.53	9.08177	106	1.22083	105	7		
54	(1)5242.8	12.7	9.07968	104	(2)315.69	1.53	9.08283	106	1.21978	105	6		
55	(1)5255.5	12.7	9.08072	104	(2)317.22	1.53	9.08389	106	1.21873	105	5		
56	(1)5268.2	12.8	9.08176	104	(2)318.75	1.54	9.08495	105	1.21768	105	4		
57	(1)5281.0	12.7	9.08280	103	(2)320.29	1.54	9.08600	105	1.21663	104	3		
58	(1)5293.7	12.7	9.08383	103	(2)321.83	1.55	9.08705	105	1.21559	104	2		
59	(1)5306.4	12.8	9.08486	103	(2)323.38	1.55	9.08810	104	1.21455	104	1		
60	(1)5319.2		9.08589		(2)324.93		9.08914		1.21351		0		

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. l. Cosc z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	(15319.2)	12.7	9.08589	103	(2)324.93	1.55	9.08914	105	1.21351	103	60	
1	(15331.9)	12.7	9.08692	103	(2)326.48	1.56	9.09019	104	1.21248	103	59	
2	(15344.6)	12.7	9.08795	102	(2)328.04	1.56	9.09123	104	1.21145	103	58	
3	(15357.3)	12.8	9.08897	102	(2)329.60	1.56	9.09227	103	1.21042	103	57	
4	(15370.1)	12.7	9.08999	102	(2)331.16	1.57	9.09330	104	1.20939	103	56	
5	(15382.8)	12.7	9.09101	101	(2)332.73	1.57	9.09434	103	1.20836	102	55	
6	(15395.5)	12.8	9.09202	102	(2)334.30	1.58	9.09537	103	1.20734	102	54	
7	(15408.3)	12.7	9.09304	101	(2)335.88	1.58	9.09640	102	1.20632	102	53	
8	(15421.0)	12.7	9.09405	101	(2)337.46	1.58	9.09742	103	1.20530	102	52	
9	(15433.7)	12.8	9.09506	100	(2)339.04	1.59	9.09845	102	1.20428	101	51	
10	(15446.5)	12.7	9.09607	101	(2)340.63	1.59	9.09947	102	1.20327	101	50	
11	(15459.2)	12.7	9.09707	100	(2)342.22	1.59	9.10049	101	1.20226	101	49	
12	(15471.9)	12.8	9.09807	100	(2)343.81	1.60	9.10150	102	1.20125	101	48	
13	(15484.7)	12.7	9.09907	99	(2)345.41	1.60	9.10252	101	1.20024	100	47	
14	(15497.4)	12.7	9.10006	100	(2)347.01	1.61	9.10353	101	1.19924	101	46	
15	(15510.1)	12.8	9.10106	99	(2)348.62	1.61	9.10454	101	1.19823	100	45	
16	(15522.9)	12.7	9.10205	99	(2)350.23	1.61	9.10555	101	1.19723	99	44	
17	(15535.6)	12.7	9.10304	98	(2)351.84	1.61	9.10656	100	1.19624	99	43	
18	(15548.3)	12.8	9.10402	99	(2)353.45	1.62	9.10756	100	1.19524	99	42	
19	(15561.1)	12.7	9.10501	98	(2)355.07	1.63	9.10856	100	1.19425	99	41	
20	(15573.8)	12.7	9.10599	98	(2)356.70	1.63	9.10956	100	1.19326	99	40	
21	(15586.5)	12.8	9.10697	98	(2)358.33	1.63	9.11056	99	1.19227	99	39	
22	(15599.3)	12.7	9.10795	98	(2)359.96	1.63	9.11155	99	1.19128	98	38	
23	(15612.0)	12.8	9.10893	97	(2)361.59	1.64	9.11254	99	1.19030	98	37	
24	(15624.8)	12.7	9.10990	97	(2)363.23	1.64	9.11353	99	1.18932	98	36	
25	(15637.5)	12.7	9.11087	97	(2)364.87	1.65	9.11452	99	1.18834	98	35	
26	(15650.2)	12.8	9.11184	97	(2)366.52	1.65	9.11551	98	1.18736	98	34	
27	(15663.0)	12.7	9.11281	96	(2)368.17	1.65	9.11649	98	1.18638	97	33	
28	(15675.7)	12.8	9.11377	96	(2)369.82	1.66	9.11747	98	1.18541	97	32	
29	(15688.5)	12.7	9.11474	96	(2)371.48	1.66	9.11845	98	1.18444	97	31	
30	(15701.2)	12.7	9.11570	96	(2)373.14	1.67	9.11943	97	1.18347	97	30	
31	(15713.9)	12.8	9.11666	95	(2)374.81	1.67	9.12040	98	1.18250	96	29	
32	(15726.7)	12.7	9.11761	96	(2)376.48	1.67	9.12138	97	1.18154	96	28	
33	(15739.4)	12.8	9.11857	95	(2)378.15	1.68	9.12235	97	1.18058	96	27	
34	(15752.2)	12.7	9.11952	95	(2)379.83	1.68	9.12332	96	1.17962	96	26	
35	(15764.9)	12.8	9.12047	95	(2)381.51	1.68	9.12428	97	1.17866	96	25	
36	(15777.7)	12.7	9.12142	94	(2)383.19	1.69	9.12525	96	1.17770	95	24	
37	(15790.4)	12.8	9.12236	95	(2)384.88	1.69	9.12621	96	1.17675	95	23	
38	(15803.2)	12.7	9.12331	94	(2)386.57	1.69	9.12717	96	1.17580	95	22	
39	(15815.9)	12.8	9.12425	94	(2)388.26	1.70	9.12813	96	1.17485	95	21	
40	(15828.7)	12.7	9.12519	93	(2)389.96	1.70	9.12909	95	1.17390	95	20	
41	(15841.4)	12.7	9.12612	94	(2)391.66	1.71	9.13004	95	1.17295	91	19	
42	(15854.1)	12.8	9.12706	93	(2)393.37	1.71	9.13099	95	1.17201	91	18	
43	(15866.9)	12.7	9.12799	93	(2)395.08	1.71	9.13194	95	1.17107	91	17	
44	(15879.6)	12.8	9.12892	93	(2)396.79	1.72	9.13289	95	1.17013	94	16	
45	(15892.4)	12.7	9.12985	93	(2)398.51	1.72	9.13384	91	1.16919	91	15	
46	(15905.1)	12.8	9.13078	93	(2)400.23	1.73	9.13478	95	1.16825	91	14	
47	(15917.9)	12.7	9.13171	92	(2)401.96	1.73	9.13573	94	1.16732	93	13	
48	(15930.6)	12.8	9.13263	92	(2)403.69	1.73	9.13667	94	1.16639	93	12	
49	(15943.4)	12.7	9.13355	92	(2)405.42	1.74	9.13761	93	1.16546	93	11	
50	(15956.1)	12.8	9.13447	92	(2)407.16	1.73	9.13854	94	1.16453	93	10	
51	(15968.9)	12.8	9.13539	91	(2)408.89	1.75	9.13948	93	1.16360	92	9	
52	(15981.7)	12.7	9.13630	92	(2)410.64	1.75	9.14041	93	1.16268	92	8	
53	(15994.4)	12.8	9.13722	91	(2)412.39	1.75	9.14134	93	1.16176	92	7	
54	(16007.2)	12.7	9.13813	91	(2)414.14	1.75	9.14227	93	1.16084	92	6	
55	(16019.9)	12.8	9.13904	90	(2)415.89	1.76	9.14320	92	1.15992	92	5	
56	(16032.7)	12.7	9.13994	91	(2)417.65	1.76	9.14412	92	1.15900	91	4	
57	(16045.4)	12.8	9.14085	90	(2)419.41	1.77	9.14504	93	1.15809	91	3	
58	(16058.2)	12.7	9.14175	91	(2)421.18	1.77	9.14597	91	1.15718	92	2	
59	(16070.9)	12.8	9.14266	90	(2)422.95	1.77	9.14688	92	1.15626	90	1	
60	(16083.7)	12.8	9.14356	90	(2)424.72	1.77	9.14780	92	1.15536	90	0	

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.       $z'$       Diff.       $\omega$   
 log sec z      log Cotg z      l. Cosec z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	(16083.7		9.14356	89	(2)424.72	1.78	9.14780	92	1.15536		91	60	
1	(16096.5	12.8	9.14445		(2)426.50	1.78	9.14872	91	1.15445		91	59	
2	(16109.2	12.7	9.14535	90	(2)428.28	1.79	9.14963	91	1.15354		90	58	
3		12.8		89									
4	(16122.0	12.7	9.14624	90	(2)430.07	1.78	9.15054	91	1.15264		90	57	
5	(16134.7	12.8	9.14714	89	(2)431.85	1.80	9.15145	91	1.15174		90	56	
6	(16147.5	12.7	9.14803	88	(2)433.65	1.79	9.15236	91	1.15084		90	55	
7	(16160.2	12.8	9.14891	89	(2)435.44	1.80	9.15327	90	1.14994		89	54	
8	(16173.0	12.8	9.14980	89	(2)437.24	1.81	9.15417	91	1.14905		90	53	
9	(16185.8	12.7	9.15069	88	(2)439.05	1.80	9.15508	90	1.14815		89	52	
10	(16198.5	12.8	9.15157	88	(2)440.85	1.81	9.15598	90	1.14726		89	51	
11	(16211.3	12.8	9.15245	88	(2)442.66	1.82	9.15688	89	1.14637		89	50	
12	(16224.1	12.7	9.15333	88	(2)444.48	1.82	9.15777	90	1.14548		88	49	
13	(16236.8	12.8	9.15421	87	(2)446.30	1.82	9.15867	89	1.14460		89	48	
14	(16249.6	12.7	9.15508	88	(2)448.12	1.83	9.15956	90	1.14371		88	47	
15	(16262.3	12.8	9.15596	87	(2)449.95	1.83	9.16046	89	1.14283		88	46	
16	(16275.1	12.8	9.15683	87	(2)451.78	1.83	9.16135	89	1.14195		88	45	
17	(16287.9	12.7	9.15770	87	(2)453.61	1.84	9.16224	88	1.14107		88	44	
18	(16300.6	12.8	9.15857	87	(2)455.45	1.84	9.16312	89	1.14019		88	43	
19	(16313.4	12.8	9.15944	86	(2)457.29	1.84	9.16401	88	1.13931		87	42	
20	(16326.2	12.7	9.16030	86	(2)459.13	1.85	9.16489	88	1.13844		87	41	
21	(16338.9	12.8	9.16116	87	(2)460.98	1.85	9.16577	88	1.13757		87	40	
22	(16351.7	12.8	9.16203	86	(2)462.83	1.86	9.16665	88	1.13670		87	39	
23	(16364.5	12.8	9.16289	85	(2)464.69	1.86	9.16753	88	1.13583		87	38	
24	(16377.3	12.7	9.16374	86	(2)466.55	1.86	9.16841	87	1.13496		87	37	
25	(16390.0	12.8	9.16460	85	(2)468.41	1.87	9.16928	88	1.13409		86	36	
26	(16402.8	12.8	9.16545	86	(2)470.28	1.87	9.17016	87	1.13323		86	35	
27	(16415.6	12.7	9.16631	85	(2)472.15	1.88	9.17103	87	1.13237		86	34	
28	(16428.3	12.8	9.16716	85	(2)474.03	1.88	9.17190	87	1.13151		86	33	
29	(16441.1	12.8	9.16801	85	(2)475.91	1.88	9.17277	86	1.13065		86	32	
30	(16453.9	12.8	9.16886	84	(2)477.79	1.88	9.17363	87	1.12979		85	31	
31	(16466.7	12.7	9.16970	85	(2)479.67	1.89	9.17450	86	1.12894		86	30	
32	(16479.4	12.8	9.17055	84	(2)481.56	1.90	9.17536	86	1.12808		85	29	
33	(16492.2	12.8	9.17139	84	(2)483.46	1.90	9.17622	86	1.12723		85	28	
34	(16505.0	12.8	9.17223	84	(2)485.36	1.90	9.17708	86	1.12638		85	27	
35	(16517.8	12.7	9.17307	84	(2)487.26	1.90	9.17794	86	1.12553		85	26	
36	(16530.5	12.8	9.17391	83	(2)489.16	1.91	9.17880	85	1.12468		84	25	
37	(16543.3	12.8	9.17474	84	(2)491.07	1.91	9.17965	86	1.12384		85	24	
38	(16556.1	12.8	9.17558	83	(2)492.98	1.92	9.18051	85	1.12299		84	23	
39	(16568.9	12.7	9.17641	83	(2)494.90	1.92	9.18136	85	1.12215		84	22	
40	(16581.6	12.8	9.17724	83	(2)496.82	1.92	9.18221	85	1.12131		84	21	
41	(16594.4	12.8	9.17807	83	(2)498.74	1.93	9.18306	85	1.12047		84	20	
42	(16607.2	12.8	9.17890	83	(2)500.67	1.93	9.18391	84	1.11963		83	19	
43	(16620.0	12.8	9.17973	82	(2)502.60	1.94	9.18475	85	1.11880		84	18	
44	(16632.8	12.7	9.18055	82	(2)504.54	1.94	9.18560	84	1.11796		83	17	
45	(16645.5	12.8	9.18137	83	(2)506.48	1.94	9.18644	84	1.11713		83	16	
46	(16658.3	12.8	9.18220	82	(2)508.42	1.94	9.18728	84	1.11630		83	15	
47	(16671.1	12.8	9.18302	81	(2)510.36	1.95	9.18812	84	1.11547		83	14	
48	(16683.9	12.8	9.18383	82	(2)512.31	1.96	9.18896	83	1.11464		82	13	
49	(16696.7	12.7	9.18465	82	(2)514.27	1.96	9.18979	84	1.11382		83	12	
50	(16709.4	12.8	9.18547	81	(2)516.23	1.96	9.19063	83	1.11299		82	11	
51	(16722.2	12.8	9.18628	81	(2)518.19	1.96	9.19146	83	1.11217		83	10	
52	(16735.0	12.8	9.18709	81	(2)520.15	1.97	9.19229	83	1.11134		82	9	
53	(16747.8	12.8	9.18790	81	(2)522.12	1.97	9.19312	83	1.11052		81	8	
54	(16760.6	12.8	9.18871	81	(2)524.09	1.98	9.19395	83	1.10971		82	7	
55	(16773.4	12.8	9.18952	81	(2)526.07	1.98	9.19478	83	1.10889		82	6	
56	(16786.2	12.8	9.19033	80	(2)528.05	1.98	9.19561	82	1.10807		81	5	
57	(16799.0	12.7	9.19113	80	(2)530.03	1.99	9.19643	82	1.10726		81	4	
58	(16811.7	12.8	9.19193	80	(2)532.02	1.99	9.19725	82	1.10645		82	3	
59	(16824.5	12.8	9.19273	80	(2)534.01	2.00	9.19807	82	1.10563		81	2	
60	(16837.3	12.8	9.19353	80	(2)536.01	2.00	9.19889	82	1.10482		80	1	
	(16850.1		9.19433		(2)538.01		9.19971		1.10402			0	

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	z'	Diff.	$\omega$
log Sec z		log Cotg z		l. Cosc z				

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.						
0	(16850.1)	12.8	9.19433	80	(2538.01)	2.00	9.19971	82	1.10402				81	60
1	(16862.9)	12.8	9.19513	79	(2540.01)	2.01	9.20053	81	1.10321				81	59
2	(16875.7)	12.8	9.19592	80	(2542.02)	2.01	9.20134	82	1.10240				80	58
3	(16888.5)	12.8	9.19672	79	(2544.03)	2.01	9.20216	81	1.10160				80	57
4	(16901.3)	12.8	9.19751	79	(2546.04)	2.02	9.20297	81	1.10080				80	56
5	(16914.1)	12.8	9.19830	79	(2548.06)	2.02	9.20378	81	1.10000				80	55
6	(16926.9)	12.8	9.19909	79	(2550.08)	2.03	9.20459	81	1.09920				80	54
7	(16939.7)	12.8	9.19988	79	(2552.11)	2.02	9.20540	81	1.09840				80	53
8	(16952.5)	12.7	9.20067	78	(2554.13)	2.04	9.20621	80	1.09760				79	52
9	(16965.2)	12.8	9.20145	78	(2556.17)	2.03	9.20701	81	1.09681				80	51
10	(16978.0)	12.8	9.20223	79	(2558.20)	2.05	9.20782	80	1.09601				79	50
11	(16990.8)	12.8	9.20302	78	(2560.25)	2.04	9.20862	80	1.09522				79	49
12	(17003.6)	12.8	9.20380	78	(2562.29)	2.05	9.20942	80	1.09443				79	48
13	(17016.4)	12.8	9.20458	77	(2564.34)	2.05	9.21022	80	1.09364				79	47
14	(17029.2)	12.8	9.20535	78	(2566.39)	2.05	9.21102	80	1.09285				78	46
15	(17042.0)	12.8	9.20613	78	(2568.44)	2.06	9.21182	79	1.09207				79	45
16	(17054.8)	12.8	9.20691	77	(2570.50)	2.07	9.21261	80	1.09128				78	44
17	(17067.6)	12.8	9.20768	77	(2572.57)	2.06	9.21341	79	1.09050				79	43
18	(17080.4)	12.8	9.20845	77	(2574.63)	2.07	9.21420	79	1.08971				78	42
19	(17093.2)	12.8	9.20922	77	(2576.70)	2.08	9.21499	79	1.08893				78	41
20	(17106.0)	12.8	9.20999	77	(2578.78)	2.08	9.21578	79	1.08815				77	40
21	(17118.8)	12.8	9.21076	77	(2580.86)	2.08	9.21657	79	1.08738				78	39
22	(17131.6)	12.9	9.21153	76	(2582.94)	2.08	9.21736	78	1.08660				78	38
23	(17144.5)	12.8	9.21229	77	(2585.02)	2.09	9.21814	79	1.08582				77	37
24	(17157.3)	12.8	9.21306	76	(2587.11)	2.10	9.21893	78	1.08505				77	36
25	(17170.1)	12.8	9.21382	76	(2589.21)	2.09	9.21971	78	1.08428				78	35
26	(17182.9)	12.8	9.21458	76	(2591.30)	2.11	9.22049	78	1.08350				77	34
27	(17195.7)	12.8	9.21534	76	(2593.41)	2.10	9.22127	78	1.08273				76	33
28	(17208.5)	12.8	9.21610	75	(2595.51)	2.11	9.22205	78	1.08197				77	32
29	(17221.3)	12.8	9.21685	76	(2597.62)	2.11	9.22283	78	1.08120				77	31
30	(17234.1)	12.8	9.21761	75	(2599.73)	2.12	9.22361	77	1.08043				76	30
31	(17246.9)	12.8	9.21836	76	(2601.85)	2.12	9.22438	78	1.07967				77	29
32	(17259.7)	12.8	9.21912	75	(2603.97)	2.12	9.22516	77	1.07890				76	28
33	(17272.5)	12.8	9.21987	75	(2606.09)	2.13	9.22593	77	1.07814				76	27
34	(17285.3)	12.8	9.22062	75	(2608.22)	2.13	9.22670	77	1.07738				76	26
35	(17298.1)	12.9	9.22137	74	(2610.35)	2.13	9.22747	77	1.07662				76	25
36	(17311.0)	12.8	9.22211	75	(2612.48)	2.14	9.22824	77	1.07586				75	24
37	(17323.8)	12.8	9.22286	75	(2614.62)	2.14	9.22901	76	1.07511				76	23
38	(17336.6)	12.8	9.22361	74	(2616.76)	2.15	9.22977	76	1.07435				75	22
39	(17349.4)	12.8	9.22435	74	(2618.91)	2.15	9.23054	77	1.07360				76	21
40	(17362.2)	12.8	9.22509	74	(2621.06)	2.15	9.23130	76	1.07284				75	20
41	(17375.0)	12.8	9.22583	74	(2623.21)	2.16	9.23206	77	1.07209				75	19
42	(17387.8)	12.9	9.22657	74	(2625.37)	2.16	9.23283	76	1.07134				75	18
43	(17400.7)	12.8	9.22731	74	(2627.53)	2.17	9.23359	76	1.07059				75	17
44	(17413.5)	12.8	9.22805	73	(2629.70)	2.17	9.23435	75	1.06984				74	16
45	(17426.3)	12.8	9.22878	74	(2631.87)	2.17	9.23510	76	1.06910				75	15
46	(17439.1)	12.8	9.22952	73	(2634.04)	2.18	9.23586	75	1.06835				74	14
47	(17451.9)	12.9	9.23025	73	(2636.22)	2.18	9.23661	76	1.06761				74	13
48	(17464.8)	12.8	9.23098	73	(2638.40)	2.18	9.23737	75	1.06687				75	12
49	(17477.6)	12.8	9.23171	73	(2640.58)	2.19	9.23812	75	1.06612				74	11
50	(17490.4)	12.9	9.23244	73	(2642.77)	2.19	9.23887	75	1.06538				74	10
51	(17503.2)	12.8	9.23317	73	(2644.96)	2.19	9.23962	75	1.06464				73	9
52	(17516.0)	12.9	9.23390	72	(2647.15)	2.20	9.24037	75	1.06391				74	8
53	(17528.9)	12.8	9.23462	73	(2649.35)	2.21	9.24112	74	1.06317				73	7
54	(17541.7)	12.8	9.23535	72	(2651.56)	2.20	9.24186	75	1.06244				74	6
55	(17554.5)	12.8	9.23607	72	(2653.76)	2.21	9.24261	74	1.06170				73	5
56	(17567.3)	12.8	9.23679	73	(2655.97)	2.22	9.24335	75	1.06097				73	4
57	(17580.2)	12.8	9.23752	71	(2658.19)	2.22	9.24410	74	1.06024				73	3
58	(17593.0)	12.8	9.23823	72	(2660.41)	2.22	9.24484	74	1.05951				73	2
59	(17605.8)	12.8	9.23895	72	(2662.63)	2.22	9.24558	74	1.05878				73	1
60	(17618.6)		9.23967	72	(2664.85)	2.22	9.24632	74	1.05805				73	0

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	$z'$	Diff.	$\omega'$
log Sec z		log Cotg z						



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
0	(17618.6		9.23967	72	(2664.85		9.24632		1.05805	73	60
1	(17631.5	12.9	9.24039	71	(2667.08	2.23	9.24706	73	1.05732	72	59
2	(17644.3	12.8	9.24110	71	(2669.32	2.23	9.24779	74	1.05660	73	58
3	(17657.1	12.9	9.24181	72	(2671.55	2.24	9.24853	73	1.05587	72	57
4	(17670.0	12.8	9.24253	71	(2673.79	2.25	9.24926	74	1.05515	72	56
5	(17682.8	12.8	9.24324	71	(2676.04	2.25	9.25000	73	1.05443	73	55
6	(17695.6	12.9	9.24395	71	(2678.29	2.25	9.25073	73	1.05370	72	54
7	(17708.5	12.8	9.24466	70	(2680.54	2.26	9.25146	73	1.05298	71	53
8	(17721.3	12.8	9.24536	70	(2682.80	2.26	9.25219	73	1.05227	72	52
9	(17734.1	12.9	9.24607	70	(2685.06	2.26	9.25292	73	1.05155	72	51
10	(17747.0	12.8	9.24677	71	(2687.32	2.27	9.25365	72	1.05083	71	50
11	(17759.8	12.8	9.24748	70	(2689.59	2.27	9.25437	73	1.05012	72	49
12	(17772.6	12.9	9.24818	70	(2691.86	2.27	9.25510	72	1.04940	71	48
13	(17785.5	12.8	9.24888	70	(2694.13	2.28	9.25582	73	1.04869	71	47
14	(17798.3	12.8	9.24958	70	(2696.41	2.28	9.25655	72	1.04798	71	46
15	(17811.1	12.9	9.25028	70	(2698.69	2.29	9.25727	72	1.04727	71	45
16	(17824.0	12.8	9.25098	70	(2700.98	2.29	9.25799	72	1.04656	71	44
17	(17836.8	12.9	9.25168	69	(2703.27	2.29	9.25871	72	1.04585	71	43
18	(17849.7	12.8	9.25237	70	(2705.56	2.30	9.25943	72	1.04514	70	42
19	(17862.5	12.8	9.25307	69	(2707.86	2.30	9.26015	71	1.04444	71	41
20	(17875.3	12.9	9.25376	69	(2710.16	2.31	9.26086	72	1.04373	70	40
21	(17888.2	12.8	9.25445	69	(2712.47	2.31	9.26158	71	1.04303	70	39
22	(17901.0	12.9	9.25514	69	(2714.78	2.31	9.26229	72	1.04233	71	38
23	(17913.9	12.8	9.25583	69	(2717.09	2.32	9.26301	71	1.04162	70	37
24	(17926.7	12.9	9.25652	69	(2719.41	2.32	9.26372	71	1.04092	69	36
25	(17939.6	12.8	9.25721	69	(2721.73	2.32	9.26443	71	1.04023	70	35
26	(17952.4	12.8	9.25790	68	(2724.05	2.33	9.26514	71	1.03953	70	34
27	(17965.2	12.9	9.25858	69	(2726.38	2.33	9.26585	70	1.03883	70	33
28	(17978.1	12.8	9.25927	68	(2728.71	2.34	9.26655	71	1.03813	70	32
29	(17990.9	12.9	9.25995	68	(2731.05	2.34	9.26726	71	1.03744	69	31
30	(18003.8	12.8	9.26063	68	(2733.39	2.34	9.26797	70	1.03675	70	30
31	(18016.6	12.9	9.26131	68	(2735.73	2.35	9.26867	70	1.03605	69	29
32	(18029.5	12.8	9.26199	68	(2738.08	2.35	9.26937	71	1.03536	69	28
33	(18042.3	12.9	9.26267	68	(2740.43	2.35	9.27008	70	1.03467	69	27
34	(18055.2	12.8	9.26335	68	(2742.78	2.36	9.27078	70	1.03398	69	26
35	(18068.0	12.9	9.26403	67	(2745.14	2.36	9.27148	70	1.03329	69	25
36	(18080.9	12.8	9.26470	68	(2747.50	2.37	9.27218	70	1.03261	69	24
37	(18093.7	12.9	9.26538	67	(2749.87	2.37	9.27288	69	1.03192	69	23
38	(18106.6	12.9	9.26605	67	(2752.24	2.37	9.27357	70	1.03123	69	22
39	(18119.5	12.8	9.26672	67	(2754.61	2.38	9.27427	69	1.03055	68	21
40	(18132.3	12.9	9.26739	67	(2756.99	2.38	9.27496	70	1.02987	68	20
41	(18145.2	12.8	9.26806	67	(2759.37	2.39	9.27566	69	1.02919	69	19
42	(18158.0	12.9	9.26873	67	(2761.75	2.39	9.27635	69	1.02850	68	18
43	(18170.9	12.8	9.26940	67	(2764.15	2.39	9.27704	69	1.02782	67	17
44	(18183.7	12.9	9.27007	66	(2766.54	2.40	9.27773	69	1.02715	68	16
45	(18196.6	12.8	9.27073	67	(2768.94	2.40	9.27842	69	1.02647	68	15
46	(18209.4	12.9	9.27140	66	(2771.34	2.40	9.27911	69	1.02579	67	14
47	(18222.3	12.9	9.27206	67	(2773.74	2.41	9.27980	69	1.02512	68	13
48	(18235.2	12.8	9.27273	66	(2776.15	2.41	9.28049	68	1.02444	67	12
49	(18248.0	12.9	9.27339	66	(2778.56	2.42	9.28117	69	1.02377	68	11
50	(18260.9	12.9	9.27405	66	(2780.98	2.42	9.28186	68	1.02309	67	10
51	(18273.8	12.8	9.27471	66	(2783.40	2.42	9.28254	69	1.02242	67	9
52	(18286.6	12.9	9.27537	65	(2785.82	2.43	9.28323	68	1.02175	67	8
53	(18299.5	12.8	9.27602	66	(2788.25	2.43	9.28391	68	1.02108	67	7
54	(18312.3	12.9	9.27668	66	(2790.68	2.43	9.28459	68	1.02041	66	6
55	(18325.2	12.9	9.27734	65	(2793.11	2.44	9.28527	68	1.01975	67	5
56	(18338.1	12.8	9.27799	65	(2795.55	2.44	9.28595	67	1.01908	67	4
57	(18350.9	12.9	9.27864	66	(2797.99	2.45	9.28662	68	1.01841	66	3
58	(18363.8	12.9	9.27930	65	(2800.44	2.45	9.28730	68	1.01775	66	2
59	(18376.7	12.9	9.27995	65	(2802.89	2.45	9.28798	67	1.01709	66	1
60	(18389.6	12.9	9.28060	65	(2805.34	2.45	9.28865	67	1.01642	67	0

$\log \cos \omega$  Diff.  $\log \sec \omega$  Diff.  $\log \cos z$  Diff.  $\log \sec z$  Diff.  $z'$  Diff.  $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	(18389.6	12.8	9.28060	65	(2)805.31	2.46	9.28865	68	1.01642		66	60
1	(18402.4	12.9	9.28125	65	(2)807.80	2.46	9.28933	67	1.01576		66	59
2	(18415.3	12.9	9.28190	64	(2)810.26	2.47	9.29000	67	1.01510		66	58
3	(18428.2	12.8	9.28254	65	(2)812.73	2.47	9.29067	67	1.01444		66	57
4	(18441.0	12.9	9.28319	65	(2)815.20	2.47	9.29131	67	1.01378		65	56
5	(18453.9	12.9	9.28384	64	(2)817.67	2.47	9.29201	67	1.01313		66	55
6	(18466.8	12.9	9.28448	64	(2)820.14	2.49	9.29268	67	1.01247		66	54
7	(18479.7	12.8	9.28512	65	(2)822.63	2.48	9.29335	67	1.01181		65	53
8	(18492.5	12.9	9.28577	64	(2)825.11	2.49	9.29402	66	1.01116		66	52
9	(18505.4	12.9	9.28641	64	(2)827.60	2.49	9.29468	67	1.01050		65	51
10	(18518.3	12.9	9.28705	64	(2)830.09	2.50	9.29535	66	1.00985		65	50
11	(18531.2	12.8	9.28769	64	(2)832.59	2.49	9.29601	67	1.00920		65	49
12	(18544.0	12.9	9.28833	63	(2)835.08	2.51	9.29668	66	1.00855		65	48
13	(18556.9	12.9	9.28896	64	(2)837.59	2.51	9.29734	66	1.00790		65	47
14	(18569.8	12.9	9.28960	64	(2)840.10	2.51	9.29800	66	1.00725		65	46
15	(18582.7	12.9	9.29024	63	(2)842.61	2.51	9.29866	66	1.00660		65	45
16	(18595.6	12.8	9.29087	63	(2)845.21	2.52	9.29932	66	1.00595		64	44
17	(18608.4	12.9	9.29150	64	(2)847.64	2.52	9.29998	66	1.00531		65	43
18	(18621.3	12.9	9.29214	63	(2)850.16	2.53	9.30064	66	1.00466		64	42
19	(18634.2	12.9	9.29277	63	(2)852.69	2.53	9.30130	65	1.00402		64	41
20	(18647.1	12.9	9.29340	63	(2)855.22	2.53	9.30195	66	1.00338		65	40
21	(18660.0	12.9	9.29403	63	(2)857.75	2.54	9.30261	65	1.00273		64	39
22	(18672.9	12.8	9.29466	63	(2)860.29	2.54	9.30326	65	1.00209		64	38
23	(18685.7	12.9	9.29529	62	(2)862.83	2.55	9.30391	66	1.00145		64	37
24	(18698.6	12.9	9.29591	63	(2)865.38	2.55	9.30457	65	1.00081		64	36
25	(18711.5	12.9	9.29654	62	(2)867.93	2.55	9.30522	65	1.00017		63	35
26	(18724.4	12.9	9.29716	63	(2)870.48	2.56	9.30587	65	0.99954		64	34
27	(18737.3	12.9	9.29779	62	(2)873.04	2.56	9.30652	65	0.99890		64	33
28	(18750.2	12.9	9.29841	62	(2)875.60	2.56	9.30717	65	0.99826		63	32
29	(18763.1	12.9	9.29903	63	(2)878.16	2.57	9.30782	64	0.99763		64	31
30	(18776.0	12.9	9.29966	62	(2)880.73	2.57	9.30846	65	0.99699		63	30
31	(18788.9	12.9	9.30028	62	(2)883.30	2.58	9.30911	64	0.99636		63	29
32	(18801.8	12.9	9.30090	61	(2)885.88	2.58	9.30975	65	0.99573		63	28
33	(18814.7	12.8	9.30151	62	(2)888.46	2.58	9.31040	64	0.99510		63	27
34	(18827.5	12.9	9.30213	62	(2)891.04	2.59	9.31104	64	0.99447		63	26
35	(18840.4	12.9	9.30275	61	(2)893.63	2.59	9.31168	65	0.99384		63	25
36	(18853.3	12.9	9.30336	62	(2)896.22	2.59	9.31233	64	0.99321		63	24
37	(18866.2	12.9	9.30398	61	(2)898.81	2.60	9.31297	64	0.99258		63	23
38	(18879.1	12.9	9.30459	62	(2)901.41	2.61	9.31361	64	0.99195		62	22
39	(18892.0	12.9	9.30521	61	(2)904.02	2.60	9.31425	64	0.99133		63	21
40	(18904.9	12.9	9.30582	61	(2)906.62	2.61	9.31489	63	0.99070		62	20
41	(18917.8	12.9	9.30643	61	(2)909.23	2.62	9.31552	64	0.99008		63	19
42	(18930.7	12.9	9.30704	61	(2)911.85	2.62	9.31616	63	0.98945		62	18
43	(18943.6	12.9	9.30765	61	(2)914.47	2.62	9.31679	64	0.98883		62	17
44	(18956.5	12.9	9.30826	61	(2)917.09	2.62	9.31743	63	0.98821		62	16
45	(18969.4	12.9	9.30887	60	(2)919.71	2.63	9.31806	64	0.98759		62	15
46	(18982.3	12.9	9.30947	61	(2)922.34	2.64	9.31870	63	0.98697		62	14
47	(18995.2	13.0	9.31008	60	(2)924.98	2.63	9.31933	63	0.98635		62	13
48	(19008.2	12.9	9.31068	61	(2)927.61	2.65	9.31996	63	0.98573		62	12
49	(19021.1	12.9	9.31129	61	(2)930.26	2.64	9.32059	63	0.98511		61	11
50	(19034.0	12.9	9.31189	60	(2)932.90	2.65	9.32122	63	0.98450		62	10
51	(19046.9	12.9	9.31250	60	(2)935.55	2.65	9.32185	63	0.98388		61	9
52	(19059.8	12.9	9.31310	60	(2)938.20	2.66	9.32248	63	0.98327		62	8
53	(19072.7	12.9	9.31370	60	(2)940.86	2.66	9.32311	62	0.98265		61	7
54	(19085.6	12.9	9.31430	60	(2)943.52	2.66	9.32373	63	0.98204		61	6
55	(19098.5	12.9	9.31490	59	(2)946.18	2.67	9.32436	62	0.98143		61	5
56	(19111.4	12.9	9.31549	60	(2)948.85	2.67	9.32498	63	0.98082		61	4
57	(19124.3	12.9	9.31609	60	(2)951.52	2.68	9.32561	62	0.98021		61	3
58	(19137.2	13.0	9.31669	59	(2)954.20	2.68	9.32623	62	0.97960		61	2
59	(19150.2	12.9	9.31728	60	(2)956.88	2.68	9.32685	62	0.97899		61	1
60	(19163.1	12.9	9.31788	60	(2)959.56	2.68	9.32747	62	0.97838		61	0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z Diff. log Cotg z



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	(1)9163.1		9.31788		(2)959.56		9.32747		0.97838		60
1	(1)9176.0	12.9	9.31847	59	(2)962.25	2.69	9.32810	63	0.97777	61	59
2	(1)9188.9	12.9	9.31907	60	(2)964.91	2.69	9.32872	62	0.97717	60	58
3	(1)9201.8	12.9	9.31966	59	(2)967.63	2.70	9.32933	61	0.97656	61	57
4	(1)9214.7	13.0	9.32025	59	(2)970.33	2.70	9.32995	62	0.97596	60	56
5	(1)9227.7	12.9	9.32084	59	(2)973.03	2.71	9.33057	62	0.97535	61	55
6	(1)9240.6	12.9	9.32143	59	(2)975.74	2.71	9.33119	61	0.97475	60	54
7	(1)9253.5	12.9	9.32202	59	(2)978.45	2.72	9.33180	62	0.97415	60	53
8	(1)9266.4	12.9	9.32261	58	(2)981.17	2.71	9.33242	61	0.97355	60	52
9	(1)9279.3	13.0	9.32319	59	(2)983.88	2.73	9.33303	62	0.97294	61	51
10	(1)9292.3	12.9	9.32378	59	(2)986.61	2.72	9.33365	61	0.97234	60	50
11	(1)9305.2	12.9	9.32437	58	(2)989.33	2.73	9.33426	61	0.97175	59	49
12	(1)9318.1	12.9	9.32495	58	(2)992.06	2.73	9.33487	61	0.97115	60	48
13	(1)9331.0	13.0	9.32553	59	(2)994.79	2.74	9.33548	61	0.97055	60	47
14	(1)9344.0	12.9	9.32612	58	(2)997.53	2.8	9.33609	61	0.96995	60	46
15	(1)9356.9	12.9	9.32670	58	(1)1000.3	2.7	9.33670	61	0.96936	59	45
16	(1)9369.8	13.0	9.32728	58	(1)1003.0	2.8	9.33731	61	0.96876	60	44
17	(1)9382.8	12.9	9.32786	58	(1)1005.8	2.7	9.33792	61	0.96817	59	43
18	(1)9395.7	12.9	9.32844	58	(1)1008.5	2.8	9.33853	60	0.96758	60	42
19	(1)9408.6	12.9	9.32902	58	(1)1011.3	2.7	9.33913	61	0.96698	60	41
20	(1)9421.5	13.0	9.32960	58	(1)1014.0	2.8	9.33974	60	0.96639	59	40
21	(1)9434.5	12.9	9.33018	57	(1)1016.8	2.8	9.34034	61	0.96580	59	39
22	(1)9447.4	12.9	9.33075	58	(1)1019.6	2.7	9.34095	60	0.96521	59	38
23	(1)9460.3	13.0	9.33133	57	(1)1022.3	2.8	9.34155	60	0.96462	59	37
24	(1)9473.3	12.9	9.33190	58	(1)1025.1	2.8	9.34215	61	0.96403	59	36
25	(1)9486.2	13.0	9.33248	57	(1)1027.9	2.8	9.34276	60	0.96344	59	35
26	(1)9499.2	12.9	9.33305	57	(1)1030.7	2.8	9.34336	60	0.96286	58	34
27	(1)9512.1	12.9	9.33362	58	(1)1033.5	2.8	9.34396	60	0.96227	59	33
28	(1)9525.0	13.0	9.33420	57	(1)1036.3	2.7	9.34456	60	0.96168	58	32
29	(1)9538.0	12.9	9.33477	57	(1)1039.0	2.8	9.34516	60	0.96110	58	31
30	(1)9550.9	12.9	9.33534	57	(1)1041.8	2.9	9.34576	59	0.96052	59	30
31	(1)9563.8	13.0	9.33591	56	(1)1044.7	2.8	9.34635	60	0.95993	58	29
32	(1)9576.8	12.9	9.33647	57	(1)1047.5	2.8	9.34695	60	0.95935	58	28
33	(1)9589.7	13.0	9.33704	57	(1)1050.3	2.8	9.34755	59	0.95877	58	27
34	(1)9602.7	12.9	9.33761	57	(1)1053.1	2.8	9.34814	60	0.95819	58	26
35	(1)9615.6	13.0	9.33818	56	(1)1055.9	2.8	9.34874	59	0.95761	58	25
36	(1)9628.6	12.9	9.33874	57	(1)1058.7	2.8	9.34933	59	0.95703	58	24
37	(1)9641.5	12.9	9.33931	56	(1)1061.5	2.9	9.34992	59	0.95645	58	23
38	(1)9654.4	13.0	9.33987	56	(1)1064.4	2.8	9.35051	60	0.95587	58	22
39	(1)9667.4	12.9	9.34043	57	(1)1067.2	2.8	9.35111	59	0.95529	57	21
40	(1)9680.3	13.0	9.34100	56	(1)1070.0	2.9	9.35170	59	0.95472	58	20
41	(1)9693.3	12.9	9.34156	56	(1)1072.9	2.8	9.35229	59	0.95414	57	19
42	(1)9706.2	13.0	9.34212	56	(1)1075.7	2.9	9.35288	59	0.95357	58	18
43	(1)9719.2	12.9	9.34268	56	(1)1078.6	2.8	9.35347	58	0.95299	57	17
44	(1)9732.1	13.0	9.34324	56	(1)1081.4	2.9	9.35405	59	0.95242	57	16
45	(1)9745.1	12.9	9.34380	56	(1)1084.3	2.9	9.35464	59	0.95185	58	15
46	(1)9758.0	13.0	9.34436	55	(1)1087.2	2.8	9.35523	58	0.95127	57	14
47	(1)9771.0	13.0	9.34491	56	(1)1090.0	2.9	9.35581	59	0.95070	57	13
48	(1)9784.0	12.9	9.34547	55	(1)1092.9	2.9	9.35640	58	0.95013	57	12
49	(1)9796.9	13.0	9.34602	56	(1)1095.8	2.8	9.35698	59	0.94956	57	11
50	(1)9809.9	12.9	9.34658	55	(1)1098.6	2.9	9.35757	58	0.94899	57	10
51	(1)9822.8	13.0	9.34713	56	(1)1101.5	2.9	9.35815	58	0.94842	56	9
52	(1)9835.8	12.9	9.34769	55	(1)1104.4	2.9	9.35873	58	0.94786	57	8
53	(1)9848.7	13.0	9.34824	55	(1)1107.3	2.9	9.35931	58	0.94729	57	7
54	(1)9861.7	13.0	9.34879	55	(1)1110.2	2.9	9.35989	58	0.94672	56	6
55	(1)9874.7	12.9	9.34934	55	(1)1113.1	2.9	9.36047	58	0.94616	57	5
56	(1)9887.6	13.0	9.34989	55	(1)1116.0	2.9	9.36105	58	0.94559	56	4
57	(1)9900.6	13.0	9.35044	55	(1)1118.9	2.9	9.36163	58	0.94503	56	3
58	(1)9913.6	12.9	9.35099	55	(1)1121.8	2.9	9.36221	58	0.94447	57	2
59	(1)9926.5	13.0	9.35154	55	(1)1124.7	2.9	9.36279	57	0.94390	57	1
60	(1)9939.5		9.35209	55	(1)1127.6		9.36336	57	0.94334	56	0

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log. otg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega'$

$\omega'$	$z'$	Diff.	$\log \operatorname{Tg} z$ $\log \sin \omega$	Diff.	$\log \operatorname{Cos} z$ $\log \sec \omega$	Diff.	$\log \operatorname{Sin} z$ $\log \operatorname{tg} \omega$	Diff.					
0	(1)9939.5	12.9	9.35209	51	(1)1127.6	2.9	9.36336	58	0.94334	56	60		
1	(1)9952.4	13.0	9.35263	55	(1)1130.5	2.9	9.36391	58	0.94278	56	59		
2	(1)9965.4	13.0	9.35318	55	(1)1133.4	3.0	9.36452	57	0.94222	56	58		
3	(1)9978.1	12.9	9.35373	51	(1)1136.4	2.9	9.36509	57	0.94166	56	57		
4	(1)9991.3	13	9.35427	55	(1)1139.3	2.9	9.36566	58	0.94110	56	56		
5	0.10001	13	9.35481	55	(1)1142.2	2.9	9.36624	57	0.94054	56	55		
6	0.10017	13	9.35536	54	(1)1145.2	2.9	9.36681	57	0.93998	55	54		
7	0.10030	13	9.35590	54	(1)1148.1	3.0	9.36738	57	0.93943	56	53		
8	0.10043	13	9.35644	54	(1)1151.1	2.9	9.36795	57	0.93887	56	52		
9	0.10056	13	9.35698	51	(1)1154.0	3.0	9.36852	57	0.93831	55	51		
10	0.10069	13	9.35752	51	(1)1157.0	2.9	9.36909	57	0.93776	55	50		
11	0.10082	13	9.35806	51	(1)1159.9	3.0	9.36966	57	0.93721	56	49		
12	0.10095	13	9.35860	51	(1)1162.9	2.9	9.37023	57	0.93665	55	48		
13	0.10108	13	9.35914	51	(1)1165.8	3.0	9.37080	57	0.93610	55	47		
14	0.10121	13	9.35968	51	(1)1168.8	3.0	9.37137	56	0.93555	55	46		
15	0.10134	13	9.36022	53	(1)1171.8	3.0	9.37193	57	0.93500	56	45		
16	0.10147	13	9.36075	51	(1)1174.8	2.9	9.37250	56	0.93444	55	44		
17	0.10160	13	9.36129	53	(1)1177.7	3.0	9.37306	57	0.93389	55	43		
18	0.10173	13	9.36182	51	(1)1180.7	3.0	9.37363	56	0.93334	54	42		
19	0.10186	13	9.36236	53	(1)1183.7	3.0	9.37419	57	0.93280	55	41		
20	0.10199	13	9.36289	53	(1)1186.7	3.0	9.37476	56	0.93225	55	40		
21	0.10212	13	9.36342	53	(1)1189.7	3.0	9.37532	56	0.93170	55	39		
22	0.10225	13	9.36395	54	(1)1192.7	3.0	9.37588	56	0.93115	55	38		
23	0.10238	13	9.36449	53	(1)1195.7	3.0	9.37644	56	0.93061	54	37		
24	0.10251	13	9.36502	53	(1)1198.7	3.0	9.37700	56	0.93006	54	36		
25	0.10264	13	9.36555	53	(1)1201.7	3.0	9.37756	56	0.92952	55	35		
26	0.10277	13	9.36608	52	(1)1204.7	3.1	9.37812	56	0.92897	54	34		
27	0.10290	13	9.36660	53	(1)1207.8	3.0	9.37868	56	0.92843	54	33		
28	0.10303	13	9.36713	53	(1)1210.8	3.0	9.37924	56	0.92789	55	32		
29	0.10316	13	9.36766	53	(1)1213.8	3.0	9.37980	55	0.92734	54	31		
30	0.10329	13	9.36819	52	(1)1216.8	3.1	9.38035	56	0.92680	54	30		
31	0.10342	13	9.36871	53	(1)1219.9	3.0	9.38091	56	0.92626	54	29		
32	0.10355	13	9.36924	52	(1)1222.9	3.1	9.38147	55	0.92572	54	28		
33	0.10368	13	9.36976	52	(1)1226.0	3.0	9.38202	55	0.92518	54	27		
34	0.10381	13	9.37028	53	(1)1229.0	3.1	9.38257	56	0.92464	53	26		
35	0.10394	13	9.37081	53	(1)1232.1	3.0	9.38313	55	0.92411	54	25		
36	0.10407	13	9.37133	52	(1)1235.1	3.1	9.38368	55	0.92357	54	24		
37	0.10420	13	9.37185	52	(1)1238.2	3.0	9.38423	56	0.92303	54	23		
38	0.10433	13	9.37237	52	(1)1241.2	3.1	9.38479	55	0.92249	54	22		
39	0.10446	13	9.37289	52	(1)1244.3	3.1	9.38534	55	0.92196	54	21		
40	0.10459	13	9.37341	52	(1)1247.4	3.0	9.38589	55	0.92142	53	20		
41	0.10472	13	9.37393	52	(1)1250.4	3.1	9.38644	55	0.92089	53	19		
42	0.10485	13	9.37445	52	(1)1253.5	3.1	9.38699	55	0.92036	54	18		
43	0.10498	13	9.37497	52	(1)1256.6	3.1	9.38754	54	0.91982	53	17		
44	0.10511	13	9.37549	51	(1)1259.7	3.1	9.38808	55	0.91929	53	16		
45	0.10524	13	9.37600	52	(1)1262.8	3.1	9.38863	55	0.91876	53	15		
46	0.10537	13	9.37652	52	(1)1265.9	3.1	9.38918	54	0.91823	53	14		
47	0.10550	13	9.37703	52	(1)1269.0	3.1	9.38972	55	0.91770	53	13		
48	0.10563	13	9.37755	51	(1)1272.1	3.1	9.39027	55	0.91717	53	12		
49	0.10576	13	9.37806	52	(1)1275.2	3.1	9.39082	54	0.91664	53	11		
50	0.10589	13	9.37858	51	(1)1278.3	3.1	9.39136	54	0.91611	53	10		
51	0.10602	13	9.37909	51	(1)1281.4	3.1	9.39190	54	0.91558	53	9		
52	0.10615	13	9.37960	51	(1)1284.5	3.1	9.39245	54	0.91505	52	8		
53	0.10628	13	9.38011	51	(1)1287.6	3.2	9.39299	54	0.91453	53	7		
54	0.10641	13	9.38062	51	(1)1290.8	3.1	9.39353	54	0.91400	53	6		
55	0.10654	13	9.38113	51	(1)1293.9	3.1	9.39407	54	0.91347	52	5		
56	0.10667	13	9.38164	51	(1)1297.0	3.2	9.39461	54	0.91295	52	4		
57	0.10680	13	9.38215	51	(1)1300.2	3.1	9.39515	54	0.91243	53	3		
58	0.10693	13	9.38266	51	(1)1303.3	3.1	9.39569	54	0.91190	52	2		
59	0.10706	13	9.38317	51	(1)1306.4	3.2	9.39623	54	0.91138	52	1		
60	0.10719	13	9.38368	51	(1)1309.6		9.39677		0.91086	52	0		

$\log \cos \omega$  Diff.  $\log \operatorname{cosec} \omega$  Diff.  $\log \cot \omega$  Diff.  $\log \operatorname{cosec} z$  Diff.  $\log \cot z$  Diff.



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.10719	13	9.38368	50	(1)1309.6	3.1	9.39677	54	0.91086		60
1	0.10732	13	9.38418	51	(1)1312.7	3.2	9.39731	51	0.91033	53	59
2	0.10745	13	9.38469	50	(1)1315.9	3.2	9.39785	53	0.90981	52	58
3	0.10758	13	9.38519	51	(1)1319.1	3.1	9.39838	51	0.90929	52	57
4	0.10771	13	9.38570	50	(1)1322.2	3.2	9.39892	53	0.90877	52	56
5	0.10784	13	9.38620	50	(1)1325.4	3.2	9.39945	54	0.90825	52	55
6	0.10797	13	9.38670	51	(1)1328.6	3.1	9.39999	53	0.90773	51	51
7	0.10810	13	9.38721	50	(1)1331.7	3.2	9.40052	54	0.90722	52	53
8	0.10823	13	9.38771	50	(1)1334.9	3.2	9.40106	53	0.90670	52	52
9	0.10836	13	9.38821	50	(1)1338.1	3.2	9.40159	53	0.90618	52	51
10	0.10849	13	9.38871	50	(1)1341.3	3.2	9.40212	54	0.90566	51	50
11	0.10862	13	9.38921	50	(1)1344.5	3.2	9.40266	53	0.90515	52	49
12	0.10875	13	9.38971	50	(1)1347.7	3.2	9.40319	53	0.90463	51	48
13	0.10888	13	9.39021	50	(1)1350.9	3.2	9.40372	53	0.90412	52	47
14	0.10901	13	9.39071	50	(1)1354.1	3.2	9.40425	53	0.90360	51	46
15	0.10914	13	9.39121	49	(1)1357.3	3.2	9.40478	53	0.90309	51	45
16	0.10927	13	9.39170	50	(1)1360.5	3.2	9.40531	53	0.90258	51	44
17	0.10940	14	9.39220	50	(1)1363.7	3.2	9.40584	52	0.90207	52	43
18	0.10954	13	9.39270	49	(1)1366.9	3.2	9.40636	53	0.90155	51	42
19	0.10967	13	9.39319	50	(1)1370.1	3.3	9.40689	53	0.90104	51	41
20	0.10980	13	9.39369	49	(1)1373.4	3.2	9.40742	53	0.90053	51	40
21	0.10993	13	9.39418	49	(1)1376.6	3.2	9.40795	52	0.90002	51	39
22	0.11006	13	9.39467	50	(1)1379.8	3.3	9.40847	53	0.89951	51	38
23	0.11019	13	9.39517	49	(1)1383.1	3.2	9.40900	52	0.89900	50	37
24	0.11032	13	9.39566	49	(1)1386.3	3.3	9.40952	53	0.89850	51	36
25	0.11045	13	9.39615	49	(1)1389.6	3.2	9.41005	52	0.89799	51	35
26	0.11058	13	9.39664	49	(1)1392.8	3.3	9.41057	52	0.89748	51	34
27	0.11071	13	9.39713	49	(1)1396.1	3.2	9.41109	52	0.89697	50	33
28	0.11084	13	9.39762	49	(1)1399.3	3.3	9.41161	53	0.89647	51	32
29	0.11097	13	9.39811	49	(1)1402.6	3.2	9.41214	52	0.89596	50	31
30	0.11110	13	9.39860	49	(1)1405.8	3.3	9.41266	52	0.89546	51	30
31	0.11123	13	9.39909	49	(1)1409.1	3.3	9.41318	52	0.89495	50	29
32	0.11136	13	9.39958	48	(1)1412.4	3.3	9.41370	52	0.89445	50	28
33	0.11149	13	9.40006	49	(1)1415.7	3.2	9.41422	52	0.89395	51	27
34	0.11162	13	9.40055	48	(1)1418.9	3.3	9.41474	52	0.89344	50	26
35	0.11175	13	9.40103	49	(1)1422.2	3.3	9.41526	52	0.89294	50	25
36	0.11188	13	9.40152	48	(1)1425.5	3.3	9.41578	51	0.89244	50	24
37	0.11201	13	9.40200	49	(1)1428.8	3.3	9.41629	52	0.89194	50	23
38	0.11214	14	9.40249	48	(1)1432.1	3.3	9.41681	52	0.89144	50	22
39	0.11228	13	9.40297	49	(1)1435.4	3.3	9.41733	51	0.89094	50	21
40	0.11241	13	9.40346	48	(1)1438.7	3.3	9.41784	52	0.89044	50	20
41	0.11254	13	9.40394	48	(1)1442.0	3.3	9.41836	51	0.88994	50	19
42	0.11267	13	9.40442	48	(1)1445.3	3.3	9.41887	52	0.88944	49	18
43	0.11280	13	9.40490	48	(1)1448.6	3.3	9.41939	51	0.88895	50	17
44	0.11293	13	9.40538	48	(1)1452.0	3.3	9.41990	51	0.88845	50	16
45	0.11306	13	9.40586	48	(1)1455.3	3.3	9.42041	52	0.88795	49	15
46	0.11319	13	9.40634	48	(1)1458.6	3.3	9.42093	51	0.88746	50	14
47	0.11332	13	9.40682	48	(1)1461.9	3.4	9.42144	51	0.88696	49	13
48	0.11345	13	9.40730	48	(1)1465.3	3.3	9.42195	51	0.88647	50	12
49	0.11358	13	9.40778	47	(1)1468.6	3.4	9.42246	51	0.88597	49	11
50	0.11371	13	9.40825	48	(1)1472.0	3.3	9.42297	51	0.88548	49	10
51	0.11384	13	9.40873	48	(1)1475.3	3.4	9.42348	51	0.88499	50	9
52	0.11397	13	9.40921	47	(1)1478.7	3.3	9.42399	51	0.88449	49	8
53	0.11410	13	9.40968	48	(1)1482.0	3.4	9.42450	51	0.88400	49	7
54	0.11423	14	9.41016	47	(1)1485.4	3.3	9.42501	51	0.88351	49	6
55	0.11437	13	9.41063	48	(1)1488.7	3.4	9.42552	51	0.88302	49	5
56	0.11450	13	9.41111	47	(1)1492.1	3.4	9.42603	50	0.88253	49	4
57	0.11463	13	9.41158	47	(1)1495.5	3.4	9.42653	51	0.88204	49	3
58	0.11476	13	9.41205	47	(1)1498.9	3.3	9.42704	51	0.88155	49	2
59	0.11489	13	9.41252	48	(1)1502.2	3.4	9.42755	51	0.88106	49	1
60	0.11502	13	9.41300	48	(1)1505.6	3.4	9.42805	50	0.88057	49	0
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$

$\omega$	$z'$	Diff.	$\log \text{Tg } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.				
0	0.11502		9.41300		(1)1505.6		9.42805		0.88057			60
1	0.11515	13	9.41347	47	(1)1509.0	3.1	9.42856	51	0.88008	49	59	
2	0.11528	13	9.41394	47	(1)1512.4	3.4	9.42906	50	0.87960	48	58	
3	0.11541	13	9.41441	47	(1)1515.8	3.4	9.42957	51	0.87911	49	57	
4	0.11554	13	9.41488	47	(1)1519.2	3.4	9.43007	50	0.87862	49	56	
5	0.11567	13	9.41535	47	(1)1522.6	3.4	9.43057	50	0.87814	48	55	
6	0.11580	14	9.41582	46	(1)1526.0	3.4	9.43108	50	0.87765	48	54	
7	0.11594	13	9.41628	47	(1)1529.4	3.4	9.43158	50	0.87717	49	53	
8	0.11607	13	9.41675	47	(1)1532.8	3.4	9.43208	50	0.87668	48	52	
9	0.11620	13	9.41722	46	(1)1536.2	3.5	9.43258	50	0.87620	48	51	
10	0.11633	13	9.41768	47	(1)1539.7	3.4	9.43308	50	0.87572	49	50	
11	0.11646	13	9.41815	46	(1)1543.1	3.4	9.43358	50	0.87523	49	49	
12	0.11659	13	9.41861	47	(1)1546.5	3.5	9.43408	50	0.87475	48	48	
13	0.11672	13	9.41908	46	(1)1550.0	3.4	9.43458	50	0.87427	48	47	
14	0.11685	13	9.41954	47	(1)1553.4	3.4	9.43508	50	0.87379	48	46	
15	0.11698	13	9.42001	46	(1)1556.8	3.5	9.43558	49	0.87331	48	45	
16	0.11711	13	9.42047	46	(1)1560.3	3.4	9.43607	50	0.87283	48	44	
17	0.11724	13	9.42093	47	(1)1563.7	3.4	9.43657	50	0.87235	48	43	
18	0.11738	14	9.42140	46	(1)1567.2	3.5	9.43707	50	0.87187	48	42	
19	0.11751	13	9.42186	46	(1)1570.6	3.1	9.43756	49	0.87139	48	41	
20	0.11764	13	9.42232	46	(1)1574.1	3.5	9.43806	50	0.87091	48	40	
21	0.11777	13	9.42278	46	(1)1577.6	3.5	9.43855	49	0.87044	48	39	
22	0.11790	13	9.42324	46	(1)1581.0	3.4	9.43905	50	0.86996	48	38	
23	0.11803	13	9.42370	46	(1)1584.5	3.5	9.43954	49	0.86948	47	37	
24	0.11816	13	9.42416	45	(1)1588.0	3.5	9.44004	49	0.86901	48	36	
25	0.11829	13	9.42461	45	(1)1591.5	3.5	9.44053	49	0.86853	47	35	
26	0.11842	13	9.42507	46	(1)1595.0	3.5	9.44102	49	0.86806	47	34	
27	0.11855	14	9.42553	46	(1)1598.5	3.5	9.44151	49	0.86758	48	33	
28	0.11869	13	9.42599	45	(1)1601.9	3.4	9.44201	50	0.86711	47	32	
29	0.11882	13	9.42644	45	(1)1605.4	3.5	9.44250	49	0.86663	48	31	
30	0.11895	13	9.42690	46	(1)1608.9	3.5	9.44299	49	0.86616	47	30	
31	0.11908	13	9.42735	45	(1)1612.5	3.6	9.44348	49	0.86569	47	29	
32	0.11921	13	9.42781	46	(1)1616.0	3.5	9.44397	49	0.86522	47	28	
33	0.11934	13	9.42826	45	(1)1619.5	3.5	9.44446	49	0.86474	47	27	
34	0.11947	13	9.42872	46	(1)1623.0	3.5	9.44495	49	0.86427	47	26	
35	0.11960	13	9.42917	45	(1)1626.5	3.5	9.44544	49	0.86380	47	25	
36	0.11973	14	9.42962	45	(1)1630.0	3.5	9.44592	48	0.86333	47	24	
37	0.11987	13	9.43008	46	(1)1633.6	3.6	9.44641	49	0.86286	47	23	
38	0.12000	13	9.43053	45	(1)1637.1	3.5	9.44690	49	0.86239	47	22	
39	0.12013	13	9.43098	45	(1)1640.6	3.5	9.44738	48	0.86193	46	21	
40	0.12026	13	9.43143	45	(1)1644.2	3.6	9.44787	49	0.86146	47	20	
41	0.12039	13	9.43188	45	(1)1647.7	3.5	9.44836	49	0.86099	47	19	
42	0.12052	13	9.43233	45	(1)1651.3	3.6	9.44884	48	0.86052	47	18	
43	0.12065	13	9.43278	45	(1)1654.8	3.5	9.44933	49	0.86006	46	17	
44	0.12078	14	9.43323	44	(1)1658.4	3.6	9.44981	48	0.85959	47	16	
45	0.12092	13	9.43367	44	(1)1661.9	3.5	9.45029	48	0.85913	46	15	
46	0.12105	13	9.43412	45	(1)1665.5	3.6	9.45078	49	0.85866	47	14	
47	0.12118	13	9.43457	45	(1)1669.1	3.6	9.45126	48	0.85820	46	13	
48	0.12131	13	9.43502	45	(1)1672.7	3.6	9.45174	48	0.85773	47	12	
49	0.12144	13	9.43546	44	(1)1676.2	3.5	9.45222	48	0.85727	46	11	
50	0.12157	13	9.43591	44	(1)1679.8	3.6	9.45271	49	0.85680	47	10	
51	0.12170	13	9.43635	44	(1)1683.4	3.6	9.45319	48	0.85634	46	9	
52	0.12183	13	9.43680	45	(1)1687.0	3.6	9.45367	48	0.85588	46	8	
53	0.12197	14	9.43724	44	(1)1690.6	3.6	9.45415	48	0.85542	46	7	
54	0.12210	13	9.43769	44	(1)1694.2	3.6	9.45463	48	0.85496	46	6	
55	0.12223	13	9.43813	44	(1)1697.8	3.6	9.45511	48	0.85449	47	5	
56	0.12236	13	9.43857	44	(1)1701.4	3.6	9.45559	47	0.85403	46	4	
57	0.12249	13	9.43901	45	(1)1705.0	3.6	9.45606	47	0.85357	46	3	
58	0.12262	13	9.43946	44	(1)1708.6	3.6	9.45654	48	0.85312	45	2	
59	0.12275	13	9.43990	44	(1)1712.2	3.6	9.45702	48	0.85266	46	1	
60	0.12289	14	9.44034	44	(1)1715.8	3.6	9.45750	48	0.85220	46	0	



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.12289	13	9.44034	44	(1)1715.8	3.7	9.45750	47	0.85220	46	60	
1	0.12302	13	9.44078	44	(1)1719.5	3.6	9.45797	48	0.85174	46	59	
2	0.12315	13	9.44122	44	(1)1723.1	3.6	9.45845	47	0.85128	46	58	
3	0.12328	13	9.44166	44	(1)1726.7	3.7	9.45892	48	0.85082	45	57	
4	0.12341	13	9.44210	43	(1)1730.4	3.6	9.45940	47	0.85037	46	56	
5	0.12354	13	9.44253	43	(1)1734.0	3.6	9.45987	48	0.84991	45	55	
6	0.12367	14	9.44297	44	(1)1737.6	3.7	9.46035	47	0.84946	46	54	
7	0.12381	13	9.44341	44	(1)1741.3	3.6	9.46082	48	0.84900	45	53	
8	0.12394	13	9.44385	43	(1)1744.9	3.7	9.46130	47	0.84855	46	52	
9	0.12407	13	9.44428	44	(1)1748.6	3.7	9.46177	47	0.84809	45	51	
10	0.12420	13	9.44472	44	(1)1752.3	3.6	9.46224	47	0.84764	46	50	
11	0.12433	13	9.44516	43	(1)1755.9	3.7	9.46271	48	0.84718	45	49	
12	0.12446	14	9.44559	43	(1)1759.6	3.7	9.46319	47	0.84673	45	48	
13	0.12460	13	9.44602	44	(1)1763.3	3.6	9.46366	47	0.84628	45	47	
14	0.12473	13	9.44646	43	(1)1766.9	3.7	9.46413	47	0.84583	46	46	
15	0.12486	13	9.44689	44	(1)1770.6	3.7	9.46460	47	0.84537	45	45	
16	0.12499	13	9.44733	43	(1)1774.3	3.7	9.46507	47	0.84492	45	44	
17	0.12512	13	9.44776	43	(1)1778.0	3.7	9.46554	47	0.84447	45	43	
18	0.12525	13	9.44819	43	(1)1781.7	3.7	9.46601	47	0.84402	45	42	
19	0.12538	14	9.44862	43	(1)1785.4	3.7	9.46648	46	0.84357	45	41	
20	0.12552	13	9.44905	43	(1)1789.1	3.7	9.46694	47	0.84312	45	40	
21	0.12565	13	9.44948	41	(1)1792.8	3.7	9.46741	47	0.84267	44	39	
22	0.12578	13	9.44992	43	(1)1796.5	3.7	9.46788	47	0.84223	45	38	
23	0.12591	13	9.45035	42	(1)1800.2	3.7	9.46835	46	0.84178	45	37	
24	0.12604	13	9.45077	43	(1)1803.9	3.7	9.46881	47	0.84133	45	36	
25	0.12617	14	9.45120	43	(1)1807.6	3.8	9.46928	47	0.84088	44	35	
26	0.12631	13	9.45163	43	(1)1811.4	3.7	9.46975	46	0.84044	45	34	
27	0.12644	13	9.45206	43	(1)1815.1	3.7	9.47021	47	0.83999	45	33	
28	0.12657	13	9.45249	43	(1)1818.8	3.8	9.47068	46	0.83954	44	32	
29	0.12670	13	9.45292	42	(1)1822.6	3.7	9.47114	46	0.83910	45	31	
30	0.12683	14	9.45334	43	(1)1826.3	3.7	9.47160	47	0.83865	44	30	
31	0.12697	13	9.45377	42	(1)1830.0	3.7	9.47207	46	0.83821	45	29	
32	0.12710	13	9.45419	43	(1)1833.8	3.8	9.47253	46	0.83776	44	28	
33	0.12723	13	9.45462	42	(1)1837.5	3.7	9.47299	47	0.83732	44	27	
34	0.12736	13	9.45504	42	(1)1841.3	3.8	9.47346	47	0.83688	44	26	
35	0.12749	13	9.45547	43	(1)1845.1	3.8	9.47392	46	0.83643	45	25	
36	0.12762	13	9.45589	42	(1)1848.8	3.7	9.47438	46	0.83599	44	24	
37	0.12776	14	9.45632	43	(1)1852.6	3.8	9.47484	46	0.83555	44	23	
38	0.12789	13	9.45674	42	(1)1856.4	3.8	9.47530	46	0.83511	44	22	
39	0.12802	13	9.45716	42	(1)1860.1	3.7	9.47576	46	0.83467	44	21	
40	0.12815	13	9.45758	42	(1)1863.9	3.8	9.47622	46	0.83423	44	20	
41	0.12828	13	9.45801	43	(1)1867.7	3.8	9.47668	46	0.83379	44	19	
42	0.12842	14	9.45843	42	(1)1871.5	3.8	9.47714	46	0.83335	44	18	
43	0.12855	13	9.45885	42	(1)1875.3	3.8	9.47760	46	0.83291	44	17	
44	0.12868	13	9.45927	42	(1)1879.1	3.8	9.47806	46	0.83247	44	16	
45	0.12881	13	9.45969	42	(1)1882.9	3.8	9.47852	46	0.83203	44	15	
46	0.12894	13	9.46011	42	(1)1886.7	3.8	9.47897	45	0.83159	44	14	
47	0.12907	13	9.46053	42	(1)1890.5	3.8	9.47943	46	0.83115	44	13	
48	0.12921	14	9.46095	42	(1)1894.3	3.8	9.47989	46	0.83072	44	12	
49	0.12934	13	9.46136	41	(1)1898.1	3.8	9.48035	46	0.83028	44	11	
50	0.12947	13	9.46178	42	(1)1901.9	3.8	9.48080	45	0.82984	44	10	
51	0.12960	13	9.46220	42	(1)1905.8	3.9	9.48126	46	0.82941	43	9	
52	0.12973	13	9.46262	42	(1)1909.6	3.8	9.48171	45	0.82897	44	8	
53	0.12987	14	9.46303	41	(1)1913.4	3.8	9.48217	46	0.82854	43	7	
54	0.13000	13	9.46345	42	(1)1917.3	3.9	9.48262	45	0.82810	44	6	
55	0.13013	13	9.46386	41	(1)1921.1	3.8	9.48307	45	0.82767	43	5	
56	0.13026	13	9.46428	42	(1)1925.0	3.9	9.48353	46	0.82723	44	4	
57	0.13039	13	9.46469	41	(1)1928.8	3.8	9.48398	45	0.82680	43	3	
58	0.13053	14	9.46511	42	(1)1932.7	3.9	9.48444	45	0.82637	43	2	
59	0.13066	13	9.46552	41	(1)1936.5	3.8	9.48489	46	0.82593	44	1	
60	0.13079	13	9.46594	42	(1)1940.4	3.9	9.48534	45	0.82550	43	0	

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.		Diff.	
0	0.13079	13	9.46594	41	(1)1940.4	3.8	9.48531	45	0.82550	43	60
1	0.13092	11	9.46635	41	(1)1944.2	3.9	9.48579	45	0.82507	43	59
2	0.13106	13	9.46676	41	(1)1948.1	3.9	9.48624	45	0.82464	43	58
3	0.13119	13	9.46717	41	(1)1952.0	3.8	9.48669	45	0.82421	43	57
4	0.13132	13	9.46758	42	(1)1955.8	3.9	9.48714	45	0.82378	43	56
5	0.13145	13	9.46800	41	(1)1959.7	3.9	9.48759	45	0.82335	43	55
6	0.13158	14	9.46841	41	(1)1963.6	3.9	9.48801	45	0.82292	43	54
7	0.13172	13	9.46882	41	(1)1967.5	3.9	9.48849	45	0.82249	43	53
8	0.13185	13	9.46923	41	(1)1971.4	3.9	9.48894	45	0.82206	43	52
9	0.13198	13	9.46964	41	(1)1975.3	3.9	9.48939	45	0.82163	43	51
10	0.13211	13	9.47005	40	(1)1979.2	3.9	9.48984	45	0.82120	43	50
11	0.13224	11	9.47045	41	(1)1983.1	3.9	9.49029	44	0.82077	42	49
12	0.13238	13	9.47086	41	(1)1987.0	3.9	9.49073	45	0.82035	43	48
13	0.13251	13	9.47127	41	(1)1990.9	3.9	9.49118	45	0.81992	43	47
14	0.13264	13	9.47168	41	(1)1994.8	4.0	9.49163	44	0.81949	42	46
15	0.13277	11	9.47209	40	(1)1998.8	3.9	9.49207	45	0.81907	43	45
16	0.13291	13	9.47249	41	(1)2002.7	3.9	9.49252	44	0.81864	43	44
17	0.13304	13	9.47290	40	(1)2006.6	3.9	9.49296	45	0.81821	42	43
18	0.13317	13	9.47330	41	(1)2010.5	4.0	9.49341	44	0.81779	43	42
19	0.13330	14	9.47371	41	(1)2014.5	3.9	9.49385	45	0.81736	42	41
20	0.13344	13	9.47411	40	(1)2018.4	4.0	9.49430	44	0.81691	42	40
21	0.13357	13	9.47452	40	(1)2022.4	3.9	9.49474	45	0.81652	43	39
22	0.13370	14	9.47492	41	(1)2026.3	4.0	9.49519	44	0.81609	42	38
23	0.13384	13	9.47533	40	(1)2030.3	3.9	9.49563	44	0.81567	42	37
24	0.13397	13	9.47573	40	(1)2034.2	4.0	9.49607	45	0.81525	42	36
25	0.13410	13	9.47613	41	(1)2038.2	3.9	9.49652	44	0.81483	43	35
26	0.13423	13	9.47654	40	(1)2042.1	4.0	9.49696	44	0.81440	42	34
27	0.13436	13	9.47694	40	(1)2046.1	4.0	9.49740	44	0.81398	42	33
28	0.13449	14	9.47734	40	(1)2050.1	4.0	9.49784	44	0.81356	42	32
29	0.13463	13	9.47774	40	(1)2054.1	3.9	9.49828	44	0.81314	42	31
30	0.13476	13	9.47814	40	(1)2058.0	4.0	9.49872	44	0.81272	42	30
31	0.13489	13	9.47854	40	(1)2062.0	4.0	9.49916	44	0.81230	42	29
32	0.13502	14	9.47894	40	(1)2066.0	4.0	9.49960	44	0.81188	42	28
33	0.13516	13	9.47934	40	(1)2070.0	4.0	9.50004	44	0.81146	42	27
34	0.13529	13	9.47974	40	(1)2074.0	4.0	9.50048	44	0.81104	42	26
35	0.13542	13	9.48014	40	(1)2078.0	4.0	9.50092	44	0.81062	41	25
36	0.13555	14	9.48054	40	(1)2082.0	4.0	9.50136	44	0.81021	42	24
37	0.13569	13	9.48094	39	(1)2086.0	4.0	9.50180	43	0.80979	42	23
38	0.13582	13	9.48133	40	(1)2090.0	4.1	9.50223	44	0.80937	42	22
39	0.13595	13	9.48173	40	(1)2094.1	4.0	9.50267	44	0.80895	41	21
40	0.13608	14	9.48213	39	(1)2098.1	4.0	9.50311	44	0.80854	42	20
41	0.13622	13	9.48252	40	(1)2102.1	4.0	9.50355	43	0.80812	41	19
42	0.13635	14	9.48292	40	(1)2106.1	4.1	9.50398	44	0.80771	42	18
43	0.13649	13	9.48332	40	(1)2110.2	4.0	9.50442	43	0.80729	41	17
44	0.13662	13	9.48371	40	(1)2114.2	4.1	9.50485	44	0.80688	42	16
45	0.13675	13	9.48411	39	(1)2118.3	4.0	9.50529	43	0.80646	41	15
46	0.13688	13	9.48450	40	(1)2122.3	4.0	9.50572	44	0.80605	42	14
47	0.13701	14	9.48490	39	(1)2126.3	4.1	9.50616	43	0.80563	41	13
48	0.13715	13	9.48529	39	(1)2130.4	4.1	9.50659	44	0.80522	41	12
49	0.13728	13	9.48568	39	(1)2134.5	4.0	9.50703	43	0.80481	42	11
50	0.13741	13	9.48607	40	(1)2138.5	4.1	9.50746	43	0.80439	41	10
51	0.13754	14	9.48647	39	(1)2142.6	4.1	9.50789	44	0.80398	41	9
52	0.13768	13	9.48686	39	(1)2146.7	4.0	9.50833	43	0.80357	41	8
53	0.13781	13	9.48725	39	(1)2150.7	4.1	9.50876	43	0.80316	41	7
54	0.13794	13	9.48764	39	(1)2154.8	4.1	9.50919	43	0.80275	41	6
55	0.13807	14	9.48803	39	(1)2158.9	4.1	9.50962	43	0.80234	41	5
56	0.13821	13	9.48842	39	(1)2163.0	4.1	9.51005	43	0.80193	41	4
57	0.13834	13	9.48881	39	(1)2167.1	4.1	9.51048	44	0.80152	41	3
58	0.13847	14	9.48920	39	(1)2171.2	4.1	9.51092	43	0.80111	41	2
59	0.13861	13	9.48959	39	(1)2175.3	4.1	9.51135	43	0.80070	41	1
60	0.13874	13	9.48998	39	(1)2179.4	4.1	9.51178	43	0.80029	41	0

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
log Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

z'

$\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.13874		9.48998	39	(1)2179.4		9.51178		0.80029			60
1	0.13887	13	9.49037	39	(1)2183.5	4.1	9.51221	43	0.79988	41		59
2	0.13900	14	9.49076	39	(1)2187.6	4.1	9.51264	42	0.79947	41		58
3	0.13914	13	9.49119	38	(1)2191.7	4.1	9.51306	43	0.79906	40		57
4	0.13927	13	9.49153	39	(1)2195.8	4.1	9.51349	43	0.79866	40		56
5	0.13940	13	9.49192	39	(1)2199.9	4.2	9.51392	43	0.79825	41		55
6	0.13954	14	9.49231	38	(1)2204.1	4.1	9.51435	43	0.79784	41		54
7	0.13967	13	9.49269	39	(1)2208.2	4.1	9.51478	42	0.79743	40		53
8	0.13980	13	9.49308	39	(1)2212.3	4.2	9.51520	43	0.79703	41		52
9	0.13993	14	9.49347	38	(1)2216.5	4.1	9.51563	43	0.79662	40		51
10	0.14007	13	9.49385	39	(1)2220.6	4.2	9.51606	42	0.79622	41		50
11	0.14020	13	9.49424	38	(1)2224.8	4.1	9.51648	43	0.79581	40		49
12	0.14033	14	9.49462	38	(1)2228.9	4.2	9.51691	43	0.79541	41		48
13	0.14047	13	9.49500	39	(1)2233.1	4.1	9.51734	42	0.79500	40		47
14	0.14060	13	9.49539	38	(1)2237.2	4.2	9.51776	43	0.79460	40		46
15	0.14073	14	9.49577	37	(1)2241.4	4.2	9.51819	42	0.79420	41		45
16	0.14087	13	9.49615	38	(1)2245.6	4.1	9.51861	42	0.79379	40		44
17	0.14100	13	9.49654	38	(1)2249.7	4.2	9.51903	43	0.79339	40		43
18	0.14113	14	9.49692	38	(1)2253.9	4.2	9.51946	42	0.79299	40		42
19	0.14127	13	9.49730	38	(1)2258.1	4.2	9.51988	43	0.79259	41		41
20	0.14140	13	9.49768	38	(1)2262.3	4.2	9.52031	42	0.79218	40		40
21	0.14153	13	9.49806	38	(1)2266.5	4.2	9.52073	42	0.79178	40		39
22	0.14166	14	9.49844	38	(1)2270.7	4.2	9.52115	42	0.79138	40		38
23	0.14180	13	9.49882	38	(1)2274.9	4.2	9.52157	43	0.79098	40		37
24	0.14193	13	9.49920	38	(1)2279.1	4.2	9.52200	42	0.79058	40		36
25	0.14206	14	9.49958	38	(1)2283.3	4.2	9.52242	42	0.79018	40		35
26	0.14220	13	9.49996	38	(1)2287.5	4.2	9.52284	42	0.78978	40		34
27	0.14233	13	9.50034	38	(1)2291.7	4.2	9.52326	42	0.78938	40		33
28	0.14246	14	9.50072	38	(1)2295.9	4.2	9.52368	42	0.78898	40		32
29	0.14260	13	9.50110	38	(1)2300.1	4.2	9.52410	42	0.78858	40		31
30	0.14273	13	9.50148	37	(1)2304.3	4.3	9.52452	42	0.78818	39		30
31	0.14286	14	9.50185	38	(1)2308.6	4.2	9.52494	42	0.78779	40		29
32	0.14300	13	9.50223	38	(1)2312.8	4.2	9.52536	42	0.78739	40		28
33	0.14313	13	9.50261	37	(1)2317.0	4.3	9.52578	42	0.78699	40		27
34	0.14326	14	9.50298	38	(1)2321.3	4.2	9.52620	41	0.78659	39		26
35	0.14340	13	9.50336	38	(1)2325.5	4.3	9.52661	42	0.78620	40		25
36	0.14353	13	9.50374	37	(1)2329.8	4.2	9.52703	42	0.78580	39		24
37	0.14366	14	9.50411	38	(1)2334.0	4.3	9.52745	42	0.78541	40		23
38	0.14380	13	9.50449	37	(1)2338.3	4.3	9.52787	42	0.78501	39		22
39	0.14393	13	9.50486	37	(1)2342.6	4.2	9.52829	41	0.78462	40		21
40	0.14406	14	9.50523	38	(1)2346.8	4.3	9.52870	42	0.78422	39		20
41	0.14420	13	9.50561	37	(1)2351.1	4.3	9.52912	41	0.78383	40		19
42	0.14433	13	9.50598	37	(1)2355.4	4.2	9.52953	42	0.78343	39		18
43	0.14446	14	9.50635	38	(1)2359.6	4.3	9.52995	42	0.78304	40		17
44	0.14460	13	9.50673	37	(1)2363.9	4.3	9.53037	41	0.78264	39		16
45	0.14473	13	9.50710	37	(1)2368.2	4.3	9.53078	42	0.78225	39		15
46	0.14486	14	9.50747	37	(1)2372.5	4.3	9.53120	41	0.78186	39		14
47	0.14500	13	9.50784	37	(1)2376.8	4.3	9.53161	41	0.78147	40		13
48	0.14513	13	9.50821	37	(1)2381.1	4.3	9.53202	42	0.78107	39		12
49	0.14526	14	9.50858	38	(1)2385.4	4.3	9.53244	41	0.78068	39		11
50	0.14540	13	9.50896	37	(1)2389.7	4.3	9.53285	42	0.78029	39		10
51	0.14553	13	9.50933	37	(1)2394.0	4.3	9.53327	41	0.77990	39		9
52	0.14566	14	9.50970	37	(1)2398.3	4.3	9.53368	41	0.77951	39		8
53	0.14580	13	9.51007	36	(1)2402.6	4.4	9.53409	41	0.77912	39		7
54	0.14593	13	9.51043	37	(1)2407.0	4.3	9.53450	42	0.77873	39		6
55	0.14606	14	9.51080	37	(1)2411.3	4.3	9.53492	41	0.77834	39		5
56	0.14620	13	9.51117	37	(1)2415.6	4.1	9.53533	41	0.77795	39		4
57	0.14633	13	9.51151	37	(1)2420.0	4.3	9.53574	41	0.77756	39		3
58	0.14646	11	9.51191	36	(1)2424.3	4.3	9.53615	41	0.77717	39		2
59	0.14660	13	9.51227	37	(1)2428.6	4.1	9.53656	41	0.77678	39		1
60	0.14673	13	9.51261	37	(1)2433.0		9.53697		0.77639	39		0
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$	

$\omega,$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
0	0.14673		9.51264	37	(1)2133.0		9.53697	41	0.77639		60
1	0.14687	14	9.51301	37	(1)2137.3	4.3	9.53738	41	0.77601	38	59
2	0.14700	13	9.51338	36	(1)2441.7	4.4	9.53779	41	0.77562	39	58
		13		37		4.4		41		39	58
3	0.14713	14	9.51374	37	(1)2446.1	4.3	9.53820	41	0.77523	39	57
4	0.14727	13	9.51411	36	(1)2450.4	4.4	9.53861	41	0.77484	38	56
5	0.14740	13	9.51447	37	(1)2454.8	4.4	9.53902	41	0.77446	39	55
		13		37		4.4		41		39	55
6	0.14753	14	9.51484	36	(1)2459.2	4.3	9.53943	41	0.77407	38	54
7	0.14767	13	9.51520	37	(1)2463.5	4.4	9.53984	41	0.77369	39	53
8	0.14780	13	9.51557	36	(1)2467.9	4.4	9.54025	41	0.77330	39	52
		14		36		4.4		40		39	52
9	0.14794	13	9.51593	36	(1)2472.3	4.4	9.54065	41	0.77291	38	51
10	0.14807	13	9.51629	37	(1)2476.7	4.4	9.54106	41	0.77253	39	50
11	0.14820	13	9.51666	36	(1)2481.1	4.4	9.54147	41	0.77214	39	49
		14		36		4.4		40		38	49
12	0.14834	13	9.51702	36	(1)2485.5	4.4	9.54187	41	0.77176	38	48
13	0.14847	13	9.51738	36	(1)2489.9	4.4	9.54228	41	0.77138	38	47
14	0.14860	13	9.51774	36	(1)2494.3	4.4	9.54269	41	0.77099	39	46
		14		37		4.4		40		38	46
15	0.14874	13	9.51811	36	(1)2498.7	4.4	9.54309	41	0.77061	38	45
16	0.14887	13	9.51847	36	(1)2503.1	4.4	9.54350	41	0.77023	38	44
17	0.14901	13	9.51883	36	(1)2507.5	4.4	9.54390	40	0.76984	39	43
		14		36		4.5		41		38	43
18	0.14914	13	9.51919	36	(1)2512.0	4.4	9.54431	40	0.76946	38	42
19	0.14927	13	9.51955	36	(1)2516.4	4.4	9.54471	40	0.76908	38	41
20	0.14941	14	9.51991	36	(1)2520.8	4.4	9.54512	41	0.76870	38	40
		13		36		4.4		40		38	40
21	0.14954	13	9.52027	36	(1)2525.2	4.5	9.54552	41	0.76832	38	39
22	0.14967	13	9.52063	36	(1)2529.7	4.4	9.54593	41	0.76794	38	38
23	0.14981	14	9.52099	36	(1)2534.1	4.4	9.54633	40	0.76755	39	37
		13		36		4.5		40		38	37
24	0.14994	13	9.52135	36	(1)2538.6	4.4	9.54673	41	0.76717	38	36
25	0.15008	13	9.52171	36	(1)2543.0	4.5	9.54714	40	0.76679	38	35
26	0.15021	13	9.52207	35	(1)2547.5	4.4	9.54754	40	0.76641	38	34
		13		35		4.4		40		38	34
27	0.15034	14	9.52242	36	(1)2551.9	4.5	9.54794	41	0.76603	38	33
28	0.15048	13	9.52278	36	(1)2556.4	4.5	9.54835	40	0.76565	38	32
29	0.15061	13	9.52314	36	(1)2560.9	4.4	9.54875	40	0.76528	37	31
		14		36		4.4		40		38	31
30	0.15075	13	9.52350	35	(1)2565.3	4.5	9.54915	40	0.76490	38	30
31	0.15088	13	9.52385	36	(1)2569.8	4.5	9.54955	40	0.76452	38	29
32	0.15101	14	9.52421	35	(1)2574.3	4.5	9.54995	40	0.76414	38	28
		13		35		4.5		40		38	28
33	0.15115	13	9.52456	36	(1)2578.8	4.5	9.55035	40	0.76376	37	27
34	0.15128	14	9.52492	35	(1)2583.3	4.5	9.55075	40	0.76339	37	26
35	0.15142	13	9.52527	36	(1)2587.8	4.5	9.55115	40	0.76301	38	25
		13		36		4.5		40		38	25
36	0.15155	13	9.52563	35	(1)2592.3	4.5	9.55155	40	0.76263	37	24
37	0.15168	13	9.52598	36	(1)2596.8	4.5	9.55195	40	0.76226	38	23
38	0.15182	14	9.52634	35	(1)2601.3	4.5	9.55235	40	0.76188	38	22
		13		35		4.5		40		38	22
39	0.15195	13	9.52669	36	(1)2605.8	4.5	9.55275	41	0.76150	37	21
40	0.15209	13	9.52705	35	(1)2610.3	4.5	9.55315	40	0.76113	38	20
41	0.15222	13	9.52740	35	(1)2614.8	4.5	9.55355	40	0.76075	37	19
		14		35		4.5		40		37	19
42	0.15236	13	9.52775	36	(1)2619.3	4.6	9.55395	39	0.76038	38	18
43	0.15249	13	9.52811	35	(1)2623.9	4.5	9.55434	40	0.76000	37	17
44	0.15262	14	9.52846	35	(1)2628.4	4.5	9.55474	40	0.75963	37	16
		14		35		4.5		40		37	16
45	0.15276	13	9.52881	35	(1)2632.9	4.6	9.55514	40	0.75926	38	15
46	0.15289	14	9.52916	35	(1)2637.5	4.5	9.55554	39	0.75888	37	14
47	0.15303	13	9.52951	35	(1)2642.0	4.5	9.55593	40	0.75851	37	13
		13		35		4.5		40		37	13
48	0.15316	14	9.52986	35	(1)2646.5	4.6	9.55633	40	0.75814	38	12
49	0.15330	13	9.53021	35	(1)2651.1	4.5	9.55673	39	0.75776	37	11
50	0.15343	13	9.53056	36	(1)2655.6	4.6	9.55712	40	0.75739	37	10
		13		35		4.6		40		37	10
51	0.15356	14	9.53092	34	(1)2660.2	4.6	9.55752	39	0.75702	37	9
52	0.15370	13	9.53126	35	(1)2664.8	4.5	9.55791	40	0.75665	38	8
53	0.15383	13	9.53161	35	(1)2669.3	4.6	9.55831	39	0.75627	37	7
		14		35		4.6		39		37	7
54	0.15397	13	9.53196	35	(1)2673.9	4.6	9.55870	40	0.75590	37	6
55	0.15410	14	9.53231	35	(1)2678.5	4.6	9.55910	39	0.75553	37	5
56	0.15424	13	9.53266	35	(1)2683.1	4.5	9.55949	40	0.75516	37	4
		13		35		4.5		40		37	4
57	0.15437	13	9.53301	35	(1)2687.6	4.6	9.55989	39	0.75479	37	3
58	0.15450	14	9.53336	34	(1)2692.2	4.6	9.56028	39	0.75442	37	2
59	0.15464	13	9.53370	35	(1)2696.8	4.6	9.56067	40	0.75405	37	1
60	0.15477	13	9.53405	35	(1)2701.4	4.6	9.56107	40	0.75368	37	0

$\log \cos \omega$  Diff.  $\log \sec \omega$   $\log \text{ Cotg } z$  Diff.  $\log \text{ cotg } \omega$  Diff.  $\log \text{ Cosec } z$  Diff.  $z'$  Diff.  $\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.15477	14	9.53405	35	(1)2701.4	4.6	9.56107	39	0.75368		60
1	0.15491	13	9.53440	35	(1)2706.0	4.6	9.56146	39	0.75331	37	59
2	0.15504	14	9.53475	34	(1)2710.6	4.6	9.56185	39	0.75294	37	58
3	0.15518	13	9.53509	35	(1)2715.2	4.6	9.56224	40	0.75257	36	57
4	0.15531	14	9.53544	34	(1)2719.8	4.7	9.56264	39	0.75221	36	56
5	0.15545	13	9.53578	35	(1)2724.5	4.6	9.56303	39	0.75184	37	55
6	0.15558	13	9.53613	34	(1)2729.1	4.6	9.56342	39	0.75147	37	54
7	0.15571	14	9.53647	35	(1)2733.7	4.6	9.56381	39	0.75110	37	53
8	0.15585	13	9.53682	34	(1)2738.3	4.7	9.56420	39	0.75074	36	52
9	0.15598	14	9.53716	35	(1)2743.0	4.6	9.56459	39	0.75037	37	51
10	0.15612	13	9.53751	34	(1)2747.6	4.6	9.56498	39	0.75000	36	50
11	0.15625	14	9.53785	34	(1)2752.2	4.7	9.56537	39	0.74964	36	49
12	0.15639	13	9.53819	35	(1)2756.9	4.6	9.56576	39	0.74927	37	48
13	0.15652	14	9.53854	34	(1)2761.5	4.7	9.56615	39	0.74890	37	47
14	0.15666	13	9.53888	34	(1)2766.2	4.7	9.56654	39	0.74854	36	46
15	0.15679	14	9.53922	35	(1)2770.9	4.6	9.56693	39	0.74817	36	45
16	0.15693	13	9.53957	34	(1)2775.5	4.7	9.56732	39	0.74781	37	44
17	0.15706	14	9.53991	34	(1)2780.2	4.7	9.56771	39	0.74744	36	43
18	0.15720	13	9.54025	34	(1)2784.9	4.6	9.56810	39	0.74708	36	42
19	0.15733	13	9.54059	34	(1)2789.5	4.7	9.56849	38	0.74672	37	41
20	0.15746	14	9.54093	34	(1)2794.2	4.7	9.56887	39	0.74635	36	40
21	0.15760	13	9.54127	34	(1)2798.9	4.7	9.56926	39	0.74599	36	39
22	0.15773	14	9.54161	34	(1)2803.6	4.7	9.56965	39	0.74563	37	38
23	0.15787	13	9.54195	34	(1)2808.3	4.7	9.57004	38	0.74526	36	37
24	0.15800	14	9.54229	34	(1)2813.0	4.7	9.57042	39	0.74490	36	36
25	0.15814	13	9.54263	34	(1)2817.7	4.7	9.57081	39	0.74454	36	35
26	0.15827	14	9.54297	34	(1)2822.4	4.7	9.57120	38	0.74418	36	34
27	0.15841	13	9.54331	34	(1)2827.1	4.7	9.57158	39	0.74381	36	33
28	0.15854	14	9.54365	34	(1)2831.8	4.7	9.57197	38	0.74345	36	32
29	0.15868	13	9.54399	34	(1)2836.5	4.7	9.57235	39	0.74309	36	31
30	0.15881	14	9.54433	33	(1)2841.2	4.8	9.57274	38	0.74273	36	30
31	0.15895	13	9.54466	33	(1)2846.0	4.7	9.57312	39	0.74237	36	29
32	0.15908	14	9.54500	34	(1)2850.7	4.7	9.57351	38	0.74201	36	28
33	0.15922	13	9.54534	33	(1)2855.4	4.8	9.57389	39	0.74165	36	27
34	0.15935	14	9.54567	34	(1)2860.6	4.7	9.57428	38	0.74129	36	26
35	0.15949	13	9.54601	34	(1)2864.9	4.8	9.57466	38	0.74093	36	25
36	0.15962	14	9.54635	33	(1)2869.7	4.7	9.57504	39	0.74057	36	24
37	0.15976	13	9.54668	34	(1)2874.4	4.8	9.57543	38	0.74021	36	23
38	0.15989	14	9.54702	33	(1)2879.2	4.7	9.57581	38	0.73985	35	22
39	0.16003	13	9.54735	34	(1)2883.9	4.8	9.57619	39	0.73950	36	21
40	0.16016	14	9.54769	33	(1)2888.7	4.7	9.57658	38	0.73914	36	20
41	0.16030	13	9.54802	34	(1)2893.4	4.8	9.57696	38	0.73878	36	19
42	0.16043	14	9.54836	33	(1)2898.2	4.8	9.57734	38	0.73842	36	18
43	0.16057	13	9.54869	34	(1)2903.0	4.8	9.57772	38	0.73806	35	17
44	0.16070	14	9.54903	33	(1)2907.8	4.8	9.57810	39	0.73771	36	16
45	0.16084	13	9.54936	33	(1)2912.6	4.7	9.57849	38	0.73735	36	15
46	0.16097	14	9.54969	34	(1)2917.3	4.8	9.57887	38	0.73699	35	14
47	0.16111	13	9.55003	33	(1)2922.1	4.8	9.57925	38	0.73664	36	13
48	0.16124	14	9.55036	33	(1)2926.9	4.8	9.57963	38	0.73628	35	12
49	0.16138	13	9.55069	33	(1)2931.7	4.8	9.58001	38	0.73593	36	11
50	0.16151	14	9.55102	34	(1)2936.5	4.9	9.58039	38	0.73557	35	10
51	0.16165	13	9.55136	33	(1)2941.4	4.8	9.58077	38	0.73522	36	9
52	0.16178	14	9.55169	33	(1)2946.2	4.8	9.58115	38	0.73486	35	8
53	0.16192	13	9.55202	33	(1)2951.0	4.8	9.58153	38	0.73451	36	7
54	0.16205	14	9.55235	33	(1)2955.8	4.8	9.58191	38	0.73415	35	6
55	0.16219	13	9.55268	33	(1)2960.6	4.9	9.58229	38	0.73380	35	5
56	0.16232	14	9.55301	33	(1)2965.5	4.8	9.58267	37	0.73345	36	4
57	0.16246	14	9.55334	33	(1)2970.3	4.8	9.58304	38	0.73309	35	3
58	0.16260	13	9.55367	33	(1)2975.1	4.9	9.58342	38	0.73274	35	2
59	0.16273	14	9.55400	33	(1)2980.0	4.8	9.58380	38	0.73239	36	1
60	0.16287	14	9.55433	33	(1)2984.8	4.8	9.58418	38	0.73203	36	0
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.16287		9.55433		(1)2984.8		9.58418		0.73303		60
1	0.16300	13	9.55466	33	(1)2989.7	4.9	9.58455	37	0.73168	35	59
2	0.16314	14	9.55499	33	(1)2994.5	4.8	9.58493	38	0.73133	35	58
3	0.16327	13	9.55532	32	(1)2999.4	4.9	9.58531	38	0.73098	35	57
4	0.16341	14	9.55564	32	(1)3004.3	4.9	9.58569	37	0.73063	36	56
5	0.16354	13	9.55597	33	(1)3009.1	4.8	9.58606	38	0.73027	35	55
6	0.16368	14	9.55630	33	(1)3014.0	4.9	9.58644	37	0.72992	35	54
7	0.16381	13	9.55663	32	(1)3018.9	4.9	9.58681	38	0.72957	35	53
8	0.16395	14	9.55695	33	(1)3023.8	4.8	9.58719	38	0.72922	35	52
9	0.16408	13	9.55728	33	(1)3028.6	4.8	9.58757	37	0.72887	35	51
10	0.16422	14	9.55761	32	(1)3033.5	4.9	9.58794	38	0.72852	35	50
11	0.16436	13	9.55793	33	(1)3038.4	4.9	9.58832	37	0.72817	35	49
12	0.16449	14	9.55826	32	(1)3043.3	4.9	9.58869	38	0.72782	35	48
13	0.16463	13	9.55858	33	(1)3048.2	4.9	9.58907	37	0.72747	35	47
14	0.16476	14	9.55891	32	(1)3053.1	4.9	9.58944	37	0.72712	34	46
15	0.16490	13	9.55923	33	(1)3058.0	5.0	9.58981	38	0.72678	35	45
16	0.16503	14	9.55956	32	(1)3063.0	4.9	9.59019	37	0.72643	35	44
17	0.16517	13	9.55988	33	(1)3067.9	4.9	9.59056	38	0.72608	35	43
18	0.16530	14	9.56021	32	(1)3072.8	4.9	9.59094	37	0.72573	35	42
19	0.16544	13	9.56053	33	(1)3077.7	4.9	9.59131	37	0.72538	34	41
20	0.16558	14	9.56085	32	(1)3082.7	5.0	9.59168	37	0.72504	35	40
21	0.16571	13	9.56118	33	(1)3087.6	4.9	9.59205	38	0.72469	35	39
22	0.16585	14	9.56150	32	(1)3092.5	5.0	9.59243	37	0.72434	35	38
23	0.16598	13	9.56182	33	(1)3097.5	4.9	9.59280	37	0.72399	34	37
24	0.16612	14	9.56215	32	(1)3102.4	5.0	9.59317	37	0.72365	35	36
25	0.16625	13	9.56247	33	(1)3107.4	4.9	9.59354	37	0.72330	34	35
26	0.16639	14	9.56279	32	(1)3112.3	5.0	9.59391	38	0.72296	34	34
27	0.16652	13	9.56311	33	(1)3117.3	5.0	9.59429	37	0.72261	35	33
28	0.16666	14	9.56343	32	(1)3122.3	5.0	9.59466	37	0.72227	34	32
29	0.16680	13	9.56375	33	(1)3127.2	4.9	9.59503	37	0.72192	35	31
30	0.16693	14	9.56408	32	(1)3132.2	5.0	9.59540	37	0.72158	34	30
31	0.16707	13	9.56440	33	(1)3137.2	5.0	9.59577	37	0.72123	35	29
32	0.16720	14	9.56472	32	(1)3142.2	5.0	9.59614	37	0.72089	34	28
33	0.16734	13	9.56504	33	(1)3147.2	5.0	9.59651	37	0.72054	35	27
34	0.16748	14	9.56536	32	(1)3152.1	4.9	9.59688	37	0.72020	34	26
35	0.16761	13	9.56568	33	(1)3157.1	5.0	9.59725	37	0.71986	34	25
36	0.16775	14	9.56599	32	(1)3162.1	5.0	9.59762	37	0.71951	35	24
37	0.16788	13	9.56631	33	(1)3167.1	5.0	9.59799	37	0.71917	34	23
38	0.16802	14	9.56663	32	(1)3172.2	5.1	9.59835	36	0.71883	34	22
39	0.16815	13	9.56695	33	(1)3177.2	5.0	9.59872	37	0.71848	35	21
40	0.16829	14	9.56727	32	(1)3182.2	5.0	9.59909	37	0.71814	34	20
41	0.16843	13	9.56759	33	(1)3187.2	5.0	9.59946	37	0.71780	34	19
42	0.16856	14	9.56790	32	(1)3192.2	5.0	9.59983	37	0.71746	34	18
43	0.16870	13	9.56822	33	(1)3197.3	5.1	9.60019	36	0.71712	34	17
44	0.16883	14	9.56854	32	(1)3202.3	5.0	9.60056	37	0.71677	35	16
45	0.16897	13	9.56886	33	(1)3207.3	5.0	9.60093	37	0.71643	34	15
46	0.16911	14	9.56917	32	(1)3212.4	5.1	9.60130	36	0.71609	34	14
47	0.16924	13	9.56949	33	(1)3217.4	5.0	9.60166	37	0.71575	34	13
48	0.16938	14	9.56980	32	(1)3222.5	5.1	9.60203	37	0.71541	34	12
49	0.16951	13	9.57012	33	(1)3227.5	5.0	9.60240	37	0.71507	34	11
50	0.16965	14	9.57044	32	(1)3232.6	5.1	9.60276	36	0.71473	34	10
51	0.16979	13	9.57075	33	(1)3237.6	5.0	9.60313	37	0.71439	34	9
52	0.16992	14	9.57107	32	(1)3242.7	5.1	9.60349	36	0.71405	34	8
53	0.17006	13	9.57138	33	(1)3247.8	5.1	9.60386	37	0.71371	33	7
54	0.17020	14	9.57169	32	(1)3252.9	5.1	9.60422	36	0.71338	34	6
55	0.17033	13	9.57201	33	(1)3257.9	5.0	9.60459	37	0.71304	34	5
56	0.17047	14	9.57232	32	(1)3263.0	5.1	9.60495	36	0.71270	34	4
57	0.17060	13	9.57264	33	(1)3268.1	5.1	9.60532	37	0.71236	34	3
58	0.17074	14	9.57295	32	(1)3273.2	5.1	9.60568	36	0.71202	34	2
59	0.17088	13	9.57326	33	(1)3278.3	5.1	9.60605	37	0.71169	33	1
60	0.17101	14	9.57358	32	(1)3283.4	5.1	9.60641	36	0.71135	34	0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z log Cotg z l. Cosec z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	0.17101		9.57358		(1)3283.4		9.60641		0.71135		34		60
1	0.17115	14	9.57389	31	(1)3288.5	5.1	9.60677	36	0.71101	34			59
2	0.17129	14	9.57420	31	(1)3293.6	5.1	9.60714	36	0.71067	33			58
3	0.17142	13	9.57451	31	(1)3298.7	5.2	9.60750	36	0.71034	34			57
4	0.17156	14	9.57482	32	(1)3303.9	5.1	9.60786	37	0.71000	34			56
5	0.17169	14	9.57514	31	(1)3309.0	5.1	9.60823	36	0.70966	33			55
6	0.17183	14	9.57545	31	(1)3314.1	5.1	9.60859	36	0.70933	34			54
7	0.17197	13	9.57576	31	(1)3319.2	5.2	9.60895	36	0.70899	33			53
8	0.17210	14	9.57607	31	(1)3324.4	5.1	9.60931	36	0.70866	34			52
9	0.17224	14	9.57638	31	(1)3329.5	5.2	9.60967	37	0.70832	33			51
10	0.17238	13	9.57669	31	(1)3334.7	5.1	9.61004	36	0.70799	34			50
11	0.17251	14	9.57700	31	(1)3339.8	5.2	9.61040	36	0.70765	33			49
12	0.17265	14	9.57731	31	(1)3345.0	5.1	9.61076	36	0.70732	34			48
13	0.17279	13	9.57762	31	(1)3350.1	5.2	9.61112	36	0.70698	33			47
14	0.17292	14	9.57793	31	(1)3355.3	5.2	9.61148	36	0.70665	33			46
15	0.17306	13	9.57824	31	(1)3360.5	5.1	9.61184	36	0.70632	34			45
16	0.17319	14	9.57855	30	(1)3365.6	5.2	9.61220	36	0.70598	33			44
17	0.17333	14	9.57885	31	(1)3370.8	5.2	9.61256	36	0.70565	33			43
18	0.17347	13	9.57916	31	(1)3376.0	5.2	9.61292	36	0.70532	34			42
19	0.17360	14	9.57947	31	(1)3381.2	5.2	9.61328	36	0.70498	33			41
20	0.17374	14	9.57978	30	(1)3386.4	5.1	9.61364	36	0.70465	33			40
21	0.17388	13	9.58008	31	(1)3391.5	5.2	9.61400	36	0.70432	33			39
22	0.17401	14	9.58039	31	(1)3396.7	5.2	9.61436	36	0.70399	34			38
23	0.17415	14	9.58070	31	(1)3401.9	5.2	9.61472	36	0.70365	33			37
24	0.17429	13	9.58101	30	(1)3407.1	5.3	9.61508	36	0.70332	33			36
25	0.17442	14	9.58131	31	(1)3412.4	5.2	9.61544	35	0.70299	33			35
26	0.17456	14	9.58162	30	(1)3417.6	5.2	9.61579	36	0.70266	33			34
27	0.17470	13	9.58192	31	(1)3422.8	5.2	9.61615	36	0.70233	33			33
28	0.17483	14	9.58223	30	(1)3428.0	5.2	9.61651	36	0.70200	33			32
29	0.17497	14	9.58253	31	(1)3433.2	5.3	9.61687	35	0.70167	33			31
30	0.17511	13	9.58284	30	(1)3438.5	5.2	9.61722	36	0.70134	33			30
31	0.17524	14	9.58314	31	(1)3443.7	5.2	9.61758	36	0.70101	33			29
32	0.17538	14	9.58345	30	(1)3448.9	5.3	9.61794	36	0.70068	33			28
33	0.17552	13	9.58375	31	(1)3454.2	5.2	9.61830	35	0.70035	33			27
34	0.17565	14	9.58406	30	(1)3459.4	5.3	9.61865	36	0.70002	33			26
35	0.17579	14	9.58436	31	(1)3464.7	5.2	9.61901	35	0.69969	33			25
36	0.17593	13	9.58467	30	(1)3469.9	5.3	9.61936	36	0.69936	33			24
37	0.17606	14	9.58497	30	(1)3475.2	5.3	9.61972	36	0.69903	33			23
38	0.17620	14	9.58527	30	(1)3480.5	5.2	9.62008	35	0.69870	32			22
39	0.17634	14	9.58557	31	(1)3485.7	5.3	9.62043	36	0.69838	33			21
40	0.17648	13	9.58588	30	(1)3491.0	5.3	9.62079	35	0.69805	33			20
41	0.17661	14	9.58618	30	(1)3496.3	5.3	9.62114	36	0.69772	33			19
42	0.17675	14	9.58648	30	(1)3501.6	5.3	9.62150	35	0.69739	32			18
43	0.17689	13	9.58678	31	(1)3506.9	5.2	9.62185	36	0.69707	33			17
44	0.17702	14	9.58709	30	(1)3512.1	5.3	9.62221	35	0.69674	33			16
45	0.17716	11	9.58739	30	(1)3517.4	5.3	9.62256	36	0.69641	32			15
46	0.17730	13	9.58769	30	(1)3522.7	5.3	9.62292	35	0.69609	33			14
47	0.17743	14	9.58799	30	(1)3528.0	5.4	9.62327	35	0.69576	33			13
48	0.17757	14	9.58829	30	(1)3533.4	5.3	9.62362	36	0.69543	32			12
49	0.17771	14	9.58859	30	(1)3538.7	5.3	9.62398	35	0.69511	33			11
50	0.17785	13	9.58889	30	(1)3544.0	5.3	9.62433	35	0.69478	32			10
51	0.17798	14	9.58919	30	(1)3549.3	5.3	9.62468	36	0.69446	33			9
52	0.17812	14	9.58949	30	(1)3554.6	5.4	9.62504	35	0.69413	32			8
53	0.17826	13	9.58979	30	(1)3560.0	5.3	9.62539	35	0.69381	33			7
54	0.17839	14	9.59009	30	(1)3565.3	5.3	9.62574	35	0.69348	32			6
55	0.17853	14	9.59039	30	(1)3570.6	5.4	9.62609	36	0.69316	32			5
56	0.17867	14	9.59069	29	(1)3576.0	5.3	9.62645	35	0.69283	32			4
57	0.17881	13	9.59098	30	(1)3581.3	5.4	9.62680	35	0.69251	33			3
58	0.17894	14	9.59128	30	(1)3586.7	5.3	9.62715	35	0.69218	32			2
59	0.17908	14	9.59158	30	(1)3592.0	5.3	9.62750	35	0.69186	32			1
60	0.17922	14	9.59188	30	(1)3597.4	5.4	9.62785	35	0.69154	32			0

log cos  $\omega$   
log Sec z

Diff.

1. cosec  $\omega$   
log Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.17922	13	9.59188	30	(1)3597.4	5.4	9.62785	35	0.69154	33	60	
1	0.17935	14	9.59218	29	(1)3602.8	5.3	9.62820	35	0.69121	32	59	
2	0.17949	14	9.59247	30	(1)3608.1	5.4	9.62855	35	0.69089	32	58	
3	0.17963	14	9.59277	30	(1)3613.5	5.4	9.62890	36	0.69057	32	57	
4	0.17977	14	9.59307	29	(1)3618.9	5.4	9.62926	35	0.69025	33	56	
5	0.17990	13	9.59336	30	(1)3624.3	5.4	9.62961	35	0.68992	32	55	
6	0.18004	14	9.59366	30	(1)3629.6	5.4	9.62996	35	0.68960	32	54	
7	0.18018	14	9.59396	29	(1)3635.0	5.4	9.63031	35	0.68928	32	53	
8	0.18032	13	9.59425	30	(1)3640.4	5.4	9.63066	35	0.68893	32	52	
9	0.18045	14	9.59455	29	(1)3645.8	5.4	9.63101	34	0.68864	32	51	
10	0.18059	14	9.59484	30	(1)3651.2	5.4	9.63135	35	0.68832	33	50	
11	0.18073	14	9.59514	29	(1)3656.6	5.5	9.63170	35	0.68799	32	49	
12	0.18087	13	9.59543	30	(1)3662.1	5.4	9.63205	35	0.68767	32	48	
13	0.18100	14	9.59573	29	(1)3667.5	5.4	9.63240	35	0.68735	32	47	
14	0.18114	14	9.59602	30	(1)3672.9	5.4	9.63275	35	0.68703	32	46	
15	0.18128	14	9.59632	29	(1)3678.3	5.4	9.63310	35	0.68671	32	45	
16	0.18142	13	9.59661	29	(1)3683.7	5.5	9.63345	34	0.68639	32	44	
17	0.18155	14	9.59690	30	(1)3689.2	5.4	9.63379	35	0.68607	32	43	
18	0.18169	14	9.59720	29	(1)3694.6	5.5	9.63414	35	0.68575	32	42	
19	0.18183	14	9.59749	29	(1)3700.1	5.4	9.63449	35	0.68543	32	41	
20	0.18197	13	9.59778	30	(1)3705.5	5.5	9.63484	35	0.68511	31	40	
21	0.18210	14	9.59808	29	(1)3711.0	5.4	9.63519	34	0.68480	32	39	
22	0.18224	14	9.59837	29	(1)3716.4	5.5	9.63553	35	0.68448	32	38	
23	0.18238	14	9.59866	29	(1)3721.9	5.4	9.63588	35	0.68416	32	37	
24	0.18252	13	9.59895	29	(1)3727.3	5.5	9.63623	34	0.68384	32	36	
25	0.18265	14	9.59924	30	(1)3732.8	5.5	9.63657	35	0.68352	31	35	
26	0.18279	14	9.59954	29	(1)3738.3	5.5	9.63692	34	0.68321	32	34	
27	0.18293	14	9.59983	29	(1)3743.8	5.4	9.63726	35	0.68289	32	33	
28	0.18307	13	9.60012	29	(1)3749.2	5.5	9.63761	35	0.68257	32	32	
29	0.18320	14	9.60041	29	(1)3754.7	5.5	9.63796	34	0.68225	31	31	
30	0.18334	14	9.60070	29	(1)3760.2	5.5	9.63830	35	0.68194	32	30	
31	0.18348	14	9.60099	29	(1)3765.7	5.5	9.63865	34	0.68162	32	29	
32	0.18362	14	9.60128	29	(1)3771.2	5.5	9.63899	35	0.68130	31	28	
33	0.18376	13	9.60157	29	(1)3776.7	5.5	9.63934	34	0.68099	32	27	
34	0.18389	14	9.60186	29	(1)3782.2	5.5	9.63968	35	0.68067	32	26	
35	0.18403	14	9.60215	29	(1)3787.7	5.6	9.64003	34	0.68035	31	25	
36	0.18417	14	9.60244	29	(1)3793.3	5.5	9.64037	35	0.68004	32	24	
37	0.18431	13	9.60273	29	(1)3798.8	5.5	9.64072	34	0.67972	31	23	
38	0.18444	14	9.60302	29	(1)3804.3	5.5	9.64106	34	0.67941	32	22	
39	0.18458	14	9.60331	28	(1)3809.8	5.6	9.64140	35	0.67909	31	21	
40	0.18472	14	9.60359	29	(1)3815.4	5.5	9.64175	34	0.67878	32	20	
41	0.18486	14	9.60388	29	(1)3820.9	5.6	9.64209	34	0.67846	31	19	
42	0.18500	13	9.60417	29	(1)3826.5	5.5	9.64243	35	0.67815	31	18	
43	0.18513	14	9.60446	28	(1)3832.0	5.6	9.64278	34	0.67784	32	17	
44	0.18527	14	9.60474	29	(1)3837.6	5.5	9.64312	34	0.67752	31	16	
45	0.18541	14	9.60503	29	(1)3843.1	5.6	9.64346	35	0.67721	32	15	
46	0.18555	14	9.60532	29	(1)3848.7	5.5	9.64381	34	0.67689	31	14	
47	0.18569	13	9.60561	28	(1)3854.2	5.6	9.64415	34	0.67658	31	13	
48	0.18582	14	9.60589	29	(1)3859.8	5.6	9.64449	34	0.67627	32	12	
49	0.18596	14	9.60618	28	(1)3865.4	5.6	9.64483	34	0.67595	31	11	
50	0.18610	14	9.60646	28	(1)3871.0	5.5	9.64517	35	0.67564	31	10	
51	0.18624	14	9.60675	29	(1)3876.5	5.6	9.64552	34	0.67533	31	9	
52	0.18638	14	9.60704	28	(1)3882.1	5.6	9.64586	34	0.67502	32	8	
53	0.18652	13	9.60732	29	(1)3887.7	5.6	9.64620	34	0.67470	31	7	
54	0.18665	14	9.60761	28	(1)3893.3	5.6	9.64654	34	0.67439	31	6	
55	0.18679	14	9.60789	29	(1)3898.9	5.6	9.64688	34	0.67408	31	5	
56	0.18693	14	9.60818	28	(1)3904.5	5.6	9.64722	31	0.67377	31	4	
57	0.18707	14	9.60846	29	(1)3910.1	5.6	9.64756	34	0.67346	31	3	
58	0.18721	13	9.60875	28	(1)3915.7	5.7	9.64790	34	0.67315	31	2	
59	0.18734	14	9.60903	28	(1)3921.4	5.6	9.64824	34	0.67284	31	1	
60	0.18748		9.60931	28	(1)3927.0	5.6	9.64858		0.67253		0	
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$	



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{tg } \omega$	Diff.				
0	0.18748		9.60931		(1)3927.0		9.64858		0.67253			60
1	0.18762	14	9.60960	29	(1)3932.6	5.6	9.64892	34	0.67221	32		59
2	0.18776	14	9.60988	28	(1)3938.2	5.6	9.64926	34	0.67190	31		58
3	0.18790	14	9.61016	29	(1)3943.9	5.7	9.64960	34	0.67159	31		57
4	0.18804	13	9.61045	28	(1)3949.5	5.6	9.64994	34	0.67128	31		56
5	0.18817	14	9.61073	28	(1)3955.2	5.7	9.65028	34	0.67098	30		55
6	0.18831	14	9.61101	28	(1)3960.8	5.6	9.65062	34	0.67067	31		54
7	0.18845	14	9.61129	28	(1)3966.5	5.7	9.65096	34	0.67036	31		53
8	0.18859	14	9.61158	29	(1)3972.1	5.6	9.65130	34	0.67005	31		52
9	0.18873	14	9.61186	28	(1)3977.8	5.7	9.65164	33	0.66974	31		51
10	0.18887	13	9.61214	28	(1)3983.5	5.7	9.65197	34	0.66943	31		50
11	0.18900	14	9.61242	28	(1)3989.1	5.6	9.65231	34	0.66912	31		49
12	0.18914	14	9.61270	28	(1)3994.8	5.7	9.65265	34	0.66881	31		48
13	0.18928	14	9.61298	28	(1)4000.5	5.7	9.65299	34	0.66850	30		47
14	0.18942	14	9.61326	28	(1)4006.2	5.6	9.65333	33	0.66820	31		46
15	0.18956	14	9.61354	28	(1)4011.8	5.7	9.65366	34	0.66789	31		45
16	0.18970	14	9.61382	29	(1)4017.5	5.7	9.65400	34	0.66758	31		44
17	0.18984	13	9.61411	27	(1)4023.2	5.7	9.65434	33	0.66727	30		43
18	0.18997	14	9.61438	28	(1)4028.9	5.7	9.65467	34	0.66697	31		42
19	0.19011	14	9.61466	28	(1)4034.6	5.8	9.65501	34	0.66666	31		41
20	0.19025	14	9.61494	28	(1)4040.4	5.7	9.65535	33	0.66635	30		40
21	0.19039	14	9.61522	28	(1)4046.1	5.7	9.65568	34	0.66605	31		39
22	0.19053	14	9.61550	28	(1)4051.8	5.7	9.65602	34	0.66574	31		38
23	0.19067	14	9.61578	28	(1)4057.5	5.7	9.65636	33	0.66543	30		37
24	0.19081	14	9.61606	28	(1)4063.2	5.8	9.65669	34	0.66513	31		36
25	0.19095	13	9.61634	28	(1)4069.0	5.7	9.65703	33	0.66482	30		35
26	0.19108	14	9.61662	28	(1)4074.7	5.7	9.65736	34	0.66452	31		34
27	0.19122	14	9.61689	28	(1)4080.5	5.8	9.65770	33	0.66421	30		33
28	0.19136	14	9.61717	27	(1)4086.2	5.7	9.65803	33	0.66391	30		32
29	0.19150	14	9.61745	28	(1)4092.0	5.8	9.65837	34	0.66360	31		31
30	0.19164	14	9.61773	28	(1)4097.7	5.7	9.65870	33	0.66330	30		30
31	0.19178	14	9.61800	27	(1)4103.5	5.8	9.65904	34	0.66299	31		29
32	0.19192	14	9.61828	28	(1)4109.2	5.7	9.65937	33	0.66269	30		28
33	0.19206	14	9.61856	28	(1)4115.0	5.8	9.65971	34	0.66238	31		27
34	0.19219	13	9.61883	27	(1)4120.8	5.8	9.66004	33	0.66208	30		26
35	0.19233	14	9.61911	28	(1)4126.6	5.8	9.66038	34	0.66178	30		25
36	0.19247	14	9.61939	28	(1)4132.3	5.7	9.66071	33	0.66147	31		24
37	0.19261	14	9.61966	27	(1)4138.1	5.8	9.66104	33	0.66117	30		23
38	0.19275	14	9.61994	28	(1)4143.9	5.8	9.66138	34	0.66087	30		22
39	0.19289	14	9.62021	27	(1)4149.7	5.8	9.66171	33	0.66056	31		21
40	0.19303	14	9.62049	28	(1)4155.5	5.8	9.66204	33	0.66026	30		20
41	0.19317	14	9.62076	27	(1)4161.3	5.8	9.66238	34	0.65996	30		19
42	0.19331	14	9.62104	28	(1)4167.1	5.8	9.66271	33	0.65966	30		18
43	0.19345	14	9.62131	27	(1)4172.9	5.8	9.66304	33	0.65935	31		17
44	0.19358	13	9.62159	28	(1)4178.7	5.8	9.66337	33	0.65905	30		16
45	0.19372	14	9.62186	27	(1)4184.6	5.9	9.66371	34	0.65875	30		15
46	0.19386	14	9.62214	28	(1)4190.4	5.8	9.66404	33	0.65845	30		14
47	0.19400	14	9.62241	27	(1)4196.2	5.8	9.66437	33	0.65815	30		13
48	0.19414	14	9.62268	27	(1)4202.1	5.9	9.66470	33	0.65785	30		12
49	0.19428	14	9.62296	28	(1)4207.9	5.8	9.66503	33	0.65754	31		11
50	0.19442	14	9.62323	27	(1)4213.7	5.8	9.66537	34	0.65724	30		10
51	0.19456	14	9.62350	27	(1)4219.6	5.9	9.66570	33	0.65694	30		9
52	0.19470	14	9.62377	27	(1)4225.4	5.8	9.66603	33	0.65664	30		8
53	0.19484	14	9.62405	28	(1)4231.3	5.9	9.66636	33	0.65634	30		7
54	0.19498	14	9.62432	27	(1)4237.2	5.9	9.66669	33	0.65604	30		6
55	0.19512	14	9.62459	27	(1)4243.0	5.8	9.66702	33	0.65574	30		5
56	0.19526	13	9.62486	27	(1)4248.9	5.9	9.66735	33	0.65544	30		4
57	0.19539	14	9.62513	27	(1)4254.8	5.9	9.66768	33	0.65514	30		3
58	0.19553	14	9.62541	28	(1)4260.7	5.9	9.66801	33	0.65484	30		2
59	0.19567	14	9.62568	27	(1)4266.5	5.8	9.66834	33	0.65454	30		1
60	0.19581	14	9.62595	27	(1)4272.4	5.9	9.66867	33	0.65424	30		0
			$\log \cos \omega$ $\log \text{ Sec } z$	Diff.	1. cosec $\omega$ $\log \text{ Cotg } z$	Diff.	$\log \text{ cotg } \omega$ 1. Cosec $z$	Diff.	$z'$	Diff.	$\omega$	

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.19581	14	9.62595	27	(1)4272.4	5.9	9.66867	33	0.65424	29	60	
1	0.19595	14	9.62622	27	(1)4278.3	5.9	9.66900	33	0.65395	30	59	
2	0.19609	14	9.62649	27	(1)4284.2	5.9	9.66933	33	0.65365	30	58	
3	0.19623	14	9.62676	27	(1)4290.1	5.9	9.66966	33	0.65335	30	57	
4	0.19637	14	9.62703	27	(1)4296.0	5.9	9.66999	33	0.65305	30	56	
5	0.19651	14	9.62730	27	(1)4301.9	6.0	9.67032	33	0.65275	30	55	
6	0.19665	14	9.62757	27	(1)4307.9	5.9	9.67065	33	0.65245	29	54	
7	0.19679	14	9.62784	27	(1)4313.8	5.9	9.67098	33	0.65216	30	53	
8	0.19693	11	9.62811	27	(1)4319.7	5.9	9.67131	32	0.65186	30	52	
9	0.19707	14	9.62838	27	(1)4325.6	6.0	9.67163	33	0.65156	30	51	
10	0.19721	14	9.62865	27	(1)4331.6	5.9	9.67196	33	0.65126	29	50	
11	0.19735	14	9.62892	26	(1)4337.5	5.9	9.67229	33	0.65097	30	49	
12	0.19749	14	9.62918	27	(1)4343.4	6.0	9.67262	33	0.65067	30	48	
13	0.19763	14	9.62945	27	(1)4349.4	5.9	9.67295	32	0.65037	29	47	
14	0.19777	14	9.62972	27	(1)4355.3	6.0	9.67327	33	0.65008	30	46	
15	0.19791	14	9.62999	27	(1)4361.3	6.0	9.67360	33	0.64978	29	45	
16	0.19805	14	9.63026	26	(1)4367.3	5.9	9.67393	33	0.64949	29	44	
17	0.19819	13	9.63052	27	(1)4373.2	6.0	9.67426	32	0.64919	30	43	
18	0.19832	14	9.63079	27	(1)4379.2	6.0	9.67458	33	0.64889	29	42	
19	0.19846	14	9.63106	27	(1)4385.2	5.9	9.67491	33	0.64860	30	41	
20	0.19860	14	9.63133	25	(1)4391.1	6.0	9.67524	32	0.64830	29	40	
21	0.19874	14	9.63159	27	(1)4397.1	6.0	9.67556	33	0.64801	30	39	
22	0.19888	14	9.63186	27	(1)4403.1	6.0	9.67589	33	0.64771	29	38	
23	0.19902	11	9.63213	26	(1)4409.1	6.0	9.67622	34	0.64742	30	37	
24	0.19916	14	9.63239	27	(1)4415.1	6.0	9.67654	33	0.64712	29	36	
25	0.19930	14	9.63266	26	(1)4421.1	6.0	9.67687	32	0.64683	30	35	
26	0.19944	11	9.63292	27	(1)4427.1	6.0	9.67719	33	0.64653	29	34	
27	0.19958	14	9.63319	26	(1)4433.1	6.0	9.67752	33	0.64624	29	33	
28	0.19972	14	9.63345	27	(1)4439.1	6.1	9.67785	32	0.64595	30	32	
29	0.19986	11	9.63372	26	(1)4445.2	6.0	9.67817	33	0.64565	29	31	
30	0.20000	14	9.63398	27	(1)4451.2	6.0	9.67850	32	0.64536	29	30	
31	0.20014	14	9.63425	26	(1)4457.2	6.0	9.67882	33	0.64507	30	29	
32	0.20028	14	9.63451	27	(1)4463.2	6.1	9.67915	32	0.64477	29	28	
33	0.20042	14	9.63478	26	(1)4469.3	6.0	9.67947	33	0.64448	29	27	
34	0.20056	14	9.63504	27	(1)4475.3	6.1	9.67980	32	0.64419	30	26	
35	0.20070	14	9.63531	26	(1)4481.4	6.0	9.68012	32	0.64389	29	25	
36	0.20084	14	9.63557	26	(1)4487.4	6.1	9.68044	33	0.64360	29	24	
37	0.20098	14	9.63583	27	(1)4493.5	6.0	9.68077	32	0.64331	29	23	
38	0.20112	14	9.63610	26	(1)4499.5	6.1	9.68109	33	0.64302	29	22	
39	0.20126	14	9.63636	26	(1)4505.6	6.1	9.68142	32	0.64273	30	21	
40	0.20140	14	9.63662	27	(1)4511.7	6.0	9.68174	32	0.64243	29	20	
41	0.20154	11	9.63689	26	(1)4517.7	6.1	9.68206	33	0.64214	29	19	
42	0.20168	14	9.63715	26	(1)4523.8	6.1	9.68239	32	0.64185	29	18	
43	0.20182	11	9.63741	26	(1)4529.9	6.1	9.68271	32	0.64156	29	17	
44	0.20196	14	9.63767	27	(1)4536.0	6.1	9.68303	33	0.64127	29	16	
45	0.20210	14	9.63794	26	(1)4542.1	6.1	9.68336	32	0.64098	29	15	
46	0.20224	15	9.63820	26	(1)4548.2	6.1	9.68368	32	0.64069	29	14	
47	0.20239	14	9.63846	26	(1)4554.3	6.1	9.68400	32	0.64040	29	13	
48	0.20253	14	9.63872	26	(1)4560.4	6.1	9.68432	33	0.64011	29	12	
49	0.20267	14	9.63898	26	(1)4566.5	6.1	9.68465	32	0.63982	29	11	
50	0.20281	14	9.63924	26	(1)4572.6	6.1	9.68497	32	0.63953	29	10	
51	0.20295	14	9.63950	26	(1)4578.7	6.1	9.68529	32	0.63924	29	9	
52	0.20309	14	9.63976	26	(1)4584.8	6.2	9.68561	32	0.63895	29	8	
53	0.20323	11	9.64002	26	(1)4591.0	6.1	9.68593	33	0.63866	29	7	
54	0.20337	14	9.64028	26	(1)4597.1	6.1	9.68626	32	0.63837	29	6	
55	0.20351	14	9.64054	26	(1)4603.2	6.2	9.68658	32	0.63808	29	5	
56	0.20365	14	9.64080	26	(1)4609.4	6.1	9.68690	32	0.63779	29	4	
57	0.20379	14	9.64106	26	(1)4615.5	6.2	9.68722	32	0.63750	29	3	
58	0.20393	14	9.64132	26	(1)4621.7	6.1	9.68754	32	0.63721	29	2	
59	0.20407	14	9.64158	26	(1)4627.8	6.2	9.68786	32	0.63692	28	1	
60	0.20421		9.64184	26	(1)4634.0		9.68818		0.63664		0	

log cos  $\omega$ 
Diff.
l. cosec  $\omega$ 
Diff.
log cotg  $\omega$ 
Diff.
 $z'$ 
Diff.
 $\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.20421		9.64184		(1)4634.0		9.68818		0.63664		60
1	0.20435	14	9.64210	26	(1)4640.1	6.1	9.68850	32	0.63635	29	59
2	0.20449	14	9.64236	26	(1)4646.3	6.2	9.68882	32	0.63606	29	58
3	0.20463	14	9.64262	26	(1)4652.5	6.2	9.68914	32	0.63577	29	57
4	0.20477	14	9.64288	26	(1)4658.7	6.2	9.68946	32	0.63548	29	56
5	0.20491	14	9.64313	25	(1)4664.8	6.1	9.68978	32	0.63520	28	55
6	0.20505	14	9.64339	26	(1)4671.0	6.2	9.69010	32	0.63491	29	54
7	0.20520	15	9.64365	26	(1)4677.2	6.2	9.69042	32	0.63462	29	53
8	0.20534	14	9.64391	26	(1)4683.4	6.2	9.69074	32	0.63434	28	52
9	0.20548	14	9.64417	26	(1)4689.6	6.2	9.69106	32	0.63405	29	51
10	0.20562	14	9.64442	25	(1)4695.8	6.2	9.69138	32	0.63376	29	50
11	0.20576	14	9.64468	26	(1)4702.0	6.2	9.69170	32	0.63348	28	49
12	0.20590	14	9.64494	25	(1)4708.2	6.2	9.69202	32	0.63319	29	48
13	0.20604	14	9.64519	26	(1)4714.5	6.3	9.69234	32	0.63290	29	47
14	0.20618	14	9.64545	26	(1)4720.7	6.2	9.69266	32	0.63262	28	46
15	0.20632	14	9.64571	26	(1)4726.9	6.2	9.69298	32	0.63233	29	45
16	0.20646	14	9.64596	25	(1)4733.1	6.2	9.69329	31	0.63205	28	44
17	0.20660	14	9.64622	26	(1)4739.4	6.3	9.69361	32	0.63176	29	43
18	0.20674	14	9.64647	25	(1)4745.6	6.2	9.69393	32	0.63148	28	42
19	0.20688	14	9.64673	26	(1)4751.9	6.3	9.69425	32	0.63119	29	41
20	0.20703	15	9.64698	25	(1)4758.1	6.2	9.69457	32	0.63091	28	40
21	0.20717	14	9.64724	26	(1)4764.4	6.3	9.69488	31	0.63062	29	39
22	0.20731	14	9.64749	25	(1)4770.6	6.2	9.69520	32	0.63034	28	38
23	0.20745	14	9.64775	26	(1)4776.9	6.3	9.69552	32	0.63005	29	37
24	0.20759	14	9.64800	25	(1)4783.2	6.3	9.69584	32	0.62977	28	36
25	0.20773	14	9.64826	26	(1)4789.4	6.2	9.69615	31	0.62948	29	35
26	0.20787	14	9.64851	25	(1)4795.7	6.3	9.69647	32	0.62920	28	34
27	0.20801	14	9.64877	26	(1)4802.0	6.3	9.69679	32	0.62892	28	33
28	0.20815	14	9.64902	25	(1)4808.3	6.3	9.69710	31	0.62863	29	32
29	0.20830	15	9.64927	25	(1)4814.6	6.3	9.69742	32	0.62835	28	31
30	0.20844	14	9.64953	26	(1)4820.9	6.3	9.69774	32	0.62807	28	30
31	0.20858	14	9.64978	25	(1)4827.2	6.3	9.69805	31	0.62778	29	29
32	0.20872	14	9.65003	26	(1)4833.5	6.3	9.69837	32	0.62750	28	28
33	0.20886	14	9.65029	25	(1)4839.8	6.3	9.69868	31	0.62722	28	27
34	0.20900	14	9.65054	25	(1)4846.1	6.3	9.69900	32	0.62694	29	26
35	0.20914	14	9.65079	25	(1)4852.4	6.4	9.69932	32	0.62665	28	25
36	0.20928	15	9.65104	26	(1)4858.8	6.3	9.69963	31	0.62637	28	24
37	0.20943	14	9.65130	26	(1)4865.1	6.3	9.69995	32	0.62609	29	23
38	0.20957	14	9.65155	25	(1)4871.4	6.3	9.70026	31	0.62581	28	22
39	0.20971	14	9.65180	25	(1)4877.8	6.4	9.70058	32	0.62553	28	21
40	0.20985	14	9.65205	25	(1)4884.1	6.3	9.70089	31	0.62524	29	20
41	0.20999	14	9.65230	25	(1)4890.4	6.3	9.70121	32	0.62496	28	19
42	0.21013	14	9.65255	25	(1)4896.8	6.4	9.70152	31	0.62468	28	18
43	0.21027	14	9.65281	26	(1)4903.2	6.4	9.70184	32	0.62440	28	17
44	0.21041	14	9.65306	25	(1)4909.5	6.3	9.70215	31	0.62412	28	16
45	0.21056	15	9.65331	25	(1)4915.9	6.4	9.70247	32	0.62384	28	15
46	0.21070	14	9.65356	25	(1)4922.2	6.3	9.70278	31	0.62356	28	14
47	0.21084	14	9.65381	25	(1)4928.6	6.4	9.70309	32	0.62328	28	13
48	0.21098	14	9.65406	25	(1)4935.0	6.4	9.70341	31	0.62300	28	12
49	0.21112	14	9.65431	25	(1)4941.4	6.4	9.70372	32	0.62272	28	11
50	0.21126	14	9.65456	25	(1)4947.8	6.4	9.70404	31	0.62244	28	10
51	0.21141	15	9.65481	25	(1)4954.2	6.4	9.70435	32	0.62216	28	9
52	0.21155	14	9.65506	25	(1)4960.6	6.4	9.70466	31	0.62188	28	8
53	0.21169	14	9.65531	25	(1)4967.0	6.4	9.70498	32	0.62160	28	7
54	0.21183	14	9.65556	24	(1)4973.4	6.4	9.70529	31	0.62132	28	6
55	0.21197	14	9.65580	25	(1)4979.8	6.4	9.70560	32	0.62104	28	5
56	0.21211	15	9.65605	25	(1)4986.2	6.4	9.70592	31	0.62076	28	4
57	0.21226	14	9.65630	25	(1)4992.6	6.4	9.70623	32	0.62048	28	3
58	0.21240	14	9.65655	25	(1)4999.0	6.5	9.70654	31	0.62020	28	2
59	0.21254	14	9.65680	25	(1)5005.5	6.4	9.70685	32	0.61992	27	1
60	0.21268	14	9.65705	25	(1)5011.9	6.4	9.70717	32	0.61965	27	0
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$

$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.21268	14	9.65705	24	(1)5011.9	6.5	9.70717	31	0.61965			60
1	0.21282	14	9.65729	25	(1)5018.4	6.4	9.70748	31	0.61937	28		59
2	0.21296	15	9.65754	25	(1)5024.8	6.4	9.70779	31	0.61909	28		58
3	0.21311	14	9.65779	25	(1)5031.2	6.5	9.70810	31	0.61881	28		57
4	0.21325	14	9.65804	24	(1)5037.7	6.5	9.70841	32	0.61853	28		56
5	0.21339	14	9.65828	25	(1)5044.2	6.4	9.70873	31	0.61826	27		55
6	0.21353	14	9.65853	25	(1)5050.6	6.5	9.70904	31	0.61798	28		54
7	0.21367	15	9.65878	24	(1)5057.1	6.5	9.70935	31	0.61770	27		53
8	0.21382	14	9.65902	25	(1)5063.6	6.4	9.70966	31	0.61743	27		52
9	0.21396	14	9.65927	25	(1)5070.0	6.5	9.70997	31	0.61715	28		51
10	0.21410	14	9.65952	24	(1)5076.5	6.5	9.71028	31	0.61687	28		50
11	0.21424	14	9.65976	25	(1)5083.0	6.5	9.71059	31	0.61659	28		49
12	0.21438	15	9.66001	24	(1)5089.5	6.5	9.71090	31	0.61632	27		48
13	0.21453	14	9.66025	25	(1)5096.0	6.5	9.71121	32	0.61604	28		47
14	0.21467	14	9.66050	25	(1)5102.5	6.5	9.71153	31	0.61577	27		46
15	0.21481	14	9.66075	24	(1)5109.0	6.5	9.71184	31	0.61549	28		45
16	0.21495	14	9.66099	25	(1)5115.5	6.5	9.71215	31	0.61521	28		44
17	0.21509	15	9.66124	24	(1)5122.0	6.5	9.71246	31	0.61494	27		43
18	0.21524	14	9.66148	25	(1)5128.5	6.5	9.71277	31	0.61466	28		42
19	0.21538	14	9.66173	24	(1)5135.0	6.6	9.71308	31	0.61439	27		41
20	0.21552	14	9.66197	24	(1)5141.6	6.5	9.71339	31	0.61411	28		40
21	0.21566	15	9.66221	25	(1)5148.1	6.5	9.71370	31	0.61384	27		39
22	0.21581	14	9.66246	24	(1)5154.6	6.6	9.71401	30	0.61356	28		38
23	0.21595	14	9.66270	25	(1)5161.2	6.5	9.71431	31	0.61329	27		37
24	0.21609	14	9.66295	24	(1)5167.7	6.6	9.71462	31	0.61301	28		36
25	0.21623	14	9.66319	24	(1)5174.3	6.5	9.71493	31	0.61274	27		35
26	0.21637	15	9.66343	25	(1)5180.8	6.6	9.71524	31	0.61246	28		34
27	0.21652	14	9.66368	24	(1)5187.4	6.6	9.71555	31	0.61219	27		33
28	0.21666	14	9.66392	24	(1)5194.0	6.5	9.71586	31	0.61192	28		32
29	0.21680	14	9.66416	25	(1)5200.5	6.6	9.71617	31	0.61164	27		31
30	0.21694	15	9.66441	24	(1)5207.1	6.6	9.71648	31	0.61137	28		30
31	0.21709	14	9.66465	24	(1)5213.7	6.6	9.71679	30	0.61110	27		29
32	0.21723	14	9.66489	24	(1)5220.3	6.6	9.71709	31	0.61082	28		28
33	0.21737	14	9.66513	24	(1)5226.9	6.6	9.71740	31	0.61055	27		27
34	0.21751	15	9.66537	25	(1)5233.5	6.5	9.71771	31	0.61028	28		26
35	0.21766	14	9.66562	24	(1)5240.0	6.7	9.71802	31	0.61000	27		25
36	0.21780	14	9.66586	24	(1)5246.7	6.6	9.71833	30	0.60973	28		24
37	0.21794	14	9.66610	24	(1)5253.3	6.6	9.71863	31	0.60946	27		23
38	0.21808	15	9.66634	24	(1)5259.9	6.6	9.71894	31	0.60918	28		22
39	0.21823	14	9.66658	24	(1)5266.5	6.6	9.71925	30	0.60891	27		21
40	0.21837	14	9.66682	24	(1)5273.1	6.6	9.71955	31	0.60864	28		20
41	0.21851	14	9.66706	25	(1)5279.7	6.7	9.71986	31	0.60837	27		19
42	0.21865	15	9.66731	24	(1)5286.4	6.6	9.72017	31	0.60810	28		18
43	0.21880	14	9.66755	24	(1)5293.0	6.6	9.72048	30	0.60782	27		17
44	0.21894	14	9.66779	24	(1)5299.6	6.7	9.72078	31	0.60755	28		16
45	0.21908	15	9.66803	24	(1)5306.3	6.6	9.72109	31	0.60728	27		15
46	0.21923	14	9.66827	24	(1)5312.9	6.7	9.72140	30	0.60701	28		14
47	0.21937	14	9.66851	24	(1)5319.6	6.6	9.72170	31	0.60674	27		13
48	0.21951	14	9.66875	24	(1)5326.2	6.7	9.72201	30	0.60647	28		12
49	0.21965	15	9.66899	23	(1)5332.9	6.7	9.72231	31	0.60620	27		11
50	0.21980	14	9.66922	24	(1)5339.6	6.6	9.72262	31	0.60593	28		10
51	0.21994	14	9.66946	24	(1)5346.2	6.7	9.72293	30	0.60566	27		9
52	0.22008	15	9.66970	24	(1)5352.9	6.7	9.72323	31	0.60539	28		8
53	0.22023	14	9.66994	24	(1)5359.6	6.7	9.72354	30	0.60512	27		7
54	0.22037	14	9.67018	24	(1)5366.3	6.7	9.72384	31	0.60485	28		6
55	0.22051	14	9.67042	24	(1)5373.0	6.7	9.72415	30	0.60458	27		5
56	0.22065	15	9.67066	24	(1)5379.7	6.7	9.72445	31	0.60431	28		4
57	0.22080	14	9.67090	23	(1)5386.4	6.7	9.72476	30	0.60404	27		3
58	0.22094	14	9.67113	24	(1)5393.1	6.7	9.72506	31	0.60377	28		2
59	0.22108	14	9.67137	24	(1)5399.8	6.7	9.72537	30	0.60350	27		1
60	0.22123	15	9.67161	24	(1)5406.5	6.7	9.72567	30	0.60323	28		0

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$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.22123	14	9.67161	24	(1)5406.5	6.7	9.72567	31	0.60323	27	60	
1	0.22137	14	9.67185	23	(1)5413.2	6.8	9.72598	30	0.60296	27	59	
2	0.22151	15	9.67208	24	(1)5420.0	6.7	9.72628	31	0.60269	27	58	
3	0.22166	14	9.67232	24	(1)5426.7	6.7	9.72659	30	0.60242	27	57	
4	0.22180	14	9.67256	24	(1)5433.4	6.7	9.74689	30	0.60215	26	56	
5	0.22194	15	9.67280	23	(1)5440.2	6.8	9.72720	31	0.60189	27	55	
6	0.22209	14	9.67303	24	(1)5446.9	6.7	9.72750	30	0.60162	27	54	
7	0.22223	14	9.67327	23	(1)5453.6	6.7	9.72780	30	0.60135	27	53	
8	0.22237	14	9.67350	24	(1)5460.4	6.8	9.72811	31	0.60108	27	52	
9	0.22251	15	9.67374	24	(1)5467.2	6.7	9.72841	31	0.60082	27	51	
10	0.22266	14	9.67398	23	(1)5473.9	6.8	9.72872	30	0.60055	27	50	
11	0.22280	14	9.67421	23	(1)5480.7	6.8	9.72902	30	0.60028	27	49	
12	0.22294	15	9.67445	24	(1)5487.5	6.7	9.72932	31	0.60001	26	48	
13	0.22309	14	9.67468	24	(1)5494.2	6.8	9.72963	30	0.59975	27	47	
14	0.22323	14	9.67492	23	(1)5501.0	6.8	9.72993	30	0.59948	27	46	
15	0.22337	15	9.67515	23	(1)5507.8	6.8	9.73023	31	0.59921	27	45	
16	0.22352	14	9.67539	24	(1)5514.6	6.8	9.73054	30	0.59894	26	44	
17	0.22366	15	9.67562	24	(1)5521.4	6.8	9.73084	30	0.59868	27	43	
18	0.22381	14	9.67586	23	(1)5528.2	6.8	9.73114	30	0.59841	27	42	
19	0.22395	14	9.67609	24	(1)5535.0	6.8	9.73144	31	0.59814	26	41	
20	0.22409	15	9.67633	23	(1)5541.8	6.8	9.73175	30	0.59788	27	40	
21	0.22424	14	9.67656	24	(1)5548.6	6.8	9.73205	30	0.59761	27	39	
22	0.22438	14	9.67680	23	(1)5555.4	6.9	9.73235	30	0.59734	26	38	
23	0.22452	15	9.67703	23	(1)5562.3	6.8	9.73265	30	0.59708	27	37	
24	0.22467	14	9.67726	24	(1)5569.1	6.8	9.73295	31	0.59681	26	36	
25	0.22481	14	9.67750	23	(1)5575.9	6.9	9.73326	30	0.59655	27	35	
26	0.22495	15	9.67773	23	(1)5582.8	6.8	9.73356	30	0.59628	26	34	
27	0.22510	14	9.67796	24	(1)5589.6	6.8	9.73386	30	0.59602	27	33	
28	0.22524	14	9.67820	23	(1)5596.4	6.9	9.73416	30	0.59575	26	32	
29	0.22538	15	9.67843	23	(1)5603.3	6.8	9.73446	30	0.59549	27	31	
30	0.22553	14	9.67866	24	(1)5610.1	6.9	9.73476	31	0.59522	26	30	
31	0.22567	15	9.67890	23	(1)5617.0	6.9	9.73507	30	0.59496	27	29	
32	0.22582	14	9.67913	23	(1)5623.9	6.8	9.73537	30	0.59469	26	28	
33	0.22596	14	9.67936	23	(1)5630.7	6.9	9.73567	30	0.59443	27	27	
34	0.22610	15	9.67959	23	(1)5637.6	6.9	9.73597	30	0.59416	26	26	
35	0.22625	14	9.67982	24	(1)5644.5	6.9	9.73627	30	0.59390	26	25	
36	0.22639	15	9.68006	23	(1)5651.4	6.9	9.73657	30	0.59364	27	24	
37	0.22654	14	9.68029	23	(1)5658.3	6.9	9.73687	30	0.59337	26	23	
38	0.22668	14	9.68052	23	(1)5665.2	6.9	9.73717	30	0.59311	27	22	
39	0.22682	15	9.68075	23	(1)5672.1	6.9	9.73747	30	0.59284	26	21	
40	0.22697	14	9.68098	23	(1)5679.0	6.9	9.73777	30	0.59258	26	20	
41	0.22711	15	9.68121	23	(1)5685.9	6.9	9.73807	30	0.59232	27	19	
42	0.22726	14	9.68144	23	(1)5692.8	6.9	9.73837	30	0.59205	26	18	
43	0.22740	14	9.68167	23	(1)5699.7	6.9	9.73867	30	0.59179	26	17	
44	0.22754	15	9.68190	23	(1)5706.6	7.0	9.73897	30	0.59153	26	16	
45	0.22769	14	9.68213	24	(1)5713.6	6.9	9.73927	30	0.59127	27	15	
46	0.22783	15	9.68237	23	(1)5720.5	6.9	9.73957	30	0.59100	26	14	
47	0.22798	14	9.68260	23	(1)5727.4	7.0	9.73987	30	0.59074	26	13	
48	0.22812	14	9.68283	22	(1)5734.4	6.9	9.74017	30	0.59048	26	12	
49	0.22826	15	9.68305	22	(1)5741.3	7.0	9.74047	30	0.59022	27	11	
50	0.22841	14	9.68328	23	(1)5748.3	6.9	9.74077	30	0.58995	26	10	
51	0.22855	15	9.68351	23	(1)5755.2	7.0	9.74107	30	0.58969	26	9	
52	0.22870	14	9.68374	23	(1)5762.2	7.0	9.74137	29	0.58943	26	8	
53	0.22884	15	9.68397	23	(1)5769.2	6.9	9.74166	30	0.58917	26	7	
54	0.22899	14	9.68420	23	(1)5776.1	7.0	9.74196	30	0.58891	26	6	
55	0.22913	14	9.68443	23	(1)5783.1	7.0	9.74226	30	0.58865	26	5	
56	0.22927	15	9.68466	23	(1)5790.1	7.0	9.74256	30	0.58839	27	4	
57	0.22942	14	9.68489	23	(1)5797.1	7.0	9.74286	30	0.58812	26	3	
58	0.22956	15	9.68512	22	(1)5804.1	7.0	9.74316	29	0.58786	26	2	
59	0.22971	14	9.68534	22	(1)5811.1	7.0	9.74345	30	0.58760	26	1	
60	0.22985	14	9.68557	23	(1)5818.1	7.0	9.74375	30	0.58734	26	0	

log cos  $\omega$  / log Sec z    Diff.    l. cosec  $\omega$  / log Cotg z    Diff.    log Cotg  $\omega$  / l. Cosec z    Diff.    z'    Diff.     $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.22985	15	9.68557	23	(1)5818.1	7.0	9.74375	30	0.58734	26	60	
1	0.23000	14	9.68580	23	(1)5825.1	7.0	9.74405	30	0.58708	26	59	
2	0.23014	14	9.68603	22	(1)5832.1	7.0	9.74435	30	0.58682	26	58	
3	0.23028	15	9.68625	23	(1)5839.1	7.0	9.74465	29	0.58656	26	57	
4	0.23043	14	9.68648	23	(1)5846.1	7.0	9.74494	30	0.58630	26	56	
5	0.23057	15	9.68671	23	(1)5853.1	7.1	9.74524	30	0.58604	26	55	
6	0.23072	14	9.68694	22	(1)5860.2	7.0	9.74554	29	0.58578	26	54	
7	0.23086	15	9.68716	23	(1)5867.2	7.0	9.74583	30	0.58552	26	53	
8	0.23101	14	9.68739	23	(1)5874.2	7.1	9.74613	30	0.58526	26	52	
9	0.23115	15	9.68762	22	(1)5881.3	7.0	9.74643	30	0.58500	26	51	
10	0.23130	15	9.68784	23	(1)5888.3	7.1	9.74673	29	0.58474	26	50	
11	0.23144	14	9.68807	22	(1)5895.4	7.1	9.74702	30	0.58448	26	49	
12	0.23159	14	9.68829	23	(1)5902.5	7.0	9.74732	30	0.58422	26	48	
13	0.23173	15	9.68852	23	(1)5909.5	7.1	9.74762	29	0.58397	26	47	
14	0.23188	14	9.68875	22	(1)5916.6	7.1	9.74791	30	0.58371	26	46	
15	0.23202	15	9.68897	23	(1)5923.7	7.0	9.74821	30	0.58345	26	45	
16	0.23217	14	9.68920	22	(1)5930.7	7.1	9.74851	29	0.58319	26	44	
17	0.23231	15	9.68942	23	(1)5937.8	7.1	9.74880	30	0.58293	26	43	
18	0.23246	14	9.68965	22	(1)5944.9	7.1	9.74910	29	0.58267	25	42	
19	0.23260	15	9.68987	23	(1)5952.0	7.1	9.74939	30	0.58242	26	41	
20	0.23275	14	9.69010	22	(1)5959.1	7.1	9.74969	29	0.58216	26	40	
21	0.23289	14	9.69032	23	(1)5966.2	7.1	9.74998	30	0.58190	26	39	
22	0.23303	15	9.69055	22	(1)5973.3	7.1	9.75028	30	0.58164	26	38	
23	0.23318	14	9.69077	23	(1)5980.4	7.1	9.75058	29	0.58138	26	37	
24	0.23332	15	9.69100	22	(1)5987.5	7.1	9.75087	30	0.58113	26	36	
25	0.23347	14	9.69122	22	(1)5994.6	7.2	9.75117	29	0.58087	26	35	
26	0.23361	15	9.69144	23	(1)6001.8	7.1	9.75146	30	0.58061	26	34	
27	0.23376	15	9.69167	22	(1)6008.9	7.1	9.75176	29	0.58036	26	33	
28	0.23391	14	9.69189	23	(1)6016.0	7.2	9.75205	30	0.58010	26	32	
29	0.23405	15	9.69212	22	(1)6023.2	7.1	9.75235	29	0.57984	26	31	
30	0.23420	14	9.69234	22	(1)6030.3	7.2	9.75264	30	0.57959	26	30	
31	0.23434	15	9.69256	23	(1)6037.5	7.1	9.75294	29	0.57933	26	29	
32	0.23449	14	9.69279	22	(1)6044.6	7.2	9.75323	30	0.57907	26	28	
33	0.23463	15	9.69301	22	(1)6051.8	7.2	9.75353	29	0.57882	26	27	
34	0.23478	14	9.69323	23	(1)6059.0	7.1	9.75382	29	0.57856	26	26	
35	0.23492	15	9.69345	23	(1)6066.1	7.2	9.75411	30	0.57830	26	25	
36	0.23507	14	9.69368	22	(1)6073.3	7.2	9.75441	29	0.57805	26	24	
37	0.23521	15	9.69390	22	(1)6080.5	7.2	9.75470	30	0.57779	26	23	
38	0.23536	14	9.69412	22	(1)6087.7	7.2	9.75500	29	0.57754	26	22	
39	0.23550	15	9.69434	22	(1)6094.8	7.2	9.75529	29	0.57728	26	21	
40	0.23565	14	9.69456	23	(1)6102.0	7.2	9.75558	30	0.57703	26	20	
41	0.23579	15	9.69479	22	(1)6109.2	7.2	9.75588	29	0.57677	26	19	
42	0.23594	14	9.69501	22	(1)6116.4	7.3	9.75617	30	0.57652	26	18	
43	0.23608	15	9.69523	22	(1)6123.7	7.2	9.75647	29	0.57626	26	17	
44	0.23623	15	9.69545	22	(1)6130.9	7.2	9.75676	29	0.57601	26	16	
45	0.23638	14	9.69567	22	(1)6138.1	7.2	9.75705	30	0.57575	26	15	
46	0.23652	15	9.69589	22	(1)6145.3	7.2	9.75735	29	0.57550	26	14	
47	0.23667	14	9.69611	22	(1)6152.5	7.3	9.75764	29	0.57524	26	13	
48	0.23681	15	9.69633	22	(1)6159.8	7.2	9.75793	29	0.57499	26	12	
49	0.23696	14	9.69655	22	(1)6167.0	7.2	9.75822	30	0.57473	26	11	
50	0.23710	15	9.69677	22	(1)6174.2	7.3	9.75852	29	0.57448	26	10	
51	0.23725	14	9.69699	22	(1)6181.5	7.2	9.75881	29	0.57423	26	9	
52	0.23739	15	9.69721	22	(1)6188.7	7.3	9.75910	29	0.57397	26	8	
53	0.23754	15	9.69743	22	(1)6196.0	7.3	9.75939	30	0.57372	26	7	
54	0.23769	14	9.69765	22	(1)6203.3	7.2	9.75969	29	0.57347	26	6	
55	0.23783	15	9.69787	22	(1)6210.5	7.3	9.75998	29	0.57321	26	5	
56	0.23798	14	9.69809	22	(1)6217.8	7.3	9.76027	29	0.57296	26	4	
57	0.23812	15	9.69831	22	(1)6225.1	7.3	9.76056	30	0.57271	26	3	
58	0.23827	14	9.69853	22	(1)6232.4	7.2	9.76086	29	0.57245	26	2	
59	0.23841	15	9.69875	22	(1)6239.6	7.3	9.76115	29	0.57220	26	1	
60	0.23856	15	9.69897	22	(1)6246.9	7.3	9.76144	29	0.57195	26	0	

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	$z'$	Diff.	$\omega$
log Sec z		log Cotg z		l. Cossec z				



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.23856	15	9.69897	22	(1)6246.9	7.3	9.76144	29	0.57195	26	60	
1	0.23871	14	9.69919	22	(1)6254.2	7.3	9.76173	29	0.57169	25	59	
2	0.23885	15	9.69941	22	(1)6261.5	7.3	9.76202	29	0.57144	25	58	
3	0.23900	14	9.69963	21	(1)6268.5	7.4	9.76231	30	0.57119	25	57	
4	0.23914	15	9.69984	22	(1)6276.2	7.3	9.76261	29	0.57094	25	56	
5	0.23929	15	9.70006	22	(1)6283.5	7.3	9.76290	29	0.57069	26	55	
6	0.23944	14	9.70028	22	(1)6290.8	7.3	9.76319	29	0.57043	25	54	
7	0.23958	15	9.70050	22	(1)6298.1	7.3	9.76348	29	0.57018	25	53	
8	0.23973	15	9.70072	22	(1)6305.4	7.4	9.76377	29	0.56993	25	52	
9	0.23987	15	9.70093	22	(1)6312.8	7.3	9.76406	29	0.56968	25	51	
10	0.24002	15	9.70115	22	(1)6320.1	7.4	9.76435	29	0.56943	25	50	
11	0.24017	14	9.70137	22	(1)6327.5	7.3	9.76464	29	0.56918	26	49	
12	0.24031	15	9.70159	21	(1)6334.8	7.4	9.76493	29	0.56892	25	48	
13	0.24046	15	9.70180	22	(1)6342.2	7.3	9.76522	29	0.56867	25	47	
14	0.24061	14	9.70202	22	(1)6349.5	7.4	9.76551	29	0.56842	25	46	
15	0.24075	15	9.70224	21	(1)6356.9	7.4	9.76580	29	0.56817	25	45	
16	0.24090	14	9.70245	22	(1)6364.3	7.3	9.76609	30	0.56792	25	44	
17	0.24104	15	9.70267	21	(1)6371.6	7.4	9.76639	29	0.56767	25	43	
18	0.24119	15	9.70288	22	(1)6379.0	7.4	9.76668	29	0.56742	25	42	
19	0.24134	14	9.70310	22	(1)6386.4	7.4	9.76697	28	0.56717	25	41	
20	0.24148	15	9.70332	21	(1)6393.8	7.4	9.76725	29	0.56692	25	40	
21	0.24163	15	9.70353	22	(1)6401.2	7.4	9.76754	29	0.56667	25	39	
22	0.24178	14	9.70375	21	(1)6408.6	7.4	9.76783	29	0.56642	25	38	
23	0.24192	15	9.70396	22	(1)6416.0	7.4	9.76812	29	0.56617	25	37	
24	0.24207	15	9.70418	21	(1)6423.4	7.4	9.76841	29	0.56592	25	36	
25	0.24222	14	9.70439	22	(1)6430.8	7.4	9.76870	29	0.56567	25	35	
26	0.24236	15	9.70461	21	(1)6438.2	7.5	9.76899	29	0.56542	25	34	
27	0.24251	14	9.70482	22	(1)6445.7	7.4	9.76928	29	0.56517	25	33	
28	0.24265	15	9.70504	21	(1)6453.1	7.4	9.76957	29	0.56492	25	32	
29	0.24280	15	9.70525	22	(1)6460.5	7.5	9.76986	29	0.56467	25	31	
30	0.24295	14	9.70547	21	(1)6468.0	7.4	9.77015	29	0.56442	24	30	
31	0.24309	15	9.70568	22	(1)6475.4	7.5	9.77044	29	0.56418	25	29	
32	0.24324	15	9.70590	21	(1)6482.9	7.4	9.77073	28	0.56393	25	28	
33	0.24339	14	9.70611	22	(1)6490.3	7.5	9.77101	29	0.56368	25	27	
34	0.24353	15	9.70633	21	(1)6497.8	7.4	9.77130	29	0.56343	25	26	
35	0.24368	15	9.70654	21	(1)6505.2	7.5	9.77159	29	0.56318	25	25	
36	0.24383	14	9.70675	22	(1)6512.7	7.5	9.77188	29	0.56293	25	24	
37	0.24397	15	9.70697	21	(1)6520.2	7.5	9.77217	29	0.56268	24	23	
38	0.24412	15	9.70718	21	(1)6527.7	7.4	9.77246	28	0.56243	25	22	
39	0.24427	15	9.70739	22	(1)6535.1	7.5	9.77274	29	0.56219	25	21	
40	0.24442	14	9.70761	21	(1)6542.6	7.5	9.77303	29	0.56194	25	20	
41	0.24456	15	9.70782	21	(1)6550.1	7.5	9.77332	29	0.56169	24	19	
42	0.24471	15	9.70803	21	(1)6557.6	7.5	9.77361	29	0.56145	25	18	
43	0.24486	14	9.70824	22	(1)6565.1	7.5	9.77390	28	0.56120	25	17	
44	0.24500	15	9.70846	21	(1)6572.6	7.5	9.77418	29	0.56095	25	16	
45	0.24515	15	9.70867	21	(1)6580.1	7.6	9.77447	29	0.56070	24	15	
46	0.24530	14	9.70888	21	(1)6587.7	7.5	9.77476	29	0.56046	25	14	
47	0.24544	15	9.70909	22	(1)6595.2	7.5	9.77505	28	0.56021	25	13	
48	0.24559	15	9.70931	21	(1)6602.7	7.5	9.77533	29	0.55996	24	12	
49	0.24574	15	9.70952	21	(1)6610.2	7.6	9.77562	29	0.55972	25	11	
50	0.24589	14	9.70973	21	(1)6617.8	7.5	9.77591	28	0.55947	25	10	
51	0.24603	15	9.70994	21	(1)6625.3	7.6	9.77619	29	0.55922	24	9	
52	0.24618	15	9.71015	21	(1)6632.9	7.5	9.77648	29	0.55898	25	8	
53	0.24633	14	9.71036	22	(1)6640.4	7.6	9.77677	29	0.55873	24	7	
54	0.24647	15	9.71058	21	(1)6648.0	7.5	9.77706	28	0.55849	25	6	
55	0.24662	15	9.71079	21	(1)6655.5	7.6	9.77734	29	0.55824	25	5	
56	0.24677	15	9.71100	21	(1)6663.1	7.6	9.77763	28	0.55799	24	4	
57	0.24692	14	9.71121	21	(1)6670.7	7.6	9.77791	29	0.55775	25	3	
58	0.24706	15	9.71142	21	(1)6678.3	7.6	9.77820	29	0.55750	25	2	
59	0.24721	15	9.71163	21	(1)6685.9	7.5	9.77849	28	0.55726	24	1	
60	0.24736	15	9.71184	21	(1)6693.4	7.5	9.77877	28	0.55701	25	0	

$\omega'$	$z'$	Diff.	$\log \sin \omega$ $\log \sec \omega$	Diff.	$\log \cos z$ $\log \sec z$	Diff.	$\log \sin z$ $\log \tg z$	Diff.				
0	0.24736		9.71184		(1)6693.4		9.77877		0.55701		24	60
1	0.24751	15	9.71205	21	(1)6701.0	7.6	9.77906	29	0.55677	24	59	
2	0.24765	14	9.71226	21	(1)6708.6	7.6	9.77935	29	0.55652	25	58	
3	0.24780	15	9.71247	21	(1)6716.2	7.6	9.77963	28	0.55628	24	57	
4	0.24795	15	9.71268	21	(1)6723.8	7.6	9.77992	29	0.55603	25	56	
5	0.24810	15	9.71289	21	(1)6731.5	7.7	9.78020	29	0.55579	24	55	
6	0.24824	14	9.71310	21	(1)6739.1	7.6	9.78049	28	0.55554	25	54	
7	0.24839	15	9.71331	21	(1)6746.7	7.6	9.78077	29	0.55530	24	53	
8	0.24854	15	9.71352	21	(1)6754.3	7.6	9.78106	29	0.55505	25	52	
9	0.24869	15	9.71373	21	(1)6762.0	7.7	9.78135	29	0.55481	24	51	
10	0.24883	14	9.71393	20	(1)6769.6	7.6	9.78163	28	0.55456	25	50	
11	0.24898	15	9.71414	21	(1)6777.2	7.6	9.78192	29	0.55432	24	49	
12	0.24913	15	9.71435	21	(1)6784.9	7.7	9.78220	28	0.55408	25	48	
13	0.24928	15	9.71456	21	(1)6792.5	7.6	9.78249	29	0.55383	24	47	
14	0.24942	14	9.71477	21	(1)6800.2	7.7	9.78277	28	0.55359	24	46	
15	0.24957	15	9.71498	21	(1)6807.9	7.7	9.78306	29	0.55335	24	45	
16	0.24972	15	9.71519	21	(1)6815.5	7.6	9.78334	28	0.55310	25	44	
17	0.24987	15	9.71539	20	(1)6823.2	7.7	9.78363	29	0.55286	24	43	
18	0.25002	15	9.71560	21	(1)6830.9	7.7	9.78391	28	0.55262	24	42	
19	0.25016	14	9.71581	21	(1)6838.6	7.7	9.78419	29	0.55237	25	41	
20	0.25031	15	9.71602	21	(1)6846.3	7.7	9.78448	28	0.55213	24	40	
21	0.25046	15	9.71622	20	(1)6854.0	7.7	9.78476	29	0.55189	24	39	
22	0.25061	15	9.71643	21	(1)6861.7	7.7	9.78505	29	0.55164	25	38	
23	0.25075	14	9.71664	21	(1)6869.4	7.7	9.78533	28	0.55140	24	37	
24	0.25090	15	9.71685	21	(1)6877.1	7.7	9.78562	29	0.55116	24	36	
25	0.25105	15	9.71705	20	(1)6884.8	7.7	9.78590	28	0.55092	24	35	
26	0.25120	15	9.71726	21	(1)6892.5	7.7	9.78618	29	0.55067	25	34	
27	0.25135	14	9.71747	21	(1)6900.2	7.7	9.78647	28	0.55043	24	33	
28	0.25149	14	9.71767	20	(1)6907.9	7.7	9.78675	29	0.55019	24	32	
29	0.25164	15	9.71788	21	(1)6915.7	7.8	9.78704	29	0.54995	24	31	
30	0.25179	15	9.71809	21	(1)6923.4	7.7	9.78732	28	0.54971	24	30	
31	0.25194	15	9.71829	20	(1)6931.2	7.8	9.78760	29	0.54946	25	29	
32	0.25209	15	9.71850	21	(1)6938.9	7.7	9.78789	28	0.54922	24	28	
33	0.25224	15	9.71870	20	(1)6946.7	7.8	9.78817	29	0.54898	24	27	
34	0.25238	14	9.71891	21	(1)6954.4	7.7	9.78845	28	0.54874	24	26	
35	0.25253	15	9.71911	20	(1)6962.2	7.8	9.78874	29	0.54850	24	25	
36	0.25268	15	9.71932	21	(1)6970.0	7.8	9.78902	28	0.54826	24	24	
37	0.25283	15	9.71952	20	(1)6977.7	7.7	9.78930	29	0.54802	24	23	
38	0.25298	15	9.71973	21	(1)6985.5	7.8	9.78959	28	0.54778	24	22	
39	0.25313	15	9.71994	21	(1)6993.3	7.8	9.78987	29	0.54753	25	21	
40	0.25327	14	9.72014	20	(1)7001.1	7.8	9.79015	28	0.54729	24	20	
41	0.25342	15	9.72034	20	(1)7008.9	7.8	9.79043	29	0.54705	24	19	
42	0.25357	15	9.72055	21	(1)7016.7	7.8	9.79072	28	0.54681	24	18	
43	0.25372	15	9.72075	20	(1)7024.5	7.8	9.79100	29	0.54657	24	17	
44	0.25387	15	9.72096	21	(1)7032.3	7.8	9.79128	28	0.54633	24	16	
45	0.25402	15	9.72116	20	(1)7040.1	7.8	9.79156	29	0.54609	24	15	
46	0.25417	15	9.72137	21	(1)7047.9	7.8	9.79185	28	0.54585	24	14	
47	0.25431	14	9.72157	20	(1)7055.8	7.9	9.79213	29	0.54561	24	13	
48	0.25446	15	9.72177	20	(1)7063.6	7.8	9.79241	28	0.54537	24	12	
49	0.25461	15	9.72198	21	(1)7071.4	7.8	9.79269	29	0.54513	24	11	
50	0.25476	15	9.72218	20	(1)7079.3	7.9	9.79297	28	0.54489	24	10	
51	0.25491	15	9.72238	20	(1)7087.1	7.8	9.79326	29	0.54465	24	9	
52	0.25506	15	9.72259	21	(1)7095.0	7.9	9.79354	28	0.54441	24	8	
53	0.25521	15	9.72279	20	(1)7102.8	7.8	9.79382	29	0.54418	23	7	
54	0.25535	14	9.72299	20	(1)7110.7	7.9	9.79410	28	0.54394	24	6	
55	0.25550	15	9.72320	21	(1)7118.5	7.8	9.79438	29	0.54370	24	5	
56	0.25565	15	9.72340	20	(1)7126.4	7.9	9.79466	28	0.54346	24	4	
57	0.25580	15	9.72360	20	(1)7134.3	7.9	9.79495	29	0.54322	24	3	
58	0.25595	15	9.72381	21	(1)7142.2	7.9	9.79523	28	0.54298	24	2	
59	0.25610	15	9.72401	20	(1)7150.1	7.9	9.79551	29	0.54274	24	1	
60	0.25625	15	9.72421	20	(1)7158.0	7.9	9.79579	28	0.54250	24	0	

$\log \cos \omega$   
 $\log \sec z$

Diff.

1. cosec  $\omega$   
 $\log \cotg z$

Diff.

$\log \cotg \omega$   
1. Cosec z

Diff.

$z'$

Diff.

$\omega'$



$\omega = 32$  Grad.

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.25625		9.72421	20	(1)7158.0	7.8	9.79579	28	0.54220	23	60
1	0.25640	15	9.72441	20	(1)7165.8	7.9	9.79607	28	0.54227	23	59
2	0.25655	15	9.72461	21	(1)7173.7	8.0	9.79635	28	0.54203	24	58
3	0.25670	14	9.72482	20	(1)7181.7	7.9	9.79663	28	0.54179	24	57
4	0.25684	15	9.72502	20	(1)7189.6	7.9	9.79691	28	0.54155	24	56
5	0.25699	15	9.72522	20	(1)7197.5	7.9	9.79719	28	0.54131	23	55
6	0.25714	15	9.72542	20	(1)7205.4	7.9	9.79747	29	0.54108	24	54
7	0.25729	15	9.72562	20	(1)7213.3	8.0	9.79776	28	0.54084	24	53
8	0.25744	15	9.72582	20	(1)7221.3	7.9	9.79804	28	0.54060	24	52
9	0.25759	15	9.72602	20	(1)7229.2	7.9	9.79832	28	0.54036	23	51
10	0.25774	15	9.72622	21	(1)7237.1	8.0	9.79860	28	0.54013	24	50
11	0.25789	15	9.72643	20	(1)7245.1	7.9	9.79888	28	0.53989	24	49
12	0.25804	15	9.72663	20	(1)7253.0	8.0	9.79916	28	0.53965	24	48
13	0.25819	15	9.72683	20	(1)7261.0	8.0	9.79944	28	0.53941	23	47
14	0.25834	15	9.72703	20	(1)7269.0	7.9	9.79972	28	0.53918	24	46
15	0.25849	14	9.72723	20	(1)7276.9	8.0	9.80000	28	0.53894	24	45
16	0.25863	15	9.72743	20	(1)7284.9	8.0	9.80028	28	0.53870	23	44
17	0.25878	15	9.72763	20	(1)7292.9	8.0	9.80056	28	0.53847	24	43
18	0.25893	15	9.72783	20	(1)7300.9	8.0	9.80084	28	0.53823	23	42
19	0.25908	15	9.72803	20	(1)7308.9	8.0	9.80112	28	0.53800	23	41
20	0.25923	15	9.72823	20	(1)7316.9	8.0	9.80140	28	0.53776	24	40
21	0.25938	15	9.72843	20	(1)7324.9	8.0	9.80168	27	0.53752	23	39
22	0.25953	15	9.72863	20	(1)7332.9	8.0	9.80195	28	0.53729	23	38
23	0.25968	15	9.72883	19	(1)7340.9	8.0	9.80223	28	0.53705	24	37
24	0.25983	15	9.72902	20	(1)7348.9	8.0	9.80251	28	0.53681	23	36
25	0.25998	15	9.72922	20	(1)7356.9	8.0	9.80279	28	0.53658	24	35
26	0.26013	15	9.72942	20	(1)7364.9	8.1	9.80307	28	0.53634	23	34
27	0.26028	15	9.72962	20	(1)7373.0	8.0	9.80335	28	0.53611	24	33
28	0.26043	15	9.72982	20	(1)7381.0	8.0	9.80363	28	0.53587	23	32
29	0.26058	15	9.73002	20	(1)7389.0	8.1	9.80391	28	0.53564	24	31
30	0.26073	15	9.73022	19	(1)7397.1	8.0	9.80419	28	0.53540	23	30
31	0.26088	15	9.73041	20	(1)7405.1	8.1	9.80447	27	0.53517	21	29
32	0.26103	15	9.73061	20	(1)7413.2	8.0	9.80474	28	0.53493	23	28
33	0.26118	15	9.73081	20	(1)7421.2	8.1	9.80502	28	0.53470	24	27
34	0.26133	15	9.73101	20	(1)7429.3	8.1	9.80530	28	0.53446	23	26
35	0.26148	15	9.73121	19	(1)7437.4	8.1	9.80558	28	0.53423	24	25
36	0.26163	15	9.73140	20	(1)7445.5	8.0	9.80586	28	0.53399	23	24
37	0.26178	15	9.73160	20	(1)7453.5	8.1	9.80614	28	0.53376	23	23
38	0.26193	15	9.73180	20	(1)7461.6	8.1	9.80642	27	0.53352	24	22
39	0.26208	15	9.73200	19	(1)7469.7	8.1	9.80669	28	0.53329	23	21
40	0.26223	15	9.73219	20	(1)7477.8	8.1	9.80697	28	0.53306	24	20
41	0.26238	15	9.73239	20	(1)7485.9	8.1	9.80725	28	0.53282	23	19
42	0.26253	15	9.73259	19	(1)7494.0	8.1	9.80753	28	0.53259	24	18
43	0.26268	15	9.73278	20	(1)7502.1	8.2	9.80781	27	0.53235	23	17
44	0.26283	15	9.73298	20	(1)7510.3	8.1	9.80808	28	0.53212	23	16
45	0.26298	15	9.73318	19	(1)7518.4	8.1	9.80836	28	0.53189	24	15
46	0.26313	15	9.73337	20	(1)7526.5	8.1	9.80864	28	0.53165	24	14
47	0.26328	15	9.73357	20	(1)7534.6	8.2	9.80892	28	0.53142	23	13
48	0.26343	15	9.73377	19	(1)7542.8	8.1	9.80919	28	0.53119	24	12
49	0.26358	15	9.73396	20	(1)7550.9	8.2	9.80947	28	0.53095	23	11
50	0.26373	15	9.73416	19	(1)7559.1	8.1	9.80975	28	0.53072	23	10
51	0.26388	15	9.73435	20	(1)7567.2	8.2	9.81003	27	0.53049	24	9
52	0.26403	15	9.73455	19	(1)7575.4	8.2	9.81030	28	0.53025	23	8
53	0.26418	15	9.73474	20	(1)7583.6	8.1	9.81058	28	0.53002	23	7
54	0.26433	15	9.73494	19	(1)7591.7	8.2	9.81086	27	0.52979	23	6
55	0.26448	15	9.73513	20	(1)7599.9	8.2	9.81113	28	0.52956	24	5
56	0.26463	15	9.73533	19	(1)7608.1	8.2	9.81141	28	0.52932	23	4
57	0.26478	15	9.73552	20	(1)7616.3	8.2	9.81169	27	0.52909	23	3
58	0.26493	15	9.73572	19	(1)7624.5	8.2	9.81196	28	0.52886	23	2
59	0.26508	15	9.73591	20	(1)7632.7	8.2	9.81224	28	0.52863	23	1
60	0.26524	16	9.73611	20	(1)7640.9	8.2	9.81252	28	0.52840	23	0
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.26524	15	9.73611	19	(1)7640.9	8.2	9.81252	27	0.52840	24	60	
1	0.26539	15	9.73630	20	(1)7649.1	8.2	9.81279	28	0.52816	23	59	
2	0.26554	15	9.73650	19	(1)7657.3	8.2	9.81307	28	0.52793	23	58	
3	0.26569	15	9.73669	20	(1)7665.5	8.2	9.81335	27	0.52770	23	57	
4	0.26584	15	9.73689	19	(1)7673.7	8.2	9.81362	28	0.52747	23	56	
5	0.26599	15	9.73708	19	(1)7681.9	8.3	9.81390	28	0.52724	23	55	
6	0.26614	15	9.73727	20	(1)7690.2	8.2	9.81418	27	0.52701	24	54	
7	0.26629	15	9.73747	19	(1)7698.4	8.3	9.81445	28	0.52677	23	53	
8	0.26644	15	9.73766	19	(1)7706.7	8.2	9.81473	27	0.52654	23	52	
9	0.26659	15	9.73785	20	(1)7714.9	8.3	9.81500	28	0.52631	23	51	
10	0.26674	15	9.73805	19	(1)7723.2	8.2	9.81528	28	0.52608	23	50	
11	0.26689	15	9.73824	19	(1)7731.4	8.3	9.81556	27	0.52585	23	49	
12	0.26705	15	9.73843	20	(1)7739.7	8.3	9.81583	28	0.52562	23	48	
13	0.26720	15	9.73863	19	(1)7748.0	8.2	9.81611	27	0.52539	23	47	
14	0.26735	15	9.73882	19	(1)7756.2	8.3	9.81638	28	0.52516	23	46	
15	0.26750	15	9.73901	20	(1)7764.5	8.3	9.81666	27	0.52493	23	45	
16	0.26765	15	9.73921	19	(1)7772.8	8.3	9.81693	28	0.52470	23	44	
17	0.26780	15	9.73940	19	(1)7781.1	8.3	9.81721	27	0.52447	23	43	
18	0.26795	15	9.73959	19	(1)7789.4	8.3	9.81748	28	0.52424	23	42	
19	0.26810	15	9.73978	20	(1)7797.7	8.3	9.81776	27	0.52401	23	41	
20	0.26825	16	9.73997	19	(1)7806.0	8.3	9.81803	28	0.52378	23	40	
21	0.26841	15	9.74017	19	(1)7814.3	8.3	9.81831	27	0.52355	23	39	
22	0.26856	15	9.74036	19	(1)7822.6	8.3	9.81858	28	0.52332	23	38	
23	0.26871	15	9.74055	19	(1)7830.9	8.4	9.81886	27	0.52309	23	37	
24	0.26886	15	9.74074	19	(1)7839.3	8.3	9.81913	28	0.52286	23	36	
25	0.26901	15	9.74093	20	(1)7847.6	8.3	9.81941	27	0.52263	23	35	
26	0.26916	15	9.74113	19	(1)7855.9	8.4	9.81968	28	0.52240	23	34	
27	0.26931	15	9.74132	19	(1)7864.3	8.3	9.81996	27	0.52217	23	33	
28	0.26946	16	9.74151	19	(1)7872.6	8.4	9.82023	28	0.52194	23	32	
29	0.26962	15	9.74170	19	(1)7881.0	8.3	9.82051	27	0.52171	23	31	
30	0.26977	15	9.74189	19	(1)7889.3	8.4	9.82078	28	0.52148	23	30	
31	0.26992	15	9.74208	19	(1)7897.7	8.4	9.82106	27	0.52125	23	29	
32	0.27007	15	9.74227	19	(1)7906.1	8.3	9.82133	28	0.52103	23	28	
33	0.27022	15	9.74246	19	(1)7914.4	8.4	9.82161	27	0.52080	23	27	
34	0.27037	15	9.74265	19	(1)7922.8	8.4	9.82188	27	0.52057	23	26	
35	0.27053	16	9.74284	19	(1)7931.2	8.4	9.82215	28	0.52034	23	25	
36	0.27068	15	9.74303	19	(1)7939.6	8.4	9.82243	27	0.52011	23	24	
37	0.27083	15	9.74322	19	(1)7948.0	8.4	9.82270	28	0.51988	23	23	
38	0.27098	15	9.74341	19	(1)7956.4	8.4	9.82298	27	0.51965	22	22	
39	0.27113	15	9.74360	19	(1)7964.8	8.4	9.82325	27	0.51943	23	21	
40	0.27128	16	9.74379	19	(1)7973.2	8.4	9.82352	28	0.51920	23	20	
41	0.27144	15	9.74398	19	(1)7981.6	8.5	9.82380	27	0.51897	23	19	
42	0.27159	15	9.74417	19	(1)7990.1	8.4	9.82407	28	0.51874	22	18	
43	0.27174	15	9.74436	19	(1)7998.5	8.4	9.82435	27	0.51852	23	17	
44	0.27189	15	9.74455	19	(1)8006.9	8.5	9.82462	27	0.51829	23	16	
45	0.27204	16	9.74474	19	(1)8015.4	8.4	9.82489	28	0.51806	23	15	
46	0.27220	15	9.74493	19	(1)8023.8	8.5	9.82517	27	0.51783	22	14	
47	0.27235	15	9.74512	19	(1)8032.3	8.4	9.82544	27	0.51761	23	13	
48	0.27250	15	9.74531	18	(1)8040.7	8.5	9.82571	28	0.51738	23	12	
49	0.27265	15	9.74549	19	(1)8049.2	8.4	9.82599	27	0.51715	22	11	
50	0.27280	16	9.74568	19	(1)8057.6	8.5	9.82626	27	0.51693	23	10	
51	0.27296	15	9.74587	19	(1)8066.1	8.5	9.82653	28	0.51670	23	9	
52	0.27311	15	9.74606	19	(1)8074.6	8.5	9.82681	27	0.51647	23	8	
53	0.27326	15	9.74625	19	(1)8083.1	8.4	9.82708	27	0.51624	23	7	
54	0.27341	15	9.74644	18	(1)8091.5	8.5	9.82735	27	0.51602	23	6	
55	0.27356	16	9.74662	19	(1)8100.0	8.5	9.82762	28	0.51579	22	5	
56	0.27372	15	9.74681	19	(1)8108.5	8.5	9.82790	27	0.51557	23	4	
57	0.27387	15	9.74700	19	(1)8117.0	8.5	9.82817	27	0.51534	23	3	
58	0.27402	15	9.74719	18	(1)8125.5	8.6	9.82844	27	0.51511	22	2	
59	0.27417	16	9.74737	19	(1)8134.1	8.5	9.82871	28	0.51489	23	1	
60	0.27433		9.74756		(1)8142.6		9.82899		0.51466		0	

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.     $z'$     Diff.     $\omega$   
 log Sec z                         log Cotg z                         l. Cosec z



$\omega$	$z'$	Diff.	$\log \operatorname{Tg} z$ $\log \sin \omega$	Diff.	$\log \operatorname{Cos} z$ $\log \sec \omega$	Diff.	$\log \operatorname{Sin} z$ $\log \operatorname{tg} \omega$	Diff.				
0	0,27433		9,74756		(18142,6		9,82899		0,51466			60
1	0,27448	15	9,74775	19	(18151,1	8,5	9,82926	27	0,51444	22		59
2	0,27463	15	9,74794	19	(18159,6	8,5	9,82953	27	0,51421	23		58
3	0,27478	16	9,74812	19	(18168,2	8,6	9,82980	27	0,51398	23		57
4	0,27494	16	9,74831	19	(18176,7	8,5	9,83008	28	0,51376	22		56
5	0,27509	15	9,74850	18	(18185,3	8,6	9,83035	27	0,51353	23		55
6	0,27524	15	9,74868	18	(18193,8	8,5	9,83062	27	0,51331	22		54
7	0,27539	16	9,74887	19	(18202,4	8,6	9,83089	27	0,51308	23		53
8	0,27555	15	9,74906	18	(18210,9	8,5	9,83117	28	0,51286	22		52
9	0,27570	15	9,74924	18	(18219,5	8,6	9,83144	27	0,51263	23		51
10	0,27585	15	9,74943	19	(18228,1	8,6	9,83171	27	0,51241	22		50
11	0,27600	16	9,74961	18	(18236,6	8,5	9,83198	27	0,51218	23		49
12	0,27616	15	9,74980	19	(18245,2	8,6	9,83225	27	0,51196	22		48
13	0,27631	15	9,74999	18	(18253,8	8,6	9,83252	28	0,51173	23		47
14	0,27646	15	9,75017	18	(18262,4	8,6	9,83280	27	0,51151	22		46
15	0,27661	16	9,75036	19	(18271,0	8,6	9,83307	27	0,51128	23		45
16	0,27677	15	9,75054	18	(18279,6	8,6	9,83334	27	0,51106	22		44
17	0,27692	15	9,75073	18	(18288,2	8,6	9,83361	27	0,51083	23		43
18	0,27707	16	9,75091	19	(18296,8	8,6	9,83388	27	0,51061	22		42
19	0,27723	15	9,75110	18	(18305,4	8,6	9,83415	27	0,51039	23		41
20	0,27738	15	9,75128	19	(18314,1	8,7	9,83442	28	0,51016	22		40
21	0,27753	16	9,75147	18	(18322,7	8,6	9,83470	27	0,50994	23		39
22	0,27769	15	9,75165	19	(18331,3	8,6	9,83497	27	0,50971	22		38
23	0,27784	15	9,75184	18	(18340,0	8,7	9,83524	27	0,50949	23		37
24	0,27799	15	9,75202	18	(18348,6	8,6	9,83551	27	0,50927	22		36
25	0,27814	16	9,75221	19	(18357,3	8,7	9,83578	27	0,50904	23		35
26	0,27830	15	9,75239	18	(18365,9	8,6	9,83605	27	0,50882	22		34
27	0,27845	15	9,75258	19	(18374,6	8,7	9,83632	27	0,50860	23		33
28	0,27860	16	9,75276	18	(18383,3	8,7	9,83659	27	0,50837	22		32
29	0,27876	15	9,75294	19	(18391,9	8,6	9,83686	27	0,50815	23		31
30	0,27891	15	9,75313	18	(18400,6	8,7	9,83713	27	0,50793	22		30
31	0,27906	16	9,75331	19	(18409,3	8,7	9,83740	28	0,50770	23		29
32	0,27922	15	9,75350	18	(18418,0	8,7	9,83768	27	0,50748	22		28
33	0,27937	15	9,75368	18	(18426,7	8,7	9,83795	27	0,50726	23		27
34	0,27952	16	9,75386	19	(18435,4	8,7	9,83822	27	0,50704	22		26
35	0,27968	15	9,75405	18	(18444,1	8,7	9,83849	27	0,50681	23		25
36	0,27983	15	9,75423	18	(18452,8	8,7	9,83876	27	0,50659	22		24
37	0,27998	16	9,75441	18	(18461,5	8,7	9,83903	27	0,50637	23		23
38	0,28014	15	9,75459	19	(18470,3	8,7	9,83930	27	0,50615	22		22
39	0,28029	16	9,75478	18	(18479,0	8,7	9,83957	27	0,50592	23		21
40	0,28045	15	9,75496	18	(18487,7	8,8	9,83984	27	0,50570	22		20
41	0,28060	15	9,75514	19	(18496,5	8,8	9,84011	27	0,50548	23		19
42	0,28075	16	9,75533	18	(18505,2	8,8	9,84038	27	0,50526	22		18
43	0,28091	15	9,75551	18	(18514,0	8,7	9,84065	27	0,50504	23		17
44	0,28106	15	9,75569	18	(18522,7	8,8	9,84092	27	0,50481	22		16
45	0,28121	16	9,75587	19	(18531,5	8,8	9,84119	27	0,50459	23		15
46	0,28137	15	9,75605	18	(18540,2	8,7	9,84146	27	0,50437	22		14
47	0,28152	15	9,75624	18	(18549,0	8,8	9,84173	27	0,50415	23		13
48	0,28167	16	9,75642	18	(18557,8	8,8	9,84200	27	0,50393	22		12
49	0,28183	15	9,75660	18	(18566,6	8,8	9,84227	27	0,50371	23		11
50	0,28198	16	9,75678	18	(18575,4	8,8	9,84254	26	0,50348	22		10
51	0,28214	15	9,75696	18	(18584,2	8,8	9,84280	27	0,50326	23		9
52	0,28229	15	9,75714	19	(18593,0	8,8	9,84307	27	0,50304	22		8
53	0,28244	16	9,75733	18	(18601,8	8,8	9,84334	27	0,50282	23		7
54	0,28260	15	9,75751	18	(18610,6	8,8	9,84361	27	0,50260	22		6
55	0,28275	16	9,75769	18	(18619,4	8,8	9,84388	27	0,50238	23		5
56	0,28291	15	9,75787	18	(18628,2	8,8	9,84415	27	0,50216	22		4
57	0,28306	15	9,75805	18	(18637,0	8,8	9,84442	27	0,50194	23		3
58	0,28321	16	9,75823	18	(18645,9	8,9	9,84469	27	0,50172	22		2
59	0,28337	16	9,75841	18	(18654,7	8,8	9,84496	27	0,50150	23		1
60	0,28352	15	9,75859	18	(18663,5	8,8	9,84523	27	0,50128	22		0

$\log \operatorname{Cos} \omega$  Diff.  $\log \operatorname{Cosec} \omega$  Diff.  $\log \operatorname{cotg} \omega$  Diff.  $z'$  Diff.  $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.28352	16	9.75859	18	(1)8663.5	8.9	9.84523	27	0.50128	22	60
1	0.28368	15	9.75877	18	(1)8672.4	8.9	9.84550	26	0.50106	22	59
2	0.28383	16	9.75895	18	(1)8681.3	8.8	9.84576	27	0.50084	22	58
3	0.28399	15	9.75913	18	(1)8690.1	8.9	9.84603	27	0.50062	22	57
4	0.28414	15	9.75931	18	(1)8699.0	8.8	9.84630	27	0.50040	22	56
5	0.28429	16	9.75949	18	(1)8707.8	8.9	9.84657	27	0.50018	22	55
6	0.28445	15	9.75967	18	(1)8716.7	8.9	9.84684	27	0.49996	22	54
7	0.28460	16	9.75985	18	(1)8725.6	8.9	9.84711	27	0.49974	22	53
8	0.28476	15	9.76003	18	(1)8734.5	8.9	9.84738	27	0.49952	22	52
9	0.28491	16	9.76021	18	(1)8743.4	8.9	9.84764	27	0.49930	22	51
10	0.28507	15	9.76039	18	(1)8752.3	8.9	9.84791	27	0.49908	22	50
11	0.28522	16	9.76057	18	(1)8761.2	8.9	9.84818	27	0.49886	22	49
12	0.28538	15	9.76075	18	(1)8770.1	8.9	9.84845	27	0.49864	22	48
13	0.28553	16	9.76093	18	(1)8779.0	8.9	9.84872	27	0.49842	22	47
14	0.28569	15	9.76111	18	(1)8787.9	9.0	9.84899	26	0.49820	22	46
15	0.28584	15	9.76129	17	(1)8796.9	8.9	9.84925	27	0.49798	21	45
16	0.28599	16	9.76146	18	(1)8805.8	8.9	9.84952	27	0.49777	22	44
17	0.28615	15	9.76164	18	(1)8814.7	9.0	9.84979	27	0.49755	22	43
18	0.28630	16	9.76182	18	(1)8823.7	8.9	9.85005	27	0.49733	22	42
19	0.28646	15	9.76200	18	(1)8832.6	9.0	9.85033	26	0.49711	22	41
20	0.28661	16	9.76218	18	(1)8841.6	8.9	9.85059	27	0.49689	22	40
21	0.28677	15	9.76236	17	(1)8850.5	9.0	9.85086	27	0.49667	22	39
22	0.28692	16	9.76253	18	(1)8859.5	9.0	9.85113	27	0.49645	21	38
23	0.28708	15	9.76271	18	(1)8868.5	8.9	9.85140	27	0.49624	22	37
24	0.28723	16	9.76289	18	(1)8877.4	9.0	9.85166	26	0.49602	22	36
25	0.28739	15	9.76307	17	(1)8886.4	9.0	9.85193	27	0.49580	22	35
26	0.28754	16	9.76324	18	(1)8895.4	9.0	9.85220	27	0.49558	22	34
27	0.28770	15	9.76342	18	(1)8904.4	9.0	9.85247	26	0.49536	21	33
28	0.28785	16	9.76360	18	(1)8913.4	9.0	9.85273	27	0.49515	22	32
29	0.28801	15	9.76378	17	(1)8922.4	9.0	9.85300	27	0.49493	22	31
30	0.28816	16	9.76395	18	(1)8931.4	9.0	9.85327	27	0.49471	22	30
31	0.28832	15	9.76413	18	(1)8940.4	9.0	9.85354	26	0.49449	21	29
32	0.28847	16	9.76431	17	(1)8949.4	9.1	9.85380	27	0.49428	22	28
33	0.28863	16	9.76448	18	(1)8958.5	9.0	9.85407	27	0.49406	22	27
34	0.28879	15	9.76466	18	(1)8967.5	9.0	9.85434	26	0.49384	22	26
35	0.28894	16	9.76484	17	(1)8976.5	9.1	9.85460	27	0.49362	21	25
36	0.28910	15	9.76501	18	(1)8985.6	9.0	9.85487	27	0.49341	22	24
37	0.28925	16	9.76519	18	(1)8994.6	9.1	9.85514	26	0.49319	22	23
38	0.28941	15	9.76537	17	(1)9003.7	9.0	9.85540	27	0.49297	21	22
39	0.28956	16	9.76554	18	(1)9012.7	9.1	9.85567	27	0.49276	22	21
40	0.28972	15	9.76572	18	(1)9021.8	9.1	9.85594	26	0.49254	22	20
41	0.28987	16	9.76590	17	(1)9030.9	9.0	9.85620	27	0.49232	21	19
42	0.29003	15	9.76607	18	(1)9039.9	9.1	9.85647	27	0.49211	22	18
43	0.29018	16	9.76625	17	(1)9049.0	9.1	9.85674	26	0.49189	22	17
44	0.29034	16	9.76642	18	(1)9058.1	9.1	9.85700	27	0.49167	21	16
45	0.29050	15	9.76660	17	(1)9067.2	9.1	9.85727	27	0.49146	22	15
46	0.29065	16	9.76677	18	(1)9076.3	9.1	9.85754	26	0.49124	21	14
47	0.29081	15	9.76695	17	(1)9085.4	9.1	9.85780	27	0.49103	22	13
48	0.29096	16	9.76712	18	(1)9094.5	9.1	9.85807	27	0.49081	22	12
49	0.29112	15	9.76730	17	(1)9103.6	9.1	9.85834	26	0.49059	21	11
50	0.29127	16	9.76747	18	(1)9112.7	9.2	9.85860	27	0.49038	22	10
51	0.29143	16	9.76765	17	(1)9121.9	9.1	9.85887	26	0.49016	21	9
52	0.29159	15	9.76782	18	(1)9131.0	9.1	9.85913	27	0.48995	22	8
53	0.29174	16	9.76800	17	(1)9140.1	9.2	9.85940	27	0.48973	21	7
54	0.29190	15	9.76817	18	(1)9149.3	9.1	9.85967	26	0.48952	22	6
55	0.29205	16	9.76835	17	(1)9158.4	9.2	9.85993	27	0.48930	22	5
56	0.29221	16	9.76852	18	(1)9167.6	9.1	9.86020	26	0.48908	21	4
57	0.29237	15	9.76870	17	(1)9176.7	9.2	9.86046	27	0.48887	22	3
58	0.29252	16	9.76887	17	(1)9185.9	9.2	9.86073	27	0.48865	21	2
59	0.29268	15	9.76904	18	(1)9195.1	9.1	9.86100	26	0.48844	22	1
60	0.29283	15	9.76922	18	(1)9204.2	9.1	9.86126	26	0.48822	22	0

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.      z'      Diff.       $\omega$   
 log Sec z      log Cotg z



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
0	0.29283		9.76922	17	(19204.2	9.2	9.86126	27	0.48822			60
1	0.29299	16	9.76939	18	(19213.4	9.2	9.86153	26	0.48801	21		59
2	0.29315	15	9.76957	17	(19222.6	9.2	9.86179	27	0.48779	22		58
3	0.29330	16	9.76974	17	(19231.8	9.2	9.86206	26	0.48758	21		57
4	0.29346	16	9.76991	18	(19241.0	9.2	9.86232	27	0.48736	22		56
5	0.29362	15	9.77009	17	(19250.2	9.2	9.86259	26	0.48715	21		55
6	0.29377	16	9.77026	17	(19259.4	9.2	9.86285	27	0.48694	22		54
7	0.29393	15	9.77043	18	(19268.6	9.2	9.86312	26	0.48672	21		53
8	0.29408	16	9.77061	17	(19277.8	9.3	9.86338	27	0.48651	22		52
9	0.29424	16	9.77078	17	(19297.1	9.2	9.86365	27	0.48629	21		51
10	0.29440	15	9.77095	17	(19306.3	9.2	9.86392	26	0.48608	21		50
11	0.29455	16	9.77112	18	(19305.5	9.3	9.86418	27	0.48587	22		49
12	0.29471	16	9.77130	17	(19314.8	9.2	9.86445	26	0.48565	21		48
13	0.29487	15	9.77147	17	(19324.0	9.3	9.86471	27	0.48544	22		47
14	0.29502	16	9.77164	17	(19333.3	9.2	9.86498	26	0.48522	21		46
15	0.29518	16	9.77181	18	(19342.5	9.3	9.86524	27	0.48501	22		45
16	0.29534	15	9.77199	17	(19351.8	9.3	9.86551	26	0.48480	21		44
17	0.29549	16	9.77216	17	(19361.1	9.3	9.86577	27	0.48458	22		43
18	0.29565	16	9.77233	17	(19370.4	9.2	9.86603	27	0.48437	21		42
19	0.29581	15	9.77250	18	(19379.6	9.3	9.86630	26	0.48416	22		41
20	0.29596	16	9.77268	17	(19388.9	9.3	9.86656	27	0.48394	21		40
21	0.29612	16	9.77285	17	(19398.2	9.3	9.86683	26	0.48373	22		39
22	0.29628	15	9.77302	17	(19407.5	9.3	9.86709	27	0.48352	21		38
23	0.29643	16	9.77319	17	(19416.8	9.3	9.86736	26	0.48330	22		37
24	0.29659	16	9.77336	17	(19426.1	9.4	9.86762	27	0.48309	21		36
25	0.29675	16	9.77353	17	(19435.5	9.3	9.86789	26	0.48288	22		35
26	0.29691	15	9.77370	17	(19444.8	9.3	9.86815	27	0.48266	21		34
27	0.29706	16	9.77387	18	(19454.1	9.3	9.86842	26	0.48245	22		33
28	0.29722	16	9.77405	17	(19463.4	9.4	9.86868	27	0.48224	21		32
29	0.29738	15	9.77422	17	(19472.8	9.3	9.86894	26	0.48203	22		31
30	0.29753	16	9.77439	17	(19482.1	9.4	9.86921	27	0.48181	21		30
31	0.29769	16	9.77456	17	(19491.5	9.3	9.86947	26	0.48160	22		29
32	0.29785	16	9.77473	17	(19500.8	9.4	9.86974	27	0.48139	21		28
33	0.29801	15	9.77490	17	(19510.2	9.4	9.87000	26	0.48118	22		27
34	0.29816	16	9.77507	17	(19519.6	9.3	9.87027	27	0.48097	21		26
35	0.29832	16	9.77524	17	(19528.9	9.4	9.87053	26	0.48076	22		25
36	0.29848	15	9.77541	17	(19538.3	9.4	9.87079	27	0.48054	21		24
37	0.29863	16	9.77558	17	(19547.7	9.4	9.87106	26	0.48033	22		23
38	0.29879	16	9.77575	17	(19557.1	9.4	9.87132	27	0.48012	21		22
39	0.29895	16	9.77592	17	(19566.5	9.4	9.87158	26	0.47991	22		21
40	0.29911	15	9.77609	17	(19575.9	9.4	9.87185	27	0.47969	21		20
41	0.29926	16	9.77626	17	(19585.3	9.4	9.87211	26	0.47948	22		19
42	0.29942	16	9.77643	17	(19594.7	9.4	9.87238	27	0.47927	21		18
43	0.29958	16	9.77660	17	(19604.1	9.5	9.87264	26	0.47906	22		17
44	0.29974	15	9.77677	17	(19613.6	9.4	9.87290	27	0.47885	21		16
45	0.29989	16	9.77694	17	(19623.0	9.4	9.87317	26	0.47864	22		15
46	0.30005	16	9.77711	17	(19632.4	9.5	9.87343	27	0.47843	21		14
47	0.30021	16	9.77728	16	(19641.9	9.4	9.87369	26	0.47822	22		13
48	0.30037	16	9.77744	17	(19651.3	9.5	9.87396	27	0.47800	21		12
49	0.30053	15	9.77761	17	(19660.8	9.4	9.87422	26	0.47779	22		11
50	0.30068	16	9.77778	17	(19670.2	9.5	9.87448	27	0.47758	21		10
51	0.30084	16	9.77795	17	(19679.7	9.5	9.87475	26	0.47737	22		9
52	0.30100	16	9.77812	17	(19689.2	9.4	9.87501	27	0.47716	21		8
53	0.30116	16	9.77829	17	(19698.6	9.5	9.87527	26	0.47695	22		7
54	0.30132	15	9.77846	16	(19708.1	9.5	9.87554	27	0.47674	21		6
55	0.30147	16	9.77862	17	(19717.6	9.5	9.87580	26	0.47653	22		5
56	0.30163	16	9.77879	17	(19727.1	9.5	9.87606	27	0.47632	21		4
57	0.30179	16	9.77896	17	(19736.6	9.5	9.87633	26	0.47611	22		3
58	0.30195	16	9.77913	17	(19746.1	9.5	9.87659	27	0.47590	21		2
59	0.30211	16	9.77930	17	(19755.6	9.5	9.87685	26	0.47569	22		1
60	0.30226	15	9.77946	16	(19765.1	9.5	9.87711	27	0.47548	21		0

$\log \cos \omega$  Diff.  $\log \text{ Cotg } z$  Diff.  $\log \text{ Cotg } \omega$  Diff.  $z'$  Diff.  $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.30226	16	9.77946	17	(1)9765.1	9.6	9.87711	27	0.47548	21	60
1	0.30242	16	9.77963	17	(1)9774.7	9.5	9.87738	26	0.47527	21	59
2	0.30258	16	9.77980	17	(1)9784.2	9.5	9.87764	26	0.47506	21	58
3	0.30274	16	9.77997	16	(1)9793.7	9.6	9.87790	27	0.47485	21	57
4	0.30290	16	9.78013	17	(1)9803.3	9.5	9.87817	26	0.47464	21	55
5	0.30306	15	9.78030	17	(1)9812.8	9.6	9.87843	26	0.47443	21	56
6	0.30321	16	9.78047	16	(1)9822.4	9.5	9.87869	26	0.47422	21	54
7	0.30337	16	9.78063	17	(1)9831.9	9.6	9.87895	27	0.47401	21	53
8	0.30353	16	9.78080	17	(1)9841.5	9.5	9.87922	26	0.47380	21	52
9	0.30369	16	9.78097	16	(1)9851.0	9.6	9.87948	26	0.47359	21	51
10	0.30385	16	9.78113	17	(1)9860.6	9.6	9.87974	26	0.47339	20	50
11	0.30401	15	9.78130	17	(1)9870.2	9.6	9.88000	27	0.47318	21	49
12	0.30416	16	9.78147	16	(1)9879.8	9.6	9.88027	26	0.47297	21	48
13	0.30432	16	9.78163	17	(1)9889.4	9.6	9.88053	26	0.47276	21	47
14	0.30448	16	9.78180	17	(1)9899.0	9.6	9.88079	26	0.47255	21	46
15	0.30464	16	9.78197	16	(1)9908.6	9.6	9.88105	26	0.47234	21	45
16	0.30480	16	9.78213	17	(1)9918.2	9.6	9.88131	27	0.47213	21	44
17	0.30496	16	9.78230	16	(1)9927.8	9.6	9.88158	26	0.47192	21	43
18	0.30512	16	9.78246	17	(1)9937.4	9.7	9.88184	26	0.47171	20	42
19	0.30528	15	9.78263	17	(1)9947.1	9.6	9.88210	26	0.47151	21	41
20	0.30543	16	9.78280	16	(1)9956.7	9.6	9.88236	26	0.47130	21	40
21	0.30559	16	9.78296	17	(1)9966.3	9.7	9.88262	27	0.47109	21	39
22	0.30575	16	9.78313	16	(1)9976.0	9.6	9.88289	26	0.47088	21	38
23	0.30591	16	9.78329	17	(1)9985.6	9.7	9.88315	26	0.47067	20	37
24	0.30607	16	9.78346	16	(1)9995.3	10	9.88341	26	0.47047	21	36
25	0.30623	16	9.78362	17	0.10005	10	9.88367	26	0.47026	21	35
26	0.30639	16	9.78379	16	0.10015	9	9.88393	27	0.47005	21	34
27	0.30655	16	9.78395	17	0.10024	10	9.88420	26	0.46984	21	33
28	0.30671	16	9.78412	16	0.10034	10	9.88446	26	0.46963	20	32
29	0.30687	15	9.78428	17	0.10044	9	9.88472	26	0.46943	21	31
30	0.30702	16	9.78445	16	0.10053	10	9.88498	26	0.46922	21	30
31	0.30718	16	9.78461	17	0.10063	10	9.88524	26	0.46901	21	29
32	0.30734	16	9.78478	16	0.10073	9	9.88550	27	0.46880	20	28
33	0.30750	16	9.78494	16	0.10082	10	9.88577	26	0.46860	21	27
34	0.30766	16	9.78510	17	0.10092	10	9.88603	26	0.46839	21	26
35	0.30782	16	9.78527	16	0.10102	10	9.88629	26	0.46818	20	25
36	0.30798	16	9.78543	17	0.10112	9	9.88655	26	0.46798	21	24
37	0.30814	16	9.78560	16	0.10121	10	9.88681	26	0.46777	21	23
38	0.30830	16	9.78576	16	0.10131	10	9.88707	26	0.46756	21	22
39	0.30846	16	9.78592	17	0.10141	10	9.88733	26	0.46735	20	21
40	0.30862	16	9.78609	16	0.10151	9	9.88759	27	0.46715	21	20
41	0.30878	16	9.78625	17	0.10160	10	9.88786	26	0.46694	21	19
42	0.30894	16	9.78642	16	0.10170	10	9.88812	26	0.46673	20	18
43	0.30910	16	9.78658	16	0.10180	10	9.88838	26	0.46653	21	17
44	0.30926	16	9.78674	17	0.10190	9	9.88864	26	0.46632	21	16
45	0.30942	16	9.78691	16	0.10199	10	9.88890	26	0.46611	20	15
46	0.30958	16	9.78707	16	0.10209	10	9.88916	26	0.46591	21	14
47	0.30974	16	9.78723	16	0.10219	10	9.88942	26	0.46570	20	13
48	0.30990	16	9.78739	17	0.10229	10	9.88968	26	0.46550	21	12
49	0.31006	16	9.78756	16	0.10239	9	9.88994	26	0.46529	21	11
50	0.31022	16	9.78772	16	0.10248	10	9.89020	26	0.46508	20	10
51	0.31038	16	9.78788	17	0.10258	10	9.89046	27	0.46488	21	9
52	0.31054	16	9.78805	16	0.10268	10	9.89073	26	0.46467	20	8
53	0.31070	16	9.78821	16	0.10278	10	9.89099	26	0.46447	21	7
54	0.31086	16	9.78837	16	0.10288	10	9.89125	26	0.46426	20	6
55	0.31102	16	9.78853	16	0.10298	9	9.89151	26	0.46406	21	5
56	0.31118	16	9.78869	17	0.10307	10	9.89177	26	0.46385	21	4
57	0.31134	16	9.78886	16	0.10317	10	9.89203	26	0.46364	20	3
58	0.31150	16	9.78902	16	0.10327	10	9.89229	26	0.46344	21	2
59	0.31166	16	9.78918	16	0.10337	10	9.89255	26	0.46323	21	1
60	0.31182	16	9.78934	16	0.10347	10	9.89281	26	0.46303	20	0

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.    l. Cosc  $\omega$     Diff.    z'    Diff.     $\omega$



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	0.31182	16	9.78934	16	0.10347	10	9.89281	26	0.46303	21	60		
1	0.31193	16	9.78950	17	0.10357	10	9.89307	26	0.46282	20	59		
2	0.31214	16	9.78967	17	0.10367	9	9.89333	26	0.46262	21	58		
3	0.31230	16	9.78983	16	0.10376	10	9.89359	26	0.46241	20	57		
4	0.31246	16	9.78999	16	0.10386	10	9.89385	26	0.46221	21	56		
5	0.31262	16	9.79015	16	0.10396	10	9.89411	26	0.46200	20	55		
6	0.31278	16	9.79031	16	0.10406	10	9.89437	26	0.46180	21	54		
7	0.31294	16	9.79047	16	0.10416	10	9.89463	26	0.46159	20	53		
8	0.31310	16	9.79063	16	0.10426	10	9.89489	26	0.46139	21	52		
9	0.31326	16	9.79079	16	0.10436	10	9.89515	26	0.46118	20	51		
10	0.31342	16	9.79095	16	0.10446	10	9.89541	26	0.46098	20	50		
11	0.31358	16	9.79111	17	0.10456	10	9.89567	26	0.46078	21	49		
12	0.31374	17	9.79128	16	0.10466	10	9.89593	26	0.46057	20	48		
13	0.31391	17	9.79144	16	0.10476	10	9.89619	26	0.46037	21	47		
14	0.31407	16	9.79160	16	0.10486	10	9.89645	26	0.46016	20	46		
15	0.31423	16	9.79176	16	0.10496	9	9.89671	26	0.45996	21	45		
16	0.31439	16	9.79192	16	0.10505	10	9.89697	26	0.45975	20	44		
17	0.31455	16	9.79208	16	0.10515	10	9.89723	26	0.45955	20	43		
18	0.31471	16	9.79224	16	0.10525	10	9.89749	26	0.45935	21	42		
19	0.31487	16	9.79240	16	0.10535	10	9.89775	26	0.45914	20	41		
20	0.31503	16	9.79256	16	0.10545	10	9.89801	26	0.45894	20	40		
21	0.31519	16	9.79272	16	0.10555	10	9.89827	26	0.45874	21	39		
22	0.31535	17	9.79288	16	0.10565	10	9.89853	26	0.45853	20	38		
23	0.31552	16	9.79304	15	0.10575	10	9.89879	26	0.45833	20	37		
24	0.31568	16	9.79319	16	0.10585	10	9.89905	26	0.45813	21	36		
25	0.31584	16	9.79335	16	0.10595	10	9.89931	26	0.45792	20	35		
26	0.31600	16	9.79351	16	0.10605	10	9.89957	26	0.45772	20	34		
27	0.31616	16	9.79367	16	0.10615	10	9.89983	26	0.45752	21	33		
28	0.31632	16	9.79383	16	0.10625	11	9.90009	26	0.45731	20	32		
29	0.31648	16	9.79399	16	0.10636	10	9.90035	26	0.45711	20	31		
30	0.31664	17	9.79415	16	0.10646	10	9.90061	26	0.45691	21	30		
31	0.31681	16	9.79431	16	0.10656	10	9.90086	26	0.45670	20	29		
32	0.31697	16	9.79447	16	0.10666	10	9.90112	26	0.45650	20	28		
33	0.31713	16	9.79463	15	0.10676	10	9.90138	26	0.45630	20	27		
34	0.31729	16	9.79478	16	0.10686	10	9.90164	26	0.45610	20	26		
35	0.31745	16	9.79494	16	0.10696	10	9.90190	26	0.45589	21	25		
36	0.31761	17	9.79510	16	0.10706	10	9.90216	26	0.45569	20	24		
37	0.31778	16	9.79526	16	0.10716	10	9.90242	26	0.45549	20	23		
38	0.31794	16	9.79542	16	0.10726	10	9.90268	26	0.45529	21	22		
39	0.31810	16	9.79558	15	0.10736	10	9.90294	26	0.45508	20	21		
40	0.31826	16	9.79573	16	0.10746	10	9.90320	26	0.45488	20	20		
41	0.31842	16	9.79589	16	0.10756	11	9.90346	25	0.45468	20	19		
42	0.31858	17	9.79605	16	0.10767	10	9.90371	26	0.45448	21	18		
43	0.31875	16	9.79621	15	0.10777	10	9.90397	26	0.45427	20	17		
44	0.31891	16	9.79636	16	0.10787	10	9.90423	26	0.45407	20	16		
45	0.31907	16	9.79652	16	0.10797	10	9.90449	26	0.45387	20	15		
46	0.31923	16	9.79668	16	0.10807	10	9.90475	26	0.45367	20	14		
47	0.31939	17	9.79684	15	0.10817	10	9.90501	26	0.45347	20	13		
48	0.31956	16	9.79699	16	0.10827	11	9.90527	26	0.45327	21	12		
49	0.31972	16	9.79715	16	0.10838	10	9.90553	25	0.45306	20	11		
50	0.31988	16	9.79731	15	0.10848	10	9.90578	26	0.45286	20	10		
51	0.32004	16	9.79746	16	0.10858	10	9.90604	26	0.45266	20	9		
52	0.32020	17	9.79762	16	0.10868	10	9.90630	26	0.45246	20	8		
53	0.32037	16	9.79778	15	0.10878	10	9.90656	26	0.45226	20	7		
54	0.32053	16	9.79793	16	0.10888	11	9.90682	26	0.45206	20	6		
55	0.32069	16	9.79809	16	0.10899	10	9.90708	26	0.45186	21	5		
56	0.32085	17	9.79825	15	0.10909	10	9.90734	25	0.45165	20	4		
57	0.32102	16	9.79840	16	0.10919	10	9.90759	26	0.45145	20	3		
58	0.32118	16	9.79856	16	0.10929	11	9.90785	26	0.45125	20	2		
59	0.32134	16	9.79872	15	0.10940	10	9.90811	26	0.45105	20	1		
60	0.32150		9.79887		0.10950		9.90837		0.45085		0		

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
 log Sec z log Cotg z

$\omega'$	$z'$	Diff.	$\log \operatorname{Tg} z$ $\log \sin \omega$	Diff.	$\log \operatorname{Cos} z$ $\log \sec \omega$	Diff.	$\log \operatorname{Sin} z$ $\log \operatorname{tg} \omega$	Diff.				
0	0.32150		9.79887	16	0.10950		9.90837		0.45085			60
1	0.32167	17	9.79903	15	0.10960	10	9.90863	26	0.45065	20		59
2	0.32183	16	9.79918	16	0.10970	10	9.90889	25	0.45045	20		58
3	0.32199	16	9.79934	16	0.10980	11	9.90914	26	0.45025	20		57
4	0.32215	17	9.79950	15	0.10991	10	9.90940	26	0.45005	20		56
5	0.32232	16	9.79965	16	0.11001	10	9.90966	26	0.44985	20		55
6	0.32248	16	9.79981	15	0.11011	11	9.90992	26	0.44965	20		54
7	0.32264	17	9.79996	16	0.11022	10	9.91018	25	0.44945	20		53
8	0.32281	16	9.80012	15	0.11032	10	9.91043	26	0.44925	20		52
9	0.32297	16	9.80027	16	0.11042	10	9.91069	26	0.44905	20		51
10	0.32313	16	9.80043	15	0.11052	11	9.91095	26	0.44885	20		50
11	0.32329	17	9.80058	16	0.11063	10	9.91121	25	0.44865	20		49
12	0.32346	16	9.80074	15	0.11073	10	9.91147	26	0.44845	20		48
13	0.32362	16	9.80089	16	0.11083	11	9.91172	26	0.44825	20		47
14	0.32378	17	9.80105	15	0.11094	10	9.91198	26	0.44805	20		46
15	0.32395	16	9.80120	16	0.11104	10	9.91224	26	0.44785	20		45
16	0.32411	16	9.80136	15	0.11114	11	9.91250	26	0.44765	20		44
17	0.32427	17	9.80151	15	0.11125	10	9.91276	25	0.44745	20		43
18	0.32444	16	9.80166	16	0.11135	10	9.91301	26	0.44725	20		42
19	0.32460	16	9.80182	15	0.11145	11	9.91327	26	0.44705	20		41
20	0.32476	17	9.80197	16	0.11156	10	9.91353	26	0.44685	20		40
21	0.32493	16	9.80213	15	0.11166	10	9.91379	25	0.44665	20		39
22	0.32509	16	9.80228	16	0.11176	11	9.91404	26	0.44645	20		38
23	0.32525	17	9.80244	15	0.11187	10	9.91430	26	0.44625	20		37
24	0.32542	16	9.80259	15	0.11197	10	9.91456	26	0.44605	19		36
25	0.32558	16	9.80274	16	0.11207	11	9.91482	25	0.44586	20		35
26	0.32574	17	9.80290	15	0.11218	10	9.91507	26	0.44566	20		34
27	0.32591	16	9.80305	15	0.11228	10	9.91533	26	0.44546	20		33
28	0.32607	16	9.80320	16	0.11239	11	9.91559	26	0.44526	20		32
29	0.32623	17	9.80336	15	0.11249	10	9.91585	25	0.44506	20		31
30	0.32640	16	9.80351	15	0.11259	11	9.91610	26	0.44486	20		30
31	0.32656	17	9.80366	16	0.11270	10	9.91636	26	0.44466	20		29
32	0.32673	16	9.80382	15	0.11280	11	9.91662	26	0.44446	19		28
33	0.32689	16	9.80397	15	0.11291	10	9.91688	25	0.44427	20		27
34	0.32705	17	9.80412	16	0.11301	11	9.91713	26	0.44407	20		26
35	0.32722	16	9.80428	15	0.11312	10	9.91739	26	0.44387	20		25
36	0.32738	17	9.80443	15	0.11322	10	9.91765	26	0.44367	20		24
37	0.32755	16	9.80458	15	0.11332	11	9.91791	25	0.44347	20		23
38	0.32771	16	9.80473	16	0.11343	10	9.91816	26	0.44327	19		22
39	0.32787	17	9.80489	15	0.11353	11	9.91842	26	0.44308	20		21
40	0.32804	16	9.80504	15	0.11364	10	9.91868	25	0.44288	20		20
41	0.32820	17	9.80519	15	0.11374	11	9.91893	26	0.44268	20		19
42	0.32837	16	9.80534	16	0.11385	10	9.91919	26	0.44248	19		18
43	0.32853	16	9.80550	15	0.11395	11	9.91945	26	0.44229	20		17
44	0.32869	17	9.80565	15	0.11406	10	9.91971	25	0.44209	20		16
45	0.32886	16	9.80580	15	0.11416	11	9.91996	26	0.44189	20		15
46	0.32902	17	9.80595	15	0.11427	10	9.92022	26	0.44169	20		14
47	0.32916	16	9.80610	15	0.11437	11	9.92048	25	0.44149	19		13
48	0.32935	17	9.80625	15	0.11448	10	9.92073	26	0.44130	20		12
49	0.32952	16	9.80641	15	0.11458	11	9.92099	26	0.44110	20		11
50	0.32968	16	9.80656	15	0.11469	10	9.92125	25	0.44090	19		10
51	0.32984	17	9.80671	15	0.11479	11	9.92150	26	0.44071	20		9
52	0.33001	16	9.80686	15	0.11490	11	9.92176	26	0.44051	20		8
53	0.33017	17	9.80701	15	0.11501	10	9.92202	25	0.44031	20		7
54	0.33034	16	9.80716	15	0.11511	11	9.92227	26	0.44011	19		6
55	0.33050	17	9.80731	15	0.11522	10	9.92253	26	0.43992	20		5
56	0.33067	16	9.80746	15	0.11532	11	9.92279	25	0.43972	20		4
57	0.33083	17	9.80762	15	0.11543	10	9.92304	26	0.43952	19		3
58	0.33100	16	9.80777	15	0.11553	11	9.92330	26	0.43933	20		2
59	0.33116	17	9.80792	15	0.11564	11	9.92356	25	0.43913	20		1
60	0.33133		9.80807		0.11575		9.92381		0.43893			0



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	0.33133	16	9.80807	15	0.11575	10	9.92381	26	0.43893	19	60		
1	0.33149	17	9.80822	15	0.11585	11	9.92407	26	0.43874	20	59		
2	0.33166	17	9.80837	15	0.11596	10	9.92433	25	0.43854	20	58		
3	0.33182	17	9.80852	15	0.11606	11	9.92458	26	0.43834	19	57		
4	0.33199	16	9.80867	15	0.11617	11	9.92484	26	0.43815	20	56		
5	0.33215	17	9.80882	15	0.11628	10	9.92510	25	0.43795	19	55		
6	0.33232	16	9.80897	15	0.11638	11	9.92535	26	0.43776	20	54		
7	0.33248	17	9.80912	15	0.11649	11	9.92561	26	0.43756	20	53		
8	0.33265	16	9.80927	15	0.11660	10	9.92587	25	0.43736	19	52		
9	0.33281	17	9.80942	15	0.11670	11	9.92612	26	0.43717	20	51		
10	0.33298	16	9.80957	15	0.11681	11	9.92638	25	0.43697	19	50		
11	0.33314	17	9.80972	15	0.11692	10	9.92663	26	0.43678	20	49		
12	0.33331	16	9.80987	15	0.11702	11	9.92689	26	0.43658	20	48		
13	0.33347	17	9.81002	15	0.11713	11	9.92715	25	0.43638	19	47		
14	0.33364	17	9.81017	15	0.11724	10	9.92740	26	0.43619	20	46		
15	0.33381	16	9.81032	15	0.11734	11	9.92766	26	0.43599	19	45		
16	0.33397	17	9.81047	14	0.11745	11	9.92792	25	0.43580	20	44		
17	0.33414	16	9.81061	15	0.11756	10	9.92817	26	0.43560	19	43		
18	0.33430	17	9.81076	15	0.11766	11	9.92843	25	0.43541	20	42		
19	0.33447	16	9.81091	15	0.11777	11	9.92868	26	0.43521	19	41		
20	0.33463	17	9.81106	15	0.11788	11	9.92894	26	0.43502	20	40		
21	0.33480	17	9.81121	15	0.11799	10	9.92920	25	0.43482	19	39		
22	0.33497	16	9.81136	15	0.11809	11	9.92945	26	0.43463	20	38		
23	0.33513	17	9.81151	15	0.11820	11	9.92971	25	0.43443	19	37		
24	0.33530	16	9.81166	14	0.11831	11	9.92996	26	0.43424	20	36		
25	0.33546	17	9.81180	15	0.11842	10	9.93022	26	0.43404	19	35		
26	0.33563	16	9.81195	15	0.11852	10	9.93048	25	0.43385	20	34		
27	0.33579	17	9.81210	15	0.11863	11	9.93073	26	0.43365	19	33		
28	0.33596	17	9.81225	15	0.11874	11	9.93099	25	0.43346	20	32		
29	0.33613	16	9.81240	14	0.11885	10	9.93124	26	0.43326	19	31		
30	0.33629	17	9.81254	15	0.11895	11	9.93150	25	0.43307	20	30		
31	0.33646	17	9.81269	15	0.11906	11	9.93175	26	0.43287	19	29		
32	0.33663	16	9.81284	15	0.11917	11	9.93201	26	0.43268	19	28		
33	0.33679	17	9.81299	15	0.11928	11	9.93227	25	0.43249	20	27		
34	0.33696	16	9.81314	14	0.11939	10	9.93252	26	0.43229	19	26		
35	0.33712	17	9.81328	15	0.11949	11	9.93278	25	0.43210	20	25		
36	0.33729	17	9.81343	15	0.11960	11	9.93303	26	0.43190	19	24		
37	0.33746	16	9.81358	14	0.11971	11	9.93329	25	0.43171	20	23		
38	0.33762	17	9.81372	15	0.11982	11	9.93354	26	0.43151	19	22		
39	0.33779	17	9.81387	15	0.11993	11	9.93380	26	0.43132	19	21		
40	0.33796	16	9.81402	15	0.12004	11	9.93406	25	0.43113	20	20		
41	0.33812	17	9.81417	14	0.12015	10	9.93431	26	0.43093	19	19		
42	0.33829	17	9.81431	15	0.12025	11	9.93457	25	0.43074	19	18		
43	0.33846	16	9.81446	15	0.12036	11	9.93482	26	0.43055	20	17		
44	0.33862	17	9.81461	14	0.12047	11	9.93508	25	0.43035	19	16		
45	0.33879	17	9.81475	15	0.12058	11	9.93533	26	0.43016	20	15		
46	0.33896	16	9.81490	15	0.12069	11	9.93559	25	0.42996	19	14		
47	0.33912	17	9.81505	14	0.12080	11	9.93584	26	0.42977	19	13		
48	0.33929	17	9.81519	15	0.12091	11	9.93610	26	0.42958	20	12		
49	0.33946	16	9.81534	15	0.12102	11	9.93636	25	0.42938	19	11		
50	0.33962	17	9.81549	14	0.12113	10	9.93661	26	0.42919	19	10		
51	0.33979	17	9.81563	15	0.12123	11	9.93687	25	0.42900	20	9		
52	0.33996	17	9.81578	14	0.12134	11	9.93712	26	0.42880	19	8		
53	0.34013	16	9.81592	15	0.12145	11	9.93738	25	0.42861	19	7		
54	0.34029	17	9.81607	15	0.12156	11	9.93763	26	0.42842	19	6		
55	0.34046	17	9.81622	14	0.12167	11	9.93789	25	0.42823	20	5		
56	0.34063	16	9.81636	15	0.12178	11	9.93814	26	0.42803	19	4		
57	0.34079	17	9.81651	14	0.12189	11	9.93840	25	0.42784	19	3		
58	0.34096	17	9.81665	15	0.12200	11	9.93865	26	0.42765	20	2		
59	0.34113	17	9.81680	15	0.12211	11	9.93891	26	0.42745	19	1		
60	0.34130	17	9.81694	14	0.12222	11	9.93916	25	0.42726	19	0		

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z log Cotg z l. Cosc z

$\omega = 41 \text{ Grad.}$

$\omega$	$z'$	Diff.	log sin $\omega$ log Tg z	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log cotg $\omega$	Diff.			
0	0.34130	16	9.81694	15	0.12222	11	9.93916	26	0.42726	19	60
1	0.34146	17	9.81709	14	0.12233	11	9.93942	25	0.42707	19	59
2	0.34163	17	9.81723	15	0.12244	11	9.93967	26	0.42688	20	58
3	0.34180	17	9.81738	14	0.12255	11	9.93993	25	0.42668	19	57
4	0.34197	16	9.81752	15	0.12266	11	9.94018	26	0.42649	19	56
5	0.34213	17	9.81767	14	0.12277	11	9.94044	25	0.42630	19	55
6	0.34230	17	9.81781	15	0.12288	11	9.94069	26	0.42611	19	54
7	0.34247	17	9.81796	14	0.12299	11	9.94095	25	0.42592	20	53
8	0.34267	16	9.81810	15	0.12310	11	9.94120	26	0.42572	19	52
9	0.34280	17	9.81825	14	0.12321	11	9.94146	25	0.42553	19	51
10	0.34297	17	9.81839	15	0.12332	11	9.94171	26	0.42534	19	50
11	0.34314	17	9.81854	14	0.12343	11	9.94197	25	0.42515	19	49
12	0.34331	17	9.81868	14	0.12354	11	9.94222	26	0.42496	20	48
13	0.34348	16	9.81882	15	0.12365	11	9.94248	25	0.42476	19	47
14	0.34364	17	9.81897	14	0.12376	11	9.94273	26	0.42457	19	46
15	0.34381	17	9.81911	15	0.12387	12	9.94299	25	0.42438	19	45
16	0.34398	17	9.81926	14	0.12399	11	9.94324	26	0.42419	19	44
17	0.34415	17	9.81940	15	0.12410	11	9.94350	25	0.42400	19	43
18	0.34432	16	9.81955	14	0.12421	11	9.94375	26	0.42381	19	42
19	0.34448	17	9.81969	14	0.12432	11	9.94401	25	0.42362	20	41
20	0.34465	17	9.81983	15	0.12443	11	9.94426	26	0.42342	19	40
21	0.34482	17	9.81998	14	0.12454	11	9.94452	25	0.42323	19	39
22	0.34499	17	9.82012	14	0.12465	11	9.94477	26	0.42304	19	38
23	0.34516	17	9.82026	15	0.12476	11	9.94503	25	0.42285	19	37
24	0.34533	16	9.82041	14	0.12487	12	9.94528	26	0.42266	19	36
25	0.34549	17	9.82055	14	0.12499	11	9.94554	25	0.42247	19	35
26	0.34566	17	9.82069	15	0.12510	11	9.94579	25	0.42228	19	34
27	0.34583	17	9.82084	14	0.12521	11	9.94604	26	0.42209	19	33
28	0.34600	17	9.82098	14	0.12532	11	9.94630	25	0.42190	20	32
29	0.34617	17	9.82112	14	0.12543	11	9.94655	26	0.42170	19	31
30	0.34634	17	9.82126	15	0.12554	12	9.94681	25	0.42151	19	30
31	0.34651	16	9.82141	14	0.12566	11	9.94706	26	0.42132	19	29
32	0.34667	17	9.82155	14	0.12577	11	9.94732	25	0.42113	19	28
33	0.34684	17	9.82169	15	0.12588	11	9.94757	26	0.42094	19	27
34	0.34701	17	9.82184	14	0.12599	11	9.94783	25	0.42075	19	26
35	0.34718	17	9.82198	14	0.12610	12	9.94808	26	0.42056	19	25
36	0.34735	17	9.82212	14	0.12622	11	9.94834	25	0.42037	19	24
37	0.34752	17	9.82226	14	0.12633	11	9.94859	25	0.42018	19	23
38	0.34769	17	9.82240	15	0.12644	11	9.94884	26	0.41999	19	22
39	0.34786	17	9.82255	14	0.12655	11	9.94910	25	0.41980	19	21
40	0.34803	16	9.82269	14	0.12666	12	9.94935	26	0.41961	19	20
41	0.34819	17	9.82283	14	0.12678	11	9.94961	25	0.41942	19	19
42	0.34836	17	9.82297	14	0.12689	11	9.94986	26	0.41923	19	18
43	0.34853	17	9.82311	15	0.12700	12	9.95012	25	0.41904	19	17
44	0.34870	17	9.82326	14	0.12712	11	9.95037	25	0.41885	19	16
45	0.34887	17	9.82340	14	0.12723	11	9.95062	26	0.41866	19	15
46	0.34904	17	9.82354	14	0.12734	11	9.95088	25	0.41847	19	14
47	0.34921	17	9.82368	14	0.12745	12	9.95113	26	0.41828	19	13
48	0.34938	17	9.82382	14	0.12757	11	9.95139	25	0.41809	19	12
49	0.34955	17	9.82396	14	0.12768	11	9.95164	26	0.41790	19	11
50	0.34972	17	9.82410	14	0.12779	12	9.95190	25	0.41771	19	10
51	0.34989	17	9.82424	15	0.12791	11	9.95215	25	0.41752	19	9
52	0.35006	17	9.82439	14	0.12802	11	9.95240	26	0.41733	18	8
53	0.35023	17	9.82453	14	0.12813	12	9.95266	25	0.41715	19	7
54	0.35040	17	9.82467	14	0.12825	11	9.95291	26	0.41696	19	6
55	0.35057	17	9.82481	14	0.12836	11	9.95317	25	0.41677	19	5
56	0.35074	17	9.82495	14	0.12847	12	9.95342	26	0.41658	19	4
57	0.35091	17	9.82509	14	0.12859	11	9.95368	25	0.41639	19	3
58	0.35108	17	9.82523	14	0.12870	11	9.95393	25	0.41620	19	2
59	0.35125	17	9.82537	14	0.12881	11	9.95418	26	0.41601	19	1
60	0.35142	17	9.82551	14	0.12893	12	9.95444	26	0.41582	19	0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. l. Cosec z Diff. z' Diff.  $\omega$

$\omega = 48 \text{ Grad.}$



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.35142	17	9.82551	14	0.12893	11	9.95444	25	0.41582	19	60
1	0.35159	17	9.82565	14	0.12904	11	9.95469	26	0.41563	19	59
2	0.35176	17	9.82579	14	0.12915	12	9.95495	25	0.41545	18	58
3	0.35193	17	9.82593	14	0.12927	11	9.95520	25	0.41526	19	57
4	0.35210	17	9.82607	14	0.12938	12	9.95545	26	0.41507	19	56
5	0.35227	17	9.82621	14	0.12950	11	9.95571	25	0.41488	19	55
6	0.35244	17	9.82635	14	0.12961	11	9.95596	26	0.41469	19	54
7	0.35261	17	9.82649	14	0.12972	12	9.95622	25	0.41450	19	53
8	0.35278	17	9.82663	14	0.12984	11	9.95647	25	0.41431	18	52
9	0.35295	17	9.82677	14	0.12995	12	9.95672	26	0.41413	19	51
10	0.35312	17	9.82691	14	0.13007	11	9.95698	25	0.41394	19	50
11	0.35329	17	9.82705	14	0.13018	12	9.95723	25	0.41375	19	49
12	0.35346	17	9.82719	14	0.13030	11	9.95748	26	0.41356	19	48
13	0.35363	17	9.82733	14	0.13041	12	9.95774	25	0.41337	18	47
14	0.35380	17	9.82747	14	0.13053	11	9.95799	26	0.41319	19	46
15	0.35397	17	9.82761	14	0.13064	12	9.95825	25	0.41300	19	45
16	0.35414	17	9.82775	13	0.13076	11	9.95850	25	0.41281	19	44
17	0.35431	17	9.82788	14	0.13087	11	9.95875	26	0.41262	19	43
18	0.35448	17	9.82802	14	0.13098	12	9.95901	25	0.41243	18	42
19	0.35465	18	9.82816	14	0.13110	11	9.95926	26	0.41225	19	41
20	0.35483	18	9.82830	14	0.13121	12	9.95952	25	0.41206	19	40
21	0.35500	17	9.82844	14	0.13133	12	9.95977	25	0.41187	19	39
22	0.35517	17	9.82858	14	0.13145	11	9.96002	26	0.41168	18	38
23	0.35534	17	9.82872	13	0.13156	12	9.96028	25	0.41150	19	37
24	0.35551	17	9.82885	14	0.13168	11	9.96053	25	0.41131	19	36
25	0.35568	17	9.82899	14	0.13179	12	9.96078	26	0.41112	19	35
26	0.35585	17	9.82913	14	0.13191	11	9.96104	25	0.41093	18	34
27	0.35602	17	9.82927	14	0.13202	12	9.96129	26	0.41075	19	33
28	0.35619	18	9.82941	14	0.13214	11	9.96155	25	0.41056	19	32
29	0.35637	17	9.82955	13	0.13225	12	9.96180	25	0.41037	18	31
30	0.35654	17	9.82968	14	0.13237	11	9.96205	26	0.41019	19	30
31	0.35671	17	9.82982	14	0.13248	12	9.96231	25	0.41000	19	29
32	0.35688	17	9.82996	14	0.13260	12	9.96256	25	0.40981	18	28
33	0.35705	17	9.83010	13	0.13272	11	9.96281	26	0.40963	19	27
34	0.35722	17	9.83023	14	0.13283	12	9.96307	25	0.40944	19	26
35	0.35739	18	9.83037	14	0.13295	11	9.96332	25	0.40925	19	25
36	0.35757	17	9.83051	14	0.13306	12	9.96357	26	0.40906	18	24
37	0.35774	17	9.83065	13	0.13318	12	9.96383	25	0.40888	19	23
38	0.35791	17	9.83078	14	0.13330	11	9.96408	25	0.40869	18	22
39	0.35808	17	9.83092	14	0.13341	12	9.96433	26	0.40851	19	21
40	0.35825	17	9.83106	14	0.13353	12	9.96459	25	0.40832	19	20
41	0.35842	18	9.83120	13	0.13365	11	9.96484	26	0.40813	18	19
42	0.35860	17	9.83133	14	0.13376	12	9.96510	25	0.40795	19	18
43	0.35877	17	9.83147	14	0.13388	12	9.96535	25	0.40776	19	17
44	0.35894	17	9.83161	13	0.13400	11	9.96560	26	0.40757	18	16
45	0.35911	17	9.83174	14	0.13411	12	9.96586	25	0.40739	19	15
46	0.35928	18	9.83188	14	0.13423	12	9.96611	25	0.40720	18	14
47	0.35946	17	9.83202	13	0.13435	11	9.96636	26	0.40702	19	13
48	0.35963	17	9.83215	14	0.13446	12	9.96662	25	0.40683	19	12
49	0.35980	17	9.83229	13	0.13458	12	9.96687	25	0.40664	18	11
50	0.35997	18	9.83242	14	0.13470	12	9.96712	26	0.40646	19	10
51	0.36015	17	9.83256	14	0.13482	11	9.96738	25	0.40627	18	9
52	0.36032	17	9.83270	13	0.13493	12	9.96763	25	0.40609	19	8
53	0.36049	17	9.83283	14	0.13505	12	9.96788	26	0.40590	19	7
54	0.36066	18	9.83297	13	0.13517	11	9.96814	25	0.40571	18	6
55	0.36084	17	9.83310	14	0.13528	12	9.96839	25	0.40553	19	5
56	0.36101	17	9.83324	14	0.13540	12	9.96864	26	0.40534	18	4
57	0.36118	17	9.83338	13	0.13552	12	9.96890	25	0.40516	19	3
58	0.36135	18	9.83351	14	0.13564	11	9.96915	25	0.40497	18	2
59	0.36153	17	9.83365	13	0.13575	12	9.96940	26	0.40479	19	1
60	0.36170	17	9.83378	13	0.13587	12	9.96966	26	0.40460	19	0

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.     $z'$     Diff.     $\omega'$   
log Sec z    log Cotg z    l. Cosec z

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
0	0.36170		9.83378	14	0.13587		9.96966		0.40460		18	60
1	0.36187	17	9.83392	13	0.13599	12	9.96991	25	0.40442		19	59
2	0.36204	18	9.83405	14	0.13611	12	9.97016	25	0.40423		18	58
3	0.36222	17	9.83419	13	0.13623	11	9.97042	25	0.40405		19	57
4	0.36239	17	9.83432	14	0.13634	12	9.97067	25	0.40386		18	56
5	0.36256	18	9.83446	13	0.13646	12	9.97092	25	0.40368		19	55
6	0.36274	17	9.83459	14	0.13658	12	9.97118	25	0.40349		18	54
7	0.36291	17	9.83473	13	0.13670	12	9.97143	25	0.40331		19	53
8	0.36308	18	9.83486	14	0.13682	12	9.97168	25	0.40312		18	52
9	0.36325	17	9.83500	13	0.13694	11	9.97193	26	0.40294		19	51
10	0.36343	18	9.83513	14	0.13705	12	9.97219	25	0.40275		18	50
11	0.36360	17	9.83527	13	0.13717	12	9.97244	25	0.40257		19	49
12	0.36377	18	9.83540	14	0.13729	12	9.97269	25	0.40238		18	48
13	0.36395	17	9.83554	13	0.13741	12	9.97295	26	0.40220		19	47
14	0.36412	18	9.83567	14	0.13753	12	9.97320	25	0.40201		18	46
15	0.36429	17	9.83581	13	0.13765	12	9.97345	25	0.40183		19	45
16	0.36447	18	9.83594	14	0.13777	12	9.97371	26	0.40165		18	44
17	0.36464	17	9.83608	13	0.13789	12	9.97396	25	0.40146		19	43
18	0.36481	18	9.83621	14	0.13800	12	9.97421	26	0.40128		18	42
19	0.36499	17	9.83634	13	0.13812	12	9.97447	25	0.40109		19	41
20	0.36516	18	9.83648	14	0.13824	12	9.97472	25	0.40091		18	40
21	0.36534	17	9.83661	13	0.13836	12	9.97497	26	0.40073		19	39
22	0.36551	18	9.83674	14	0.13848	12	9.97523	25	0.40054		18	38
23	0.36568	17	9.83688	13	0.13860	12	9.97548	25	0.40036		19	37
24	0.36586	18	9.83701	14	0.13872	12	9.97573	25	0.40017		18	36
25	0.36603	17	9.83715	13	0.13884	12	9.97598	26	0.39999		19	35
26	0.36621	18	9.83728	14	0.13896	12	9.97624	25	0.39981		18	34
27	0.36638	17	9.83741	13	0.13908	12	9.97649	25	0.39962		19	33
28	0.36655	18	9.83755	14	0.13920	12	9.97674	26	0.39944		18	32
29	0.36673	17	9.83768	13	0.13932	12	9.97700	25	0.39925		19	31
30	0.36690	18	9.83781	14	0.13944	12	9.97725	25	0.39907		18	30
31	0.36708	17	9.83795	13	0.13956	12	9.97750	26	0.39889		19	29
32	0.36725	18	9.83808	14	0.13968	12	9.97776	25	0.39870		18	28
33	0.36742	17	9.83821	13	0.13980	12	9.97801	25	0.39852		19	27
34	0.36760	18	9.83834	14	0.13992	12	9.97826	25	0.39834		18	26
35	0.36777	17	9.83848	13	0.14004	12	9.97851	26	0.39815		19	25
36	0.36795	18	9.83861	14	0.14016	12	9.97877	25	0.39797		18	24
37	0.36812	17	9.83874	13	0.14028	12	9.97902	25	0.39779		19	23
38	0.36830	18	9.83887	14	0.14040	12	9.97927	26	0.39760		18	22
39	0.36847	17	9.83901	13	0.14052	12	9.97953	25	0.39742		19	21
40	0.36865	18	9.83914	14	0.14064	12	9.97978	25	0.39724		18	20
41	0.36882	17	9.83927	13	0.14076	12	9.98003	26	0.39706		19	19
42	0.36899	18	9.83940	14	0.14088	12	9.98029	25	0.39687		18	18
43	0.36917	17	9.83954	13	0.14100	12	9.98054	25	0.39669		19	17
44	0.36934	18	9.83967	14	0.14112	12	9.98079	25	0.39651		18	16
45	0.36952	17	9.83980	13	0.14124	12	9.98104	26	0.39632		19	15
46	0.36969	18	9.83993	14	0.14136	13	9.98130	25	0.39614		18	14
47	0.36987	17	9.84006	13	0.14149	12	9.98155	25	0.39596		19	13
48	0.37004	18	9.84020	14	0.14161	12	9.98180	26	0.39578		18	12
49	0.37022	17	9.84033	13	0.14173	12	9.98206	25	0.39559		19	11
50	0.37039	18	9.84046	14	0.14185	12	9.98231	25	0.39541		18	10
51	0.37057	17	9.84059	13	0.14197	12	9.98256	25	0.39523		19	9
52	0.37074	18	9.84072	14	0.14209	12	9.98281	26	0.39505		18	8
53	0.37092	17	9.84085	13	0.14221	13	9.98307	25	0.39486		19	7
54	0.37110	18	9.84098	14	0.14234	12	9.98332	25	0.39468		18	6
55	0.37127	17	9.84112	13	0.14246	12	9.98357	26	0.39450		19	5
56	0.37145	18	9.84125	14	0.14258	12	9.98383	25	0.39432		18	4
57	0.37162	17	9.84138	13	0.14270	12	9.98408	25	0.39414		19	3
58	0.37180	18	9.84151	14	0.14282	12	9.98433	25	0.39395		18	2
59	0.37197	17	9.84164	13	0.14294	12	9.98458	25	0.39377		19	1
60	0.37215	18	9.84177	14	0.14307	13	9.98484	26	0.39359		18	0

$\log \cos \omega$  Diff.  $\log \sec \omega$  Diff.  $\log \cotg \omega$  Diff.  $\log \text{ cosec } \omega$  Diff.  $z'$  Diff.  $\omega'$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.		
0	0.37215	17	9.84177	13	0.14307		9.98184		0.39359	60
1	0.37232	18	9.84190	13	0.14319	12	9.98509	25	0.39341	59
2	0.37250	18	9.84203	13	0.14331	12	9.98534	25	0.39323	58
3	0.37268	17	9.84216	13	0.14343	12	9.98560	25	0.39305	57
4	0.37285	18	9.84229	13	0.14355	13	9.98585	25	0.39286	56
5	0.37303	17	9.84242	13	0.14368	13	9.98610	25	0.39268	55
6	0.37320	18	9.84255	14	0.14380	12	9.98635	26	0.39250	54
7	0.37338	18	9.84269	13	0.14392	12	9.98661	25	0.39232	53
8	0.37355	17	9.84282	13	0.14404	13	9.98686	25	0.39214	52
9	0.37373	18	9.84295	13	0.14417	12	9.98711	26	0.39196	51
10	0.37391	17	9.84308	13	0.14429	12	9.98737	25	0.39177	50
11	0.37408	18	9.84321	13	0.14441	12	9.98762	25	0.39159	49
12	0.37426	18	9.84334	13	0.14453	13	9.98787	25	0.39141	48
13	0.37444	17	9.84347	13	0.14466	12	9.98812	26	0.39123	47
14	0.37461	18	9.84360	13	0.14478	12	9.98838	25	0.39105	46
15	0.37479	17	9.84373	13	0.14490	13	9.98863	25	0.39087	45
16	0.37496	18	9.84385	13	0.14503	12	9.98888	25	0.39069	44
17	0.37514	18	9.84398	13	0.14515	12	9.98913	26	0.39051	43
18	0.37532	17	9.84411	13	0.14527	13	9.98939	25	0.39033	42
19	0.37549	18	9.84424	13	0.14540	12	9.98964	25	0.39014	41
20	0.37567	18	9.84437	13	0.14552	12	9.98989	26	0.38996	40
21	0.37585	17	9.84450	13	0.14564	13	9.99015	25	0.38978	39
22	0.37602	18	9.84463	13	0.14577	12	9.99040	25	0.38960	38
23	0.37620	18	9.84476	13	0.14589	12	9.99065	25	0.38942	37
24	0.37638	17	9.84489	13	0.14601	13	9.99090	26	0.38924	36
25	0.37655	18	9.84502	13	0.14614	12	9.99116	25	0.38906	35
26	0.37673	18	9.84515	13	0.14626	13	9.99141	25	0.38888	34
27	0.37691	17	9.84528	12	0.14639	12	9.99166	25	0.38870	33
28	0.37708	18	9.84540	13	0.14651	12	9.99191	26	0.38852	32
29	0.37726	18	9.84553	13	0.14663	13	9.99217	25	0.38834	31
30	0.37744	18	9.84566	13	0.14676	12	9.99242	25	0.38816	30
31	0.37762	17	9.84579	13	0.14688	13	9.99267	26	0.38798	29
32	0.37779	18	9.84592	13	0.14701	12	9.99293	25	0.38780	28
33	0.37797	18	9.84605	13	0.14713	13	9.99318	25	0.38762	27
34	0.37815	18	9.84618	12	0.14726	12	9.99343	25	0.38744	26
35	0.37833	17	9.84630	13	0.14738	12	9.99368	26	0.38726	25
36	0.37850	18	9.84643	13	0.14750	13	9.99394	25	0.38708	24
37	0.37868	18	9.84656	13	0.14763	12	9.99419	25	0.38690	23
38	0.37886	18	9.84669	13	0.14775	13	9.99444	25	0.38672	22
39	0.37904	17	9.84682	12	0.14788	12	9.99469	26	0.38654	21
40	0.37921	18	9.84694	13	0.14800	13	9.99495	25	0.38636	20
41	0.37939	18	9.84707	13	0.14813	12	9.99520	25	0.38618	19
42	0.37957	18	9.84720	13	0.14825	13	9.99545	25	0.38600	18
43	0.37975	17	9.84733	12	0.14838	12	9.99570	26	0.38582	17
44	0.37992	18	9.84745	13	0.14850	13	9.99596	25	0.38564	16
45	0.38010	18	9.84758	13	0.14863	12	9.99621	25	0.38546	15
46	0.38028	18	9.84771	13	0.14875	13	9.99646	26	0.38528	14
47	0.38046	18	9.84784	12	0.14888	12	9.99672	25	0.38510	13
48	0.38064	17	9.84796	13	0.14900	13	9.99697	25	0.38492	12
49	0.38081	18	9.84809	13	0.14913	13	9.99722	25	0.38474	11
50	0.38099	18	9.84822	13	0.14926	12	9.99747	26	0.38456	10
51	0.38117	18	9.84835	12	0.14938	13	9.99773	25	0.38439	9
52	0.38135	18	9.84847	13	0.14951	12	9.99798	25	0.38421	8
53	0.38153	17	9.84860	13	0.14963	13	9.99823	25	0.38403	7
54	0.38170	18	9.84873	12	0.14976	12	9.99848	26	0.38385	6
55	0.38188	18	9.84885	13	0.14988	13	9.99874	25	0.38367	5
56	0.38206	18	9.84898	13	0.15001	13	9.99899	25	0.38349	4
57	0.38224	18	9.84911	12	0.15014	12	9.99924	25	0.38331	3
58	0.38242	18	9.84923	13	0.15026	13	9.99949	26	0.38313	2
59	0.38260	18	9.84936	13	0.15039	13	9.99975	25	0.38295	1
60	0.38278		9.84949		0.15051		0.00000		0.38278	0

log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	$z'$	Diff.	$\omega$
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$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.38278	17	9.84949	12	0.15051	13	(~)	25.266	0.38278	18	60
1	0.38295	18	9.84961	13	0.15064	13	(3)25.266	25.266	0.38260	18	59
2	0.38313	18	9.84974	12	0.15077	12	(3)50.532	25.267	0.38242	18	58
3	0.38331	18	9.84986	13	0.15089	13	(3)75.799	25.27	0.38224	18	57
4	0.38349	18	9.84999	13	0.15102	13	(2)101.07	25.26	0.38206	18	56
5	0.38367	18	9.85012	12	0.15115	12	(2)126.33	25.27	0.38188	18	55
6	0.38385	18	9.85024	13	0.15127	13	(2)151.60	25.26	0.38170	17	54
7	0.38403	18	9.85037	12	0.15140	13	(2)176.86	25.27	0.38153	18	53
8	0.38421	18	9.85049	13	0.15153	12	(2)202.13	25.27	0.38135	18	52
9	0.38439	17	9.85062	12	0.15165	13	(2)227.40	25.26	0.38117	18	51
10	0.38456	18	9.85074	13	0.15178	13	(2)252.66	25.27	0.38099	18	50
11	0.38474	18	9.85087	13	0.15191	13	(2)277.93	25.27	0.38081	18	49
12	0.38492	18	9.85100	12	0.15204	12	(2)303.20	25.26	0.38064	18	48
13	0.38510	18	9.85112	13	0.15216	13	(2)328.46	25.27	0.38046	18	47
14	0.38528	18	9.85125	12	0.15229	13	(2)353.73	25.27	0.38028	18	46
15	0.38546	18	9.85137	13	0.15242	12	(2)379.00	25.27	0.38010	18	45
16	0.38564	18	9.85150	12	0.15255	13	(2)404.27	25.26	0.37992	17	44
17	0.38582	18	9.85162	13	0.15267	13	(2)429.53	25.27	0.37975	17	43
18	0.38600	18	9.85175	12	0.15280	13	(2)454.80	25.27	0.37957	18	42
19	0.38618	18	9.85187	13	0.15293	13	(2)480.07	25.27	0.37939	18	41
20	0.38636	18	9.85200	12	0.15306	12	(2)505.34	25.26	0.37921	17	40
21	0.38654	18	9.85212	13	0.15318	13	(2)530.60	25.27	0.37904	18	39
22	0.38672	18	9.85225	12	0.15331	13	(2)555.87	25.27	0.37886	18	38
23	0.38690	18	9.85237	13	0.15344	13	(2)581.14	25.27	0.37868	18	37
24	0.38708	18	9.85250	12	0.15357	13	(2)606.41	25.27	0.37850	17	36
25	0.38726	18	9.85262	12	0.15370	12	(2)631.68	25.27	0.37833	18	35
26	0.38744	18	9.85274	13	0.15382	13	(2)656.95	25.27	0.37815	18	34
27	0.38762	18	9.85287	12	0.15395	13	(2)682.22	25.27	0.37797	18	33
28	0.38780	18	9.85299	13	0.15408	13	(2)707.49	25.27	0.37779	17	32
29	0.38798	18	9.85312	12	0.15421	13	(2)732.76	25.27	0.37762	18	31
30	0.38816	18	9.85324	13	0.15434	13	(2)758.03	25.27	0.37744	18	30
31	0.38834	18	9.85337	12	0.15447	13	(2)783.30	25.27	0.37726	18	29
32	0.38852	18	9.85349	12	0.15460	12	(2)808.57	25.27	0.37708	17	28
33	0.38870	18	9.85361	13	0.15472	13	(2)833.84	25.27	0.37691	18	27
34	0.38888	18	9.85374	12	0.15485	13	(2)859.11	25.27	0.37673	18	26
35	0.38906	18	9.85386	13	0.15498	13	(2)884.38	25.27	0.37655	17	25
36	0.38924	18	9.85399	12	0.15511	13	(2)909.65	25.27	0.37638	18	24
37	0.38942	18	9.85411	12	0.15524	13	(2)934.92	25.27	0.37620	18	23
38	0.38960	18	9.85423	13	0.15537	13	(2)960.19	25.28	0.37602	17	22
39	0.38978	18	9.85436	12	0.15550	13	(2)985.47	25.27	0.37585	18	21
40	0.38996	18	9.85448	12	0.15563	13	(1)1010.7	25.2	0.37567	18	20
41	0.39014	19	9.85460	13	0.15576	13	(1)1036.0	25.3	0.37549	17	19
42	0.39033	18	9.85473	12	0.15589	13	(1)1061.3	25.3	0.37532	18	18
43	0.39051	18	9.85485	12	0.15602	13	(1)1086.6	25.2	0.37514	18	17
44	0.39069	18	9.85497	13	0.15615	12	(1)1111.8	25.3	0.37496	17	16
45	0.39087	18	9.85510	12	0.15627	13	(1)1137.1	25.3	0.37479	18	15
46	0.39105	18	9.85522	12	0.15640	13	(1)1162.4	25.3	0.37461	17	14
47	0.39123	18	9.85534	13	0.15653	13	(1)1187.7	25.2	0.37444	18	13
48	0.39141	18	9.85547	12	0.15666	13	(1)1212.9	25.3	0.37426	18	12
49	0.39159	18	9.85559	12	0.15679	13	(1)1238.2	25.3	0.37408	17	11
50	0.39177	19	9.85571	12	0.15692	13	(1)1263.5	25.3	0.37391	18	10
51	0.39196	18	9.85583	13	0.15705	13	(1)1288.8	25.2	0.37373	18	9
52	0.39214	18	9.85596	12	0.15718	13	(1)1314.0	25.3	0.37355	17	8
53	0.39232	18	9.85608	12	0.15731	13	(1)1339.3	25.3	0.37338	18	7
54	0.39250	18	9.85620	12	0.15745	13	(1)1364.6	25.3	0.37320	17	5
55	0.39268	18	9.85632	13	0.15758	13	(1)1389.9	25.3	0.37303	18	5
56	0.39286	19	9.85645	12	0.15771	13	(1)1415.2	25.2	0.37285	17	4
57	0.39305	18	9.85657	12	0.15784	13	(1)1440.4	25.3	0.37268	18	3
58	0.39323	18	9.85669	12	0.15797	13	(1)1465.7	25.3	0.37250	18	2
59	0.39341	18	9.85681	12	0.15810	13	(1)1491.0	25.3	0.37232	17	1
60	0.39359	18	9.85693	12	0.15823	13	(1)1516.3	25.3	0.37215	17	0

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.       $z'$       Diff.       $\omega$   
log Sec z      l. Cotg z      l. Cosec z



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \csc \omega$	Diff.				
0	0.39359		9.85693		0.15823		(1)1516.3		25.3	0.37215	18	60
1	0.39377	18	9.85706	13	0.15836	13	(1)1541.6	25.2	0.37197	17	59	
2	0.39395	18	9.85718	12	0.15849	13.	(1)1566.8	25.3	0.37180	18	58	
3	0.39414	18	9.85730	12	0.15862	13	(1)1592.1	25.3	0.37162	17	57	
4	0.39432	18	9.85742	12	0.15875	13	(1)1617.4	25.3	0.37145	18	56	
5	0.39450	18	9.85754	12	0.15888	13	(1)1642.7	25.3	0.37127	17	55	
6	0.39468	18	9.85766	13	0.15902	13	(1)1668.0	25.3	0.37110	18	54	
7	0.39486	19	9.85779	12	0.15915	13	(1)1693.3	25.3	0.37092	18	53	
8	0.39505	18	9.85791	12	0.15928	13	(1)1718.6	25.2	0.37074	17	52	
9	0.39523	18	9.85803	12	0.15941	13	(1)1743.8	25.3	0.37057	18	51	
10	0.39541	18	9.85815	12	0.15954	13	(1)1769.1	25.3	0.37039	17	50	
11	0.39559	19	9.85827	12	0.15967	13	(1)1794.4	25.3	0.37022	18	49	
12	0.39578	18	9.85839	12	0.15980	14	(1)1819.7	25.3	0.37004	17	48	
13	0.39596	18	9.85851	13	0.15994	13	(1)1845.0	25.3	0.36987	18	47	
14	0.39614	18	9.85864	12	0.16007	13	(1)1870.3	25.3	0.36969	17	46	
15	0.39632	19	9.85876	12	0.16020	13	(1)1895.6	25.3	0.36952	18	45	
16	0.39651	18	9.85888	12	0.16033	13	(1)1920.9	25.3	0.36934	17	44	
17	0.39669	18	9.85900	12	0.16046	14	(1)1946.2	25.2	0.36917	18	43	
18	0.39687	19	9.85912	12	0.16060	13	(1)1971.4	25.3	0.36899	17	42	
19	0.39706	18	9.85924	12	0.16073	13	(1)1996.7	25.3	0.36882	17	41	
20	0.39724	18	9.85936	12	0.16086	13	(1)2022.0	25.3	0.36865	18	40	
21	0.39742	18	9.85948	12	0.16099	14	(1)2047.3	25.3	0.36847	17	39	
22	0.39760	19	9.85960	12	0.16113	13	(1)2072.6	25.3	0.36830	18	38	
23	0.39779	18	9.85972	12	0.16126	13	(1)2097.9	25.3	0.36812	17	37	
24	0.39797	18	9.85984	12	0.16139	13	(1)2123.2	25.3	0.36795	18	36	
25	0.39815	19	9.85996	12	0.16152	14	(1)2148.5	25.3	0.36777	17	35	
26	0.39834	18	9.86008	12	0.16166	13	(1)2173.8	25.3	0.36760	18	34	
27	0.39852	18	9.86020	12	0.16179	13	(1)2199.1	25.3	0.36742	17	33	
28	0.39870	19	9.86032	12	0.16192	13	(1)2224.4	25.3	0.36725	17	32	
29	0.39889	18	9.86044	12	0.16205	14	(1)2249.7	25.3	0.36708	18	31	
30	0.39907	18	9.86056	12	0.16219	13	(1)2275.0	25.3	0.36690	17	30	
31	0.39925	19	9.86068	12	0.16232	13	(1)2300.3	25.3	0.36673	18	29	
32	0.39944	18	9.86080	12	0.16245	14	(1)2325.6	25.3	0.36655	17	28	
33	0.39962	19	9.86092	12	0.16259	13	(1)2350.9	25.3	0.36638	17	27	
34	0.39981	18	9.86104	12	0.16272	13	(1)2376.2	25.3	0.36621	18	26	
35	0.39999	18	9.86116	12	0.16285	14	(1)2401.5	25.3	0.36603	17	25	
36	0.40017	19	9.86128	12	0.16299	13	(1)2426.8	25.3	0.36586	18	24	
37	0.40036	18	9.86140	12	0.16312	14	(1)2452.1	25.3	0.36568	17	23	
38	0.40054	19	9.86152	12	0.16326	13	(1)2477.4	25.3	0.36551	17	22	
39	0.40073	18	9.86164	12	0.16339	13	(1)2502.7	25.3	0.36534	18	21	
40	0.40091	18	9.86176	12	0.16352	14	(1)2528.0	25.4	0.36516	17	20	
41	0.40109	19	9.86188	12	0.16366	13	(1)2553.3	25.3	0.36499	18	19	
42	0.40128	18	9.86200	11	0.16379	13	(1)2578.7	25.3	0.36481	17	18	
43	0.40146	19	9.86211	12	0.16392	14	(1)2604.0	25.3	0.36464	17	17	
44	0.40165	18	9.86223	12	0.16406	13	(1)2629.3	25.3	0.36447	18	16	
45	0.40183	18	9.86235	12	0.16419	14	(1)2654.6	25.3	0.36429	17	15	
46	0.40201	19	9.86247	12	0.16433	13	(1)2679.9	25.3	0.36412	17	14	
47	0.40220	18	9.86259	12	0.16446	14	(1)2705.2	25.3	0.36395	18	13	
48	0.40238	19	9.86271	12	0.16460	13	(1)2730.5	25.4	0.36377	17	12	
49	0.40257	18	9.86283	12	0.16473	14	(1)2755.9	25.3	0.36360	17	11	
50	0.40275	19	9.86295	11	0.16487	13	(1)2781.2	25.3	0.36343	18	10	
51	0.40294	18	9.86306	12	0.16500	14	(1)2806.5	25.3	0.36325	17	9	
52	0.40312	19	9.86318	12	0.16514	13	(1)2831.8	25.3	0.36308	17	8	
53	0.40331	18	9.86330	12	0.16527	14	(1)2857.1	25.4	0.36291	17	7	
54	0.40349	19	9.86342	12	0.16541	13	(1)2882.5	25.3	0.36274	18	6	
55	0.40368	18	9.86354	12	0.16554	14	(1)2907.8	25.3	0.36256	17	5	
56	0.40386	19	9.86366	11	0.16568	13	(1)2933.1	25.3	0.36239	17	4	
57	0.40405	18	9.86377	12	0.16581	14	(1)2958.4	25.4	0.36222	18	3	
58	0.40423	19	9.86389	12	0.16595	13	(1)2983.8	25.3	0.36204	17	2	
59	0.40442	18	9.86401	12	0.16608	13	(1)3009.1	25.3	0.36187	17	1	
60	0.40460	18	9.86413	12	0.16622	14	(1)3034.4	25.3	0.36170	17	0	

$\log \cos \omega$   
 $\log \sec z$

Diff.

1. cosec  $\omega$   
1. Cotg z

Diff.

$\log \cotg \omega$   
1. Cosec z

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.40460	19	9.86413	12	0.16622	13	(1)3034.4	25.3	0.36170	17	60	
1	0.40479	18	9.86425	11	0.16635	14	(1)3059.7	25.4	0.36153	18	59	
2	0.40497	19	9.86436	12	0.16649	13	(1)3085.1	25.3	0.36135	17	58	
3	0.40516	18	9.86448	12	0.16662	14	(1)3110.4	25.3	0.36118	17	57	
4	0.40534	19	9.86460	12	0.16676	14	(1)3135.7	25.4	0.36101	17	56	
5	0.40553	18	9.86472	11	0.16690	13	(1)3161.1	25.3	0.36084	18	55	
6	0.40571	19	9.86483	12	0.16703	14	(1)3186.4	25.3	0.36066	17	54	
7	0.40590	19	9.86495	12	0.16717	13	(1)3211.7	25.4	0.36049	17	53	
8	0.40609	18	9.86507	11	0.16730	14	(1)3237.1	25.3	0.36032	17	52	
9	0.40627	19	9.86518	12	0.16744	14	(1)3262.4	25.3	0.36015	18	51	
10	0.40646	18	9.86530	12	0.16758	13	(1)3287.7	25.4	0.35997	17	50	
11	0.40664	19	9.86542	12	0.16771	14	(1)3313.1	25.3	0.35980	17	49	
12	0.40683	19	9.86554	11	0.16785	13	(1)3338.4	25.4	0.35963	17	48	
13	0.40702	18	9.86565	12	0.16798	14	(1)3363.8	25.3	0.35946	18	47	
14	0.40720	19	9.86577	12	0.16812	14	(1)3389.1	25.4	0.35928	17	46	
15	0.40739	18	9.86589	11	0.16826	13	(1)3414.5	25.3	0.35911	17	45	
16	0.40757	19	9.86600	12	0.16839	14	(1)3439.8	25.3	0.35894	17	44	
17	0.40776	19	9.86612	12	0.16853	14	(1)3465.1	25.4	0.35877	17	43	
18	0.40795	18	9.86624	11	0.16867	13	(1)3490.5	25.3	0.35860	18	42	
19	0.40813	19	9.86635	12	0.16880	14	(1)3515.8	25.4	0.35842	17	41	
20	0.40832	19	9.86647	12	0.16894	14	(1)3541.2	25.3	0.35825	17	40	
21	0.40851	18	9.86659	11	0.16908	14	(1)3566.5	25.4	0.35808	17	39	
22	0.40869	19	9.86670	12	0.16922	13	(1)3591.9	25.3	0.35791	17	38	
23	0.40888	18	9.86682	12	0.16935	14	(1)3617.2	25.4	0.35774	17	37	
24	0.40906	19	9.86694	11	0.16949	14	(1)3642.6	25.4	0.35757	18	36	
25	0.40925	19	9.86705	12	0.16963	14	(1)3668.0	25.3	0.35739	17	35	
26	0.40944	19	9.86717	11	0.16977	13	(1)3693.3	25.4	0.35722	17	34	
27	0.40963	18	9.86728	12	0.16990	14	(1)3718.7	25.3	0.35705	17	33	
28	0.40981	19	9.86740	12	0.17004	14	(1)3744.0	25.4	0.35688	17	32	
29	0.41000	19	9.86752	11	0.17018	14	(1)3769.4	25.4	0.35671	17	31	
30	0.41019	18	9.86763	12	0.17032	13	(1)3794.8	25.3	0.35654	17	30	
31	0.41037	19	9.86775	11	0.17045	14	(1)3820.1	25.4	0.35637	18	29	
32	0.41056	19	9.86786	12	0.17059	14	(1)3845.5	25.3	0.35619	17	28	
33	0.41075	18	9.86798	11	0.17073	14	(1)3870.8	25.4	0.35602	17	27	
34	0.41093	19	9.86809	12	0.17087	14	(1)3896.2	25.4	0.35585	17	26	
35	0.41112	19	9.86821	11	0.17101	14	(1)3921.6	25.4	0.35568	17	25	
36	0.41131	19	9.86832	12	0.17115	13	(1)3947.0	25.3	0.35551	17	23	
37	0.41150	18	9.86844	11	0.17128	14	(1)3972.3	25.4	0.35534	17	24	
38	0.41168	19	9.86855	12	0.17142	14	(1)3997.7	25.4	0.35517	17	22	
39	0.41187	19	9.86867	12	0.17156	14	(1)4023.1	25.3	0.35500	17	21	
40	0.41206	19	9.86879	11	0.17170	14	(1)4048.4	25.4	0.35483	18	20	
41	0.41225	18	9.86890	12	0.17184	14	(1)4073.8	25.4	0.35465	17	19	
42	0.41243	19	9.86902	11	0.17198	14	(1)4099.2	25.4	0.35448	17	18	
43	0.41262	19	9.86913	11	0.17212	13	(1)4124.6	25.4	0.35431	17	17	
44	0.41281	19	9.86924	12	0.17225	14	(1)4150.0	25.3	0.35414	17	16	
45	0.41300	19	9.86936	11	0.17239	14	(1)4175.3	25.4	0.35397	17	15	
46	0.41319	18	9.86947	12	0.17253	14	(1)4200.7	25.4	0.35380	17	14	
47	0.41337	19	9.86959	11	0.17267	14	(1)4226.1	25.4	0.35363	17	13	
48	0.41356	19	9.86970	12	0.17281	14	(1)4251.5	25.4	0.35346	17	12	
49	0.41375	19	9.86982	11	0.17295	14	(1)4276.9	25.4	0.35329	17	11	
50	0.41394	19	9.86993	12	0.17309	14	(1)4302.3	25.4	0.35312	17	10	
51	0.41413	18	9.87005	11	0.17323	14	(1)4327.7	25.4	0.35295	17	9	
52	0.41431	19	9.87016	12	0.17337	14	(1)4353.1	25.4	0.35278	17	8	
53	0.41450	19	9.87028	11	0.17351	14	(1)4378.5	25.4	0.35261	17	7	
54	0.41469	19	9.87039	11	0.17365	14	(1)4403.9	25.3	0.35244	17	6	
55	0.41488	19	9.87050	12	0.17379	14	(1)4429.2	25.4	0.35227	17	5	
56	0.41507	19	9.87062	11	0.17393	14	(1)4454.6	25.4	0.35210	17	4	
57	0.41526	19	9.87073	12	0.17407	14	(1)4480.0	25.4	0.35193	17	3	
58	0.41545	18	9.87085	11	0.17421	14	(1)4505.4	25.5	0.35176	17	2	
59	0.41563	19	9.87096	11	0.17435	14	(1)4530.9	25.4	0.35159	17	1	
60	0.41582	19	9.87107	11	0.17449	14	(1)4556.3	25.4	0.35142	17	0	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z l. Cotg z l. Cosec z



$\omega'$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.41582		9.87107	12	0.17449	14	(1)4556.3	25.4	0.35142	17	60
1	0.41601	19	9.87119	11	0.17463	14	(1)4581.7	25.4	0.35125	17	59
2	0.41620	19	9.87130	11	0.17477	14	(1)4607.1	25.4	0.35108	17	58
3	0.41639	19	9.87141	12	0.17491	14	(1)4632.5	25.4	0.35091	17	57
4	0.41658	19	9.87153	11	0.17505	14	(1)4657.9	25.4	0.35074	17	56
5	0.41677	19	9.87164	11	0.17519	14	(1)4683.3	25.4	0.35057	17	55
6	0.41696	19	9.87175	12	0.17533	14	(1)4708.7	25.4	0.35040	17	54
7	0.41715	18	9.87187	11	0.17547	14	(1)4734.1	25.4	0.35023	17	53
8	0.41733	19	9.87198	11	0.17561	15	(1)4759.5	25.5	0.35006	17	52
9	0.41752	19	9.87209	12	0.17576	14	(1)4785.0	25.4	0.34989	17	51
10	0.41771	19	9.87221	11	0.17590	14	(1)4810.4	25.4	0.34972	17	50
11	0.41790	19	9.87232	11	0.17604	14	(1)4835.8	25.4	0.34955	17	49
12	0.41809	19	9.87243	12	0.17618	14	(1)4861.2	25.5	0.34938	17	48
13	0.41828	19	9.87255	11	0.17632	14	(1)4886.6	25.4	0.34921	17	47
14	0.41847	19	9.87266	11	0.17646	14	(1)4912.1	25.4	0.34904	17	46
15	0.41866	19	9.87277	11	0.17660	14	(1)4937.5	25.4	0.34887	17	45
16	0.41885	19	9.87288	12	0.17674	15	(1)4962.9	25.5	0.34870	17	44
17	0.41904	19	9.87300	11	0.17689	14	(1)4988.4	25.4	0.34853	17	43
18	0.41923	19	9.87311	11	0.17703	14	(1)5013.8	25.4	0.34836	17	42
19	0.41942	19	9.87322	12	0.17717	14	(1)5039.2	25.5	0.34819	16	41
20	0.41961	19	9.87334	11	0.17731	14	(1)5064.7	25.4	0.34803	17	40
21	0.41980	19	9.87345	11	0.17745	15	(1)5090.1	25.5	0.34786	17	39
22	0.41999	19	9.87356	11	0.17760	14	(1)5115.6	25.4	0.34769	17	38
23	0.42018	19	9.87367	11	0.17774	14	(1)5141.0	25.5	0.34752	17	37
24	0.42037	19	9.87378	12	0.17788	14	(1)5166.5	25.4	0.34735	17	36
25	0.42056	19	9.87390	11	0.17802	14	(1)5191.9	25.4	0.34718	17	35
26	0.42075	19	9.87401	11	0.17816	15	(1)5217.3	25.5	0.34701	17	34
27	0.42094	19	9.87412	11	0.17831	14	(1)5242.8	25.4	0.34684	17	33
28	0.42113	19	9.87423	11	0.17845	14	(1)5268.2	25.5	0.34667	16	32
29	0.42132	19	9.87434	12	0.17859	15	(1)5293.7	25.5	0.34651	17	31
30	0.42151	19	9.87446	11	0.17874	14	(1)5319.2	25.4	0.34634	17	30
31	0.42170	20	9.87457	11	0.17888	14	(1)5344.6	25.5	0.34617	17	29
32	0.42190	19	9.87468	11	0.17902	14	(1)5370.1	25.4	0.34600	17	28
33	0.42209	19	9.87479	11	0.17916	15	(1)5395.5	25.5	0.34583	17	27
34	0.42228	19	9.87490	11	0.17931	14	(1)5421.0	25.5	0.34566	17	26
35	0.42247	19	9.87501	12	0.17945	14	(1)5446.5	25.4	0.34549	16	25
36	0.42266	19	9.87513	11	0.17959	15	(1)5471.9	25.5	0.34533	17	24
37	0.42285	19	9.87524	11	0.17974	14	(1)5497.4	25.5	0.34516	17	23
38	0.42304	19	9.87535	11	0.17988	14	(1)5522.9	25.4	0.34499	17	22
39	0.42323	19	9.87546	11	0.18002	15	(1)5548.3	25.5	0.34482	17	21
40	0.42342	20	9.87557	11	0.18017	14	(1)5573.8	25.5	0.34465	17	20
41	0.42362	19	9.87568	11	0.18031	14	(1)5599.3	25.5	0.34448	16	19
42	0.42381	19	9.87579	11	0.18045	15	(1)5624.8	25.4	0.34432	17	18
43	0.42400	19	9.87590	11	0.18060	14	(1)5650.2	25.5	0.34415	17	17
44	0.42419	19	9.87601	12	0.18074	15	(1)5675.7	25.5	0.34398	17	16
45	0.42438	19	9.87613	11	0.18089	14	(1)5701.2	25.5	0.34381	17	15
46	0.42457	19	9.87624	11	0.18103	15	(1)5726.7	25.5	0.34364	16	14
47	0.42476	20	9.87635	11	0.18118	14	(1)5752.2	25.5	0.34348	17	13
48	0.42496	19	9.87646	11	0.18132	14	(1)5777.7	25.5	0.34331	17	12
49	0.42515	19	9.87657	11	0.18146	15	(1)5803.2	25.5	0.34314	17	11
50	0.42534	19	9.87668	11	0.18161	14	(1)5828.7	25.4	0.34297	17	10
51	0.42553	19	9.87679	11	0.18175	15	(1)5854.1	25.5	0.34280	16	9
52	0.42572	20	9.87690	11	0.18190	14	(1)5879.6	25.5	0.34264	17	8
53	0.42592	19	9.87701	11	0.18204	15	(1)5905.1	25.5	0.34247	17	7
54	0.42611	19	9.87712	11	0.18219	14	(1)5930.6	25.5	0.34230	17	6
55	0.42630	19	9.87723	11	0.18233	15	(1)5956.1	25.6	0.34213	16	5
56	0.42649	19	9.87734	11	0.18248	14	(1)5981.7	25.5	0.34197	17	4
57	0.42668	20	9.87745	11	0.18262	15	(1)6007.2	25.5	0.34180	17	3
58	0.42688	19	9.87756	11	0.18277	14	(1)6032.7	25.5	0.34163	17	2
59	0.42707	19	9.87767	11	0.18291	15	(1)6058.2	25.5	0.34146	16	1
60	0.42726	19	9.87778	11	0.18306	15	(1)6083.7	25.5	0.34130	16	0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega'$   
 log Sec z l. Cotg z l. Cosec z

$\omega$	$z'$	Diff.	$\log Tg z$ $\log \sin \omega$	Diff.	$\log Cos z$ $\log \sec \omega$	Diff.	$\log Sin z$ $\log tg \omega$	Diff.			
0	0.42726	19	9.87778		0.18306		(1)6083.7		0.34130		60
1	0.42745	20	9.87789	11	0.18320	14	(1)6109.2	25.5	0.34113	17	59
2	0.42765	19	9.87800	11	0.18335	15	(1)6134.7	25.5	0.34096	17	58
3	0.42784	19	9.87811	11	0.18349	14	(1)6160.2	25.5	0.34079	17	57
4	0.42803	19	9.87822	11	0.18364	15	(1)6185.8	25.6	0.34063	16	56
5	0.42823	20	9.87833	11	0.18378	14	(1)6211.3	25.5	0.34046	17	55
6	0.42842	19	9.87844	11	0.18393	15	(1)6236.8	25.5	0.34029	16	54
7	0.42861	19	9.87855	11	0.18408	15	(1)6262.3	25.5	0.34013	16	53
8	0.42880	20	9.87866	11	0.18422	14	(1)6287.9	25.6	0.33996	17	52
9	0.42900	19	9.87877	10	0.18437	15	(1)6313.4	25.5	0.33979	17	51
10	0.42919	19	9.87887	11	0.18451	14	(1)6338.9	25.5	0.33962	16	50
11	0.42938	20	9.87898	11	0.18466	15	(1)6364.5	25.5	0.33946	17	49
12	0.42958	19	9.87909	11	0.18481	15	(1)6390.0	25.5	0.33929	17	48
13	0.42977	19	9.87920	11	0.18495	14	(1)6415.6	25.6	0.33912	16	47
14	0.42996	20	9.87931	11	0.18510	15	(1)6441.1	25.6	0.33896	17	46
15	0.43016	19	9.87942	11	0.18525	15	(1)6466.7	25.5	0.33879	17	45
16	0.43035	20	9.87953	11	0.18539	14	(1)6492.2	25.5	0.33862	16	44
17	0.43055	19	9.87964	11	0.18554	15	(1)6517.8	25.6	0.33846	17	43
18	0.43074	19	9.87975	10	0.18569	15	(1)6543.3	25.5	0.33829	17	42
19	0.43093	20	9.87985	11	0.18583	14	(1)6568.9	25.6	0.33812	16	41
20	0.43113	19	9.87996	11	0.18598	15	(1)6594.4	25.5	0.33796	17	40
21	0.43132	19	9.88007	11	0.18613	15	(1)6620.0	25.5	0.33779	17	39
22	0.43151	20	9.88018	11	0.18628	14	(1)6645.5	25.6	0.33762	16	38
23	0.43171	19	9.88029	11	0.18642	15	(1)6671.1	25.6	0.33746	17	37
24	0.43190	20	9.88040	11	0.18657	15	(1)6696.7	25.5	0.33729	17	36
25	0.43210	19	9.88051	10	0.18672	14	(1)6722.2	25.6	0.33712	16	35
26	0.43229	20	9.88061	11	0.18686	15	(1)6747.8	25.6	0.33696	17	34
27	0.43249	19	9.88072	11	0.18701	15	(1)6773.4	25.5	0.33679	16	33
28	0.43268	19	9.88083	11	0.18716	15	(1)6799.0	25.5	0.33663	17	32
29	0.43287	20	9.88094	11	0.18731	15	(1)6824.5	25.6	0.33646	17	31
30	0.43307	19	9.88105	10	0.18746	14	(1)6850.1	25.6	0.33629	16	30
31	0.43326	20	9.88115	11	0.18760	15	(1)6875.7	25.6	0.33613	17	29
32	0.43346	19	9.88126	11	0.18775	15	(1)6901.3	25.6	0.33596	17	28
33	0.43365	20	9.88137	11	0.18790	15	(1)6926.9	25.6	0.33579	16	27
34	0.43385	19	9.88148	10	0.18805	15	(1)6952.5	25.6	0.33563	16	26
35	0.43404	20	9.88158	11	0.18820	14	(1)6978.0	25.5	0.33546	17	25
36	0.43424	19	9.88169	11	0.18834	15	(1)7003.6	25.6	0.33530	17	24
37	0.43443	20	9.88180	11	0.18849	15	(1)7029.2	25.6	0.33513	16	23
38	0.43463	19	9.88191	10	0.18864	15	(1)7054.8	25.6	0.33497	17	22
39	0.43482	20	9.88201	11	0.18879	15	(1)7080.4	25.6	0.33480	17	21
40	0.43502	19	9.88212	11	0.18894	15	(1)7106.0	25.6	0.33463	16	20
41	0.43521	20	9.88223	11	0.18909	15	(1)7131.6	25.6	0.33447	16	19
42	0.43541	19	9.88234	10	0.18924	15	(1)7157.3	25.7	0.33430	17	18
43	0.43560	20	9.88245	11	0.18939	15	(1)7182.9	25.6	0.33414	16	17
44	0.43580	19	9.88255	11	0.18953	14	(1)7208.5	25.6	0.33397	17	16
45	0.43599	20	9.88266	10	0.18968	15	(1)7234.1	25.6	0.33381	16	15
46	0.43619	19	9.88276	11	0.18983	15	(1)7259.7	25.6	0.33364	17	14
47	0.43638	20	9.88287	11	0.18998	15	(1)7285.3	25.6	0.33347	17	13
48	0.43658	19	9.88298	10	0.19013	15	(1)7311.0	25.7	0.33331	16	12
49	0.43678	20	9.88308	11	0.19028	15	(1)7336.6	25.6	0.33314	17	11
50	0.43697	19	9.88319	11	0.19043	15	(1)7362.2	25.6	0.33298	16	10
51	0.43717	20	9.88330	10	0.19058	15	(1)7387.8	25.6	0.33281	17	9
52	0.43736	19	9.88340	10	0.19073	15	(1)7413.5	25.7	0.33265	16	8
53	0.43756	20	9.88351	11	0.19088	15	(1)7439.1	25.6	0.33248	17	7
54	0.43776	19	9.88362	10	0.19103	15	(1)7464.8	25.7	0.33232	16	6
55	0.43795	20	9.88372	11	0.19118	15	(1)7490.4	25.6	0.33215	17	5
56	0.43815	19	9.88383	11	0.19133	15	(1)7516.0	25.6	0.33199	16	4
57	0.43834	20	9.88394	10	0.19148	15	(1)7541.7	25.7	0.33182	17	3
58	0.43854	19	9.88404	11	0.19163	15	(1)7567.3	25.6	0.33166	16	2
59	0.43874	20	9.88415	10	0.19178	15	(1)7593.0	25.7	0.33149	17	1
60	0.43893	19	9.88425	10	0.19193	15	(1)7618.6	25.6	0.33133	16	0



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.43893		9.88425		0.19193		(17618.6		0.33133		17	60
1	0.43913	20	9.88436	11	0.19208	15	(17644.3	25.7	0.33116	17	59	
2	0.43933	20	9.88447	11	0.19223	15	(17670.0	25.7	0.33100	16	58	
3	0.43952	19	9.88457	10	0.19238	15	(17695.6	25.6	0.33083	17	57	
4	0.43972	20	9.88468	11	0.19254	16	(17721.3	25.7	0.33067	16	56	
5	0.43992	20	9.88478	10	0.19269	15	(17747.0	25.7	0.33050	17	55	
6	0.44011	19	9.88489	11	0.19284	15	(17772.6	25.6	0.33034	16	54	
7	0.44031	20	9.88499	10	0.19299	15	(17798.3	25.7	0.33017	17	53	
8	0.44051	20	9.88510	11	0.19314	15	(17824.0	25.7	0.33001	16	52	
9	0.44071	20	9.88521	11	0.19329	15	(17849.7	25.7	0.32984	17	51	
10	0.44090	19	9.88531	10	0.19344	15	(17875.3	25.6	0.32968	16	50	
11	0.44110	20	9.88542	11	0.19359	15	(17901.0	25.7	0.32952	17	49	
12	0.44130	20	9.88552	10	0.19375	16	(17926.7	25.7	0.32935	16	48	
13	0.44149	19	9.88563	11	0.19390	15	(17952.4	25.7	0.32919	17	47	
14	0.44169	20	9.88573	10	0.19405	15	(17978.1	25.7	0.32902	16	46	
15	0.44189	20	9.88584	11	0.19420	15	(18003.8	25.7	0.32886	17	45	
16	0.44209	20	9.88594	10	0.19435	15	(18029.5	25.7	0.32869	16	44	
17	0.44229	20	9.88605	11	0.19450	15	(18055.2	25.7	0.32853	17	43	
18	0.44248	19	9.88615	10	0.19466	16	(18080.9	25.7	0.32837	16	42	
19	0.44268	20	9.88626	11	0.19481	15	(18106.6	25.7	0.32820	17	41	
20	0.44288	20	9.88636	10	0.19496	15	(18132.3	25.7	0.32804	16	40	
21	0.44308	20	9.88647	11	0.19511	15	(18158.0	25.7	0.32787	17	39	
22	0.44327	19	9.88657	10	0.19527	16	(18183.7	25.7	0.32771	16	38	
23	0.44347	20	9.88668	11	0.19542	15	(18209.4	25.7	0.32755	17	37	
24	0.44367	20	9.88678	10	0.19557	15	(18235.2	25.8	0.32738	16	36	
25	0.44387	20	9.88688	11	0.19572	16	(18260.9	25.7	0.32722	17	35	
26	0.44407	20	9.88699	10	0.19588	15	(18286.6	25.7	0.32705	16	34	
27	0.44427	20	9.88709	11	0.19603	15	(18312.3	25.7	0.32689	17	33	
28	0.44446	19	9.88720	10	0.19618	15	(18338.1	25.8	0.32673	16	32	
29	0.44466	20	9.88730	11	0.19634	16	(18363.8	25.7	0.32656	17	31	
30	0.44486	20	9.88741	10	0.19649	15	(18389.6	25.8	0.32640	16	30	
31	0.44506	20	9.88751	11	0.19664	15	(18415.3	25.7	0.32623	17	29	
32	0.44526	20	9.88761	10	0.19680	16	(18441.0	25.7	0.32607	16	28	
33	0.44546	20	9.88772	11	0.19695	15	(18466.8	25.8	0.32591	17	27	
34	0.44566	20	9.88782	10	0.19710	15	(18492.5	25.7	0.32574	16	26	
35	0.44586	19	9.88793	11	0.19726	16	(18518.3	25.8	0.32558	17	25	
36	0.44605	20	9.88803	10	0.19741	15	(18544.0	25.7	0.32542	16	24	
37	0.44625	20	9.88813	11	0.19756	15	(18569.8	25.7	0.32525	17	23	
38	0.44645	20	9.88824	10	0.19772	16	(18595.6	25.8	0.32509	16	22	
39	0.44665	20	9.88834	11	0.19787	15	(18621.3	25.7	0.32493	17	21	
40	0.44685	20	9.88844	10	0.19803	16	(18647.1	25.8	0.32476	16	20	
41	0.44705	20	9.88855	11	0.19818	15	(18672.9	25.7	0.32460	17	19	
42	0.44725	20	9.88865	10	0.19834	16	(18698.6	25.7	0.32444	16	18	
43	0.44745	20	9.88875	11	0.19849	15	(18724.4	25.8	0.32427	17	17	
44	0.44765	20	9.88886	10	0.19864	15	(18750.2	25.8	0.32411	16	16	
45	0.44785	20	9.88896	11	0.19880	16	(18776.0	25.8	0.32395	17	15	
46	0.44805	20	9.88906	10	0.19895	15	(18801.8	25.7	0.32378	16	14	
47	0.44825	20	9.88917	11	0.19911	16	(18827.5	25.7	0.32362	17	13	
48	0.44845	20	9.88927	10	0.19926	15	(18853.3	25.8	0.32346	16	12	
49	0.44865	20	9.88937	11	0.19942	16	(18879.1	25.8	0.32329	17	11	
50	0.44885	20	9.88948	10	0.19957	15	(18904.9	25.8	0.32313	16	10	
51	0.44905	20	9.88958	11	0.19973	16	(18930.7	25.8	0.32297	17	9	
52	0.44925	20	9.88968	10	0.19988	15	(18956.5	25.8	0.32281	16	8	
53	0.44945	20	9.88978	11	0.20004	16	(18982.3	25.9	0.32264	17	7	
54	0.44965	20	9.88989	10	0.20019	15	(19008.2	25.8	0.32248	16	6	
55	0.44985	20	9.88999	11	0.20035	16	(19034.0	25.8	0.32232	17	5	
56	0.45005	20	9.89009	10	0.20050	15	(19059.8	25.8	0.32215	16	4	
57	0.45025	20	9.89020	11	0.20066	16	(19085.6	25.8	0.32199	17	3	
58	0.45045	20	9.89030	10	0.20082	15	(19111.4	25.8	0.32183	16	2	
59	0.45065	20	9.89040	11	0.20097	15	(19137.2	25.9	0.32167	17	1	
60	0.45085	20	9.89050	10	0.20113	16	(19163.1		0.32150	16	0	

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      log cotg  $\omega$       Diff.       $z'$       Diff.       $\omega$   
 log Sec z           log Cotg z           l. Cosec z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.	log Cos z log sec z	Diff.	log Cotg $\omega$ l. Cossec z	Diff.	$z'$	Diff.	$\omega$
0	0.45085		9.89050		0.20113		(1)9163.1		25.8		0.32150				60
1	0.45105	20	9.89060	10	0.20128	15	(1)9188.9	25.8	0.32134	16	0.31956	16	16	59	
2	0.45125	20	9.89071	10	0.20144	16	(1)9214.7	25.8	0.32118	16	0.31939	16	16	58	
3	0.45145	20	9.89081	10	0.20160	16	(1)9240.6	25.9	0.32102	16	0.31923	16	16	57	
4	0.45165	20	9.89091	10	0.20175	15	(1)9266.1	25.8	0.32085	17	0.31907	16	17	56	
5	0.45186	20	9.89101	10	0.20191	16	(1)9292.3	25.9	0.32069	16	0.31891	16	16	55	
6	0.45206	20	9.89112	10	0.20207	15	(1)9318.1	25.8	0.32053	16	0.31875	17	16	54	
7	0.45226	20	9.89122	10	0.20222	16	(1)9344.0	25.8	0.32037	16	0.31858	16	16	53	
8	0.45246	20	9.89132	10	0.20238	16	(1)9369.8	25.9	0.32020	16	0.31842	16	16	52	
9	0.45266	20	9.89142	10	0.20254	15	(1)9395.7	25.8	0.32004	16	0.31826	16	16	51	
10	0.45286	20	9.89152	10	0.20269	16	(1)9421.5	25.8	0.31988	16	0.31810	16	16	50	
11	0.45306	20	9.89162	10	0.20285	16	(1)9447.4	25.9	0.31972	16	0.31794	16	16	49	
12	0.45327	20	9.89173	10	0.20301	15	(1)9473.3	25.9	0.31956	17	0.31778	16	17	48	
13	0.45347	20	9.89183	10	0.20316	16	(1)9499.2	25.8	0.31939	16	0.31761	16	16	47	
14	0.45367	20	9.89193	10	0.20332	16	(1)9525.0	25.8	0.31923	16	0.31745	16	16	46	
15	0.45387	20	9.89203	10	0.20348	16	(1)9550.9	25.9	0.31907	16	0.31729	16	16	45	
16	0.45407	20	9.89213	10	0.20364	15	(1)9576.8	25.9	0.31891	16	0.31713	16	16	44	
17	0.45427	20	9.89223	10	0.20379	16	(1)9602.7	25.9	0.31875	16	0.31697	16	16	43	
18	0.45448	20	9.89233	11	0.20395	16	(1)9628.6	25.8	0.31858	16	0.31681	16	16	42	
19	0.45468	20	9.89241	10	0.20411	16	(1)9654.4	25.9	0.31842	16	0.31665	16	16	41	
20	0.45488	20	9.89251	10	0.20427	15	(1)9680.3	25.9	0.31826	16	0.31649	16	16	40	
21	0.45508	21	9.89261	10	0.20442	16	(1)9706.2	25.9	0.31810	16	0.31633	16	16	39	
22	0.45529	20	9.89274	10	0.20458	16	(1)9732.1	25.9	0.31794	16	0.31617	16	16	38	
23	0.45549	20	9.89281	10	0.20474	16	(1)9758.0	26.0	0.31778	17	0.31601	16	17	37	
24	0.45569	20	9.89294	10	0.20490	16	(1)9784.0	25.9	0.31761	16	0.31585	16	16	36	
25	0.45589	21	9.89304	10	0.20506	16	(1)9809.9	25.9	0.31745	16	0.31569	16	16	35	
26	0.45610	20	9.89314	10	0.20522	15	(1)9835.8	25.9	0.31729	16	0.31553	16	16	34	
27	0.45630	20	9.89324	10	0.20537	16	(1)9861.7	25.9	0.31713	16	0.31537	16	16	33	
28	0.45650	20	9.89334	10	0.20553	16	(1)9887.6	26.0	0.31697	16	0.31521	16	16	32	
29	0.45670	21	9.89344	10	0.20569	16	(1)9913.6	25.9	0.31681	17	0.31505	16	17	31	
30	0.45691	20	9.89354	10	0.20585	16	(1)9939.5	25.9	0.31665	16	0.31489	16	16	30	
31	0.45711	20	9.89364	10	0.20601	16	(1)9965.4	25.9	0.31648	16	0.31473	16	16	29	
32	0.45731	21	9.89375	10	0.20617	16	(1)9991.3	26	0.31632	16	0.31457	16	16	28	
33	0.45752	20	9.89385	10	0.20633	16	0.10017	26	0.31616	16	0.31441	16	16	27	
34	0.45772	20	9.89395	10	0.20649	16	0.10013	26	0.31600	16	0.31425	16	16	26	
35	0.45792	21	9.89405	10	0.20665	16	0.10009	26	0.31584	16	0.31409	16	16	25	
36	0.45813	20	9.89415	10	0.20681	15	0.10005	26	0.31568	16	0.31393	16	16	24	
37	0.45833	20	9.89425	10	0.20696	16	0.10121	26	0.31552	16	0.31377	16	16	23	
38	0.45853	21	9.89435	10	0.20712	16	0.10147	26	0.31535	16	0.31361	16	16	22	
39	0.45874	20	9.89445	10	0.20728	16	0.10173	26	0.31519	16	0.31345	16	16	21	
40	0.45894	20	9.89455	10	0.20744	16	0.10199	26	0.31503	16	0.31329	16	16	20	
41	0.45914	21	9.89465	10	0.20760	16	0.10225	26	0.31487	16	0.31313	16	16	19	
42	0.45935	20	9.89475	10	0.20776	15	0.10251	26	0.31471	16	0.31297	16	16	18	
43	0.45955	20	9.89485	10	0.20792	16	0.10277	26	0.31455	16	0.31281	16	16	17	
44	0.45975	21	9.89495	9	0.20808	16	0.10303	26	0.31439	16	0.31265	16	16	16	
45	0.45996	20	9.89504	10	0.20824	15	0.10329	26	0.31423	16	0.31249	16	16	15	
46	0.46016	21	9.89514	10	0.20840	16	0.10355	26	0.31407	16	0.31233	16	16	14	
47	0.46037	20	9.89524	10	0.20856	16	0.10381	26	0.31391	16	0.31217	16	16	13	
48	0.46057	21	9.89534	10	0.20872	17	0.10407	26	0.31375	16	0.31201	16	16	12	
49	0.46078	20	9.89544	10	0.20889	16	0.10433	26	0.31358	16	0.31185	16	16	11	
50	0.46098	20	9.89554	10	0.20905	16	0.10459	26	0.31342	16	0.31169	16	16	10	
51	0.46118	21	9.89564	10	0.20921	16	0.10485	26	0.31326	16	0.31153	16	16	9	
52	0.46139	20	9.89574	10	0.20937	16	0.10511	26	0.31310	16	0.31137	16	16	8	
53	0.46159	21	9.89584	10	0.20953	16	0.10537	26	0.31294	16	0.31121	16	16	7	
54	0.46180	20	9.89594	10	0.20969	16	0.10563	26	0.31278	16	0.31105	16	16	6	
55	0.46200	21	9.89604	10	0.20985	16	0.10589	26	0.31262	16	0.31089	16	16	5	
56	0.46221	20	9.89614	10	0.21001	16	0.10615	26	0.31246	16	0.31073	16	16	4	
57	0.46241	21	9.89624	9	0.21017	16	0.10641	26	0.31230	16	0.31057	16	16	3	
58	0.46262	20	9.89633	10	0.21033	17	0.10667	26	0.31214	16	0.31041	16	16	2	
59	0.46282	20	9.89643	10	0.21050	16	0.10693	26	0.31198	16	0.31025	16	16	1	
60	0.46303	21	9.89653	10	0.21066	16	0.10719	26	0.31182	16	0.31009	16	16	0	



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
0	0.46303		9.89553		0.21066		0.10719		0.31182		60
1	0.46323	20	9.89663	10	0.21082	16	0.10745	26	0.31166	16	59
2	0.46341	20	9.89673	10	0.21098	16	0.10771	26	0.31150	16	58
3	0.46361	21	9.89683	10	0.21111	17	0.10797	26	0.31134	16	57
4	0.46385	21	9.89693	10	0.21131	17	0.10823	26	0.31118	16	56
5	0.46406	20	9.89702	9	0.21147	16	0.10849	26	0.31102	16	55
6	0.46426	21	9.89712	10	0.21163	16	0.10875	26	0.31086	16	54
7	0.46447	20	9.89722	10	0.21179	16	0.10901	26	0.31070	16	53
8	0.46467	21	9.89732	10	0.21195	17	0.10927	27	0.31054	16	52
9	0.46488	20	9.89742	10	0.21212	16	0.10954	26	0.31038	16	51
10	0.46508	21	9.89752	9	0.21228	16	0.10980	26	0.31022	16	50
11	0.46529	21	9.89761	10	0.21244	16	0.11006	26	0.31006	16	49
12	0.46550	20	9.89771	10	0.21261	16	0.11032	26	0.30990	16	48
13	0.46570	21	9.89781	10	0.21277	16	0.11058	26	0.30974	16	47
14	0.46591	20	9.89791	10	0.21293	16	0.11084	26	0.30958	16	46
15	0.46611	21	9.89801	9	0.21309	17	0.11110	26	0.30942	16	45
16	0.46632	21	9.89810	10	0.21326	16	0.11136	26	0.30926	16	44
17	0.46653	20	9.89820	10	0.21342	16	0.11162	26	0.30910	16	43
18	0.46673	21	9.89830	10	0.21358	17	0.11188	26	0.30894	16	42
19	0.46694	21	9.89840	9	0.21375	16	0.11214	27	0.30878	16	41
20	0.46715	20	9.89849	10	0.21391	16	0.11241	26	0.30862	16	40
21	0.46735	21	9.89859	10	0.21408	16	0.11267	26	0.30846	16	39
22	0.46756	21	9.89869	10	0.21424	16	0.11293	26	0.30830	16	38
23	0.46777	21	9.89879	9	0.21440	17	0.11319	26	0.30814	16	37
24	0.46798	20	9.89888	10	0.21457	16	0.11345	26	0.30798	16	36
25	0.46818	21	9.89898	10	0.21473	17	0.11371	26	0.30782	16	35
26	0.46839	21	9.89908	10	0.21490	16	0.11397	26	0.30766	16	34
27	0.46860	20	9.89918	9	0.21506	16	0.11423	27	0.30750	16	33
28	0.46880	21	9.89927	10	0.21522	17	0.11450	26	0.30734	16	32
29	0.46901	21	9.89937	10	0.21539	16	0.11476	26	0.30718	16	31
30	0.46922	21	9.89947	9	0.21555	17	0.11502	26	0.30702	15	30
31	0.46943	20	9.89956	10	0.21572	16	0.11528	26	0.30687	16	29
32	0.46963	21	9.89966	10	0.21588	17	0.11554	26	0.30671	16	28
33	0.46984	21	9.89976	9	0.21605	16	0.11580	27	0.30655	16	27
34	0.47005	21	9.89985	10	0.21621	17	0.11607	26	0.30639	16	26
35	0.47026	21	9.89995	10	0.21638	16	0.11633	26	0.30623	16	25
36	0.47047	20	9.90005	9	0.21654	17	0.11659	26	0.30607	16	24
37	0.47067	21	9.90014	10	0.21671	16	0.11685	26	0.30591	16	23
38	0.47088	21	9.90024	10	0.21687	17	0.11711	27	0.30575	16	22
39	0.47109	21	9.90034	9	0.21704	16	0.11738	26	0.30559	16	21
40	0.47130	21	9.90043	10	0.21720	17	0.11764	26	0.30543	15	20
41	0.47151	20	9.90053	10	0.21737	17	0.11790	26	0.30528	16	19
42	0.47171	21	9.90063	9	0.21754	16	0.11816	26	0.30512	16	18
43	0.47192	21	9.90072	10	0.21770	17	0.11842	27	0.30496	16	17
44	0.47213	21	9.90082	9	0.21787	16	0.11869	26	0.30480	16	16
45	0.47234	21	9.90091	10	0.21803	17	0.11895	26	0.30464	16	15
46	0.47255	21	9.90101	10	0.21820	17	0.11921	26	0.30448	16	14
47	0.47276	21	9.90111	9	0.21837	16	0.11947	26	0.30432	16	13
48	0.47297	21	9.90120	10	0.21853	17	0.11973	27	0.30416	15	12
49	0.47318	21	9.90130	9	0.21870	17	0.12000	26	0.30401	16	11
50	0.47339	20	9.90139	10	0.21887	16	0.12026	26	0.30385	16	10
51	0.47359	21	9.90149	10	0.21903	17	0.12052	26	0.30369	16	9
52	0.47380	21	9.90159	9	0.21920	17	0.12078	27	0.30353	16	8
53	0.47401	21	9.90168	10	0.21937	16	0.12105	26	0.30337	16	7
54	0.47422	21	9.90178	9	0.21953	17	0.12131	26	0.30321	15	6
55	0.47443	21	9.90187	10	0.21970	17	0.12157	26	0.30306	16	4
56	0.47464	21	9.90197	9	0.21987	16	0.12183	27	0.30290	16	5
57	0.47485	21	9.90206	10	0.22003	17	0.12210	26	0.30274	16	3
58	0.47506	21	9.90216	9	0.22020	17	0.12236	26	0.30258	16	2
59	0.47527	21	9.90225	10	0.22037	17	0.12262	26	0.30242	16	1
60	0.47548	21	9.90235	10	0.22054	17	0.12289	27	0.30226	16	0

$\log \cos \omega$   
 $\log \sec z$

Diff.

$\text{l. cosec } \omega$   
 $\text{l. Cotg } z$

Diff.

$\log \cotg \omega$   
 $\text{l. Cosc } z$

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
0	0.47548	21	9.90235	9	0.22051	16	0.12289	26	0.30226	15	60
1	0.47569	21	9.90244	9	0.22070	17	0.12315	26	0.30211	16	59
2	0.47590	21	9.90254	10	0.22087	17	0.12341	26	0.30195	16	58
3	0.47611	21	9.90263	10	0.22104	17	0.12367	27	0.30179	16	57
4	0.47632	21	9.90273	9	0.22121	17	0.12394	26	0.30163	15	56
5	0.47653	21	9.90282	10	0.22138	16	0.12420	26	0.30147	15	55
6	0.47674	21	9.90292	9	0.22154	17	0.12446	27	0.30132	16	54
7	0.47695	21	9.90301	10	0.22171	17	0.12473	26	0.30116	16	53
8	0.47716	21	9.90311	9	0.22188	17	0.12499	26	0.30100	16	52
9	0.47737	21	9.90320	10	0.22205	17	0.12525	27	0.30084	16	51
10	0.47758	21	9.90330	9	0.22222	17	0.12552	26	0.30068	15	50
11	0.47779	21	9.90339	10	0.22239	17	0.12578	26	0.30053	16	49
12	0.47800	22	9.90349	9	0.22256	16	0.12604	27	0.30037	16	48
13	0.47822	21	9.90358	10	0.22272	17	0.12631	26	0.30021	16	47
14	0.47843	21	9.90368	9	0.22289	17	0.12657	26	0.30005	16	46
15	0.47864	21	9.90377	9	0.22306	17	0.12683	27	0.29989	16	45
16	0.47885	21	9.90386	10	0.22323	17	0.12710	26	0.29974	15	44
17	0.47906	21	9.90396	9	0.22340	17	0.12736	26	0.29958	16	43
18	0.47927	21	9.90405	10	0.22357	17	0.12762	27	0.29942	16	42
19	0.47948	21	9.90415	9	0.22374	17	0.12789	26	0.29926	16	41
20	0.47969	22	9.90424	10	0.22391	17	0.12815	27	0.29911	15	40
21	0.47991	21	9.90434	9	0.22408	17	0.12842	26	0.29895	16	39
22	0.48012	21	9.90443	9	0.22425	17	0.12868	26	0.29879	16	38
23	0.48033	21	9.90452	10	0.22442	17	0.12894	27	0.29863	16	37
24	0.48054	22	9.90462	9	0.22459	17	0.12921	26	0.29848	16	36
25	0.48076	21	9.90471	9	0.22476	17	0.12947	26	0.29832	16	35
26	0.48097	21	9.90480	10	0.22493	17	0.12973	27	0.29816	15	34
27	0.48118	21	9.90490	9	0.22510	17	0.13000	26	0.29801	16	33
28	0.48139	21	9.90499	10	0.22527	17	0.13026	27	0.29785	16	32
29	0.48160	21	9.90509	9	0.22544	17	0.13053	26	0.29769	16	31
30	0.48181	22	9.90518	9	0.22561	17	0.13079	27	0.29753	15	30
31	0.48203	21	9.90527	10	0.22578	17	0.13106	26	0.29738	16	29
32	0.48224	21	9.90537	9	0.22595	18	0.13132	26	0.29722	16	28
33	0.48245	21	9.90546	9	0.22613	17	0.13158	27	0.29706	15	27
34	0.48266	22	9.90555	10	0.22630	17	0.13185	26	0.29691	16	26
35	0.48288	21	9.90565	9	0.22647	17	0.13211	27	0.29675	16	25
36	0.48309	21	9.90574	9	0.22664	17	0.13238	26	0.29659	16	24
37	0.48330	22	9.90583	9	0.22681	17	0.13264	27	0.29643	15	23
38	0.48352	21	9.90592	10	0.22698	17	0.13291	26	0.29628	16	22
39	0.48373	21	9.90602	9	0.22715	17	0.13317	27	0.29612	16	21
40	0.48394	22	9.90611	9	0.22732	18	0.13344	26	0.29596	15	20
41	0.48416	21	9.90620	10	0.22750	17	0.13370	27	0.29581	16	19
42	0.48437	21	9.90630	9	0.22767	17	0.13397	26	0.29565	16	18
43	0.48458	22	9.90639	9	0.22784	17	0.13423	26	0.29549	15	17
44	0.48480	21	9.90648	9	0.22801	18	0.13449	27	0.29534	16	16
45	0.48501	21	9.90657	10	0.22819	17	0.13476	26	0.29518	16	15
46	0.48522	22	9.90667	9	0.22836	17	0.13502	27	0.29502	15	14
47	0.48544	21	9.90676	9	0.22853	17	0.13529	26	0.29487	16	13
48	0.48565	22	9.90685	9	0.22870	18	0.13555	27	0.29471	16	12
49	0.48587	21	9.90694	10	0.22888	17	0.13582	26	0.29455	15	11
50	0.48608	21	9.90704	9	0.22905	17	0.13608	27	0.29440	15	10
51	0.48629	22	9.90713	9	0.22922	17	0.13635	27	0.29424	16	9
52	0.48651	21	9.90722	9	0.22939	18	0.13662	26	0.29408	15	8
53	0.48672	22	9.90731	10	0.22957	17	0.13688	27	0.29393	16	7
54	0.48694	21	9.90741	9	0.22974	17	0.13715	26	0.29377	15	6
55	0.48715	21	9.90750	9	0.22991	18	0.13741	27	0.29362	16	5
56	0.48736	22	9.90759	9	0.23009	17	0.13768	26	0.29346	16	4
57	0.48758	21	9.90768	9	0.23026	17	0.13794	27	0.29330	15	3
58	0.48779	22	9.90777	10	0.23043	18	0.13821	26	0.29315	16	2
59	0.48801	21	9.90787	9	0.23061	17	0.13847	27	0.29299	16	1
60	0.48822	21	9.90796	9	0.23078	17	0.13874	27	0.29283	16	0

$\log \cos \omega$  Diff.  $\log \text{ Cotg } \omega$  Diff.  $\log \text{ Cosec } z$  Diff.  $z'$  Diff.  $\omega$



$\omega$	$z'$	Diff.	$\log \text{Tg } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \cos \omega$	Diff.	$z'$	Diff.	$\omega$
0	0.48822	22	9.90796	9	0.23078	18	0.13874	26	0.29283	15	60
1	0.48844	21	9.90805	9	0.23096	17	0.13900	27	0.29268	16	59
2	0.48865	22	9.90814	9	0.23113	17	0.13927	27	0.29252	15	58
3	0.48887	21	9.90823	9	0.23130	18	0.13954	26	0.29237	16	57
4	0.48908	22	9.90832	9	0.23148	17	0.13980	27	0.29221	16	56
5	0.48930	22	9.90842	10	0.23165	17	0.14007	27	0.29205	16	55
6	0.48952	21	9.90851	9	0.23183	18	0.14033	26	0.29190	16	54
7	0.48973	22	9.90860	9	0.23200	17	0.14060	27	0.29174	15	53
8	0.48995	21	9.90869	9	0.23218	18	0.14087	27	0.29159	16	52
9	0.49016	22	9.90878	9	0.23235	17	0.14113	26	0.29143	16	51
10	0.49038	21	9.90887	9	0.23253	18	0.14140	27	0.29127	15	50
11	0.49059	22	9.90896	9	0.23270	17	0.14166	26	0.29112	16	49
12	0.49081	22	9.90906	10	0.23288	18	0.14193	27	0.29096	15	48
13	0.49103	21	9.90915	9	0.23305	17	0.14220	26	0.29081	16	47
14	0.49124	22	9.90924	9	0.23323	18	0.14246	26	0.29065	16	46
15	0.49146	22	9.90933	9	0.23340	17	0.14273	27	0.29050	15	45
16	0.49167	21	9.90942	9	0.23358	18	0.14300	27	0.29034	16	44
17	0.49189	22	9.90951	9	0.23375	17	0.14326	26	0.29018	16	43
18	0.49211	22	9.90960	18	0.23393	18	0.14353	27	0.29003	15	42
19	0.49232	21	9.90969	9	0.23410	17	0.14380	27	0.28987	16	41
20	0.49254	22	9.90978	9	0.23428	18	0.14406	26	0.28972	15	40
21	0.49276	22	9.90987	18	0.23446	18	0.14433	27	0.28956	16	39
22	0.49297	21	9.90996	9	0.23463	17	0.14460	27	0.28941	15	38
23	0.49319	22	9.91005	9	0.23481	18	0.14486	26	0.28925	16	37
24	0.49341	22	9.91014	18	0.23499	18	0.14513	27	0.28910	15	36
25	0.49362	21	9.91023	9	0.23516	17	0.14540	27	0.28894	16	35
26	0.49384	22	9.91033	10	0.23534	18	0.14566	26	0.28879	15	34
27	0.49406	22	9.91042	9	0.23552	18	0.14593	27	0.28863	16	33
28	0.49428	21	9.91051	9	0.23569	17	0.14620	27	0.28847	16	32
29	0.49449	22	9.91060	9	0.23587	18	0.14646	26	0.28832	15	31
30	0.49471	22	9.91069	9	0.23605	18	0.14673	27	0.28816	16	30
31	0.49493	22	9.91078	9	0.23622	17	0.14700	27	0.28801	15	29
32	0.49515	21	9.91087	9	0.23640	18	0.14727	27	0.28785	16	28
33	0.49536	22	9.91096	9	0.23658	18	0.14753	26	0.28770	15	27
34	0.49558	22	9.91105	9	0.23676	17	0.14780	27	0.28754	16	26
35	0.49580	22	9.91114	9	0.23693	18	0.14807	27	0.28739	15	25
36	0.49602	22	9.91123	9	0.23711	18	0.14834	27	0.28723	16	24
37	0.49624	22	9.91132	9	0.23729	26	0.14860	26	0.28708	15	23
38	0.49645	21	9.91141	9	0.23747	18	0.14887	27	0.28692	16	22
39	0.49667	22	9.91149	8	0.23764	17	0.14914	27	0.28677	15	21
40	0.49689	22	9.91158	9	0.23782	18	0.14941	26	0.28661	16	20
41	0.49711	22	9.91167	9	0.23800	18	0.14967	26	0.28646	15	19
42	0.49733	22	9.91176	9	0.23818	18	0.14994	27	0.28630	16	18
43	0.49755	22	9.91185	9	0.23836	18	0.15021	27	0.28615	15	17
44	0.49777	22	9.91194	9	0.23854	18	0.15048	27	0.28599	16	16
45	0.49798	21	9.91203	9	0.23871	17	0.15075	26	0.28584	15	15
46	0.49820	22	9.91212	9	0.23889	18	0.15101	27	0.28569	16	14
47	0.49842	22	9.91221	9	0.23907	18	0.15128	27	0.28553	15	13
48	0.49864	22	9.91230	9	0.23926	18	0.15155	27	0.28538	16	12
49	0.49886	22	9.91239	9	0.23943	18	0.15182	27	0.28522	15	11
50	0.49908	22	9.91248	9	0.23961	18	0.15209	27	0.28507	16	10
51	0.49930	22	9.91257	9	0.23979	18	0.15236	26	0.28491	15	9
52	0.49952	22	9.91266	9	0.23997	18	0.15262	26	0.28476	16	8
53	0.49974	22	9.91274	8	0.24015	18	0.15289	27	0.28460	15	7
54	0.49996	22	9.91283	9	0.24033	18	0.15316	27	0.28445	16	6
55	0.50018	22	9.91292	9	0.24051	18	0.15343	27	0.28429	15	5
56	0.50040	22	9.91301	9	0.24069	18	0.15370	27	0.28414	16	4
57	0.50062	22	9.91310	9	0.24087	18	0.15397	27	0.28399	15	3
58	0.50084	22	9.91319	9	0.24105	18	0.15424	27	0.28383	16	2
59	0.50106	22	9.91328	9	0.24123	18	0.15450	26	0.28368	15	1
60	0.50128	22	9.91336	8	0.24141	18	0.15477	27	0.28352	16	0

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.		
0	0.50128		9.91336		0.21111		0.15177		0.28352	15
1	0.50150	22	9.91345	9	0.21159	18	0.15504	27	0.28337	15
2	0.50172	22	9.91351	9	0.21177	18	0.15531	27	0.28321	16
3	0.50191	22	9.91363	9	0.21195	18	0.15558	27	0.28306	15
4	0.50216	22	9.91372	9	0.21213	18	0.15585	27	0.28291	15
5	0.50238	22	9.91381	9	0.21231	18	0.15612	27	0.28275	16
6	0.50260	22	9.91389	8	0.21249	18	0.15639	27	0.28260	15
7	0.50282	22	9.91398	9	0.21267	18	0.15666	27	0.28244	16
8	0.50304	22	9.91407	9	0.21286	19	0.15693	27	0.28229	15
9	0.50326	22	9.91416	8	0.21304	18	0.15720	27	0.28214	15
10	0.50348	23	9.91425	9	0.21322	18	0.15746	26	0.28198	16
11	0.50371	22	9.91433	8	0.21340	18	0.15773	27	0.28183	15
12	0.50393	22	9.91442	9	0.21358	18	0.15800	27	0.28167	16
13	0.50415	22	9.91451	9	0.21376	18	0.15827	27	0.28152	15
14	0.50437	22	9.91460	9	0.21395	19	0.15854	27	0.28137	15
15	0.50459	22	9.91469	8	0.21413	18	0.15881	27	0.28121	16
16	0.50481	23	9.91477	9	0.21431	18	0.15908	27	0.28105	15
17	0.50504	22	9.91486	9	0.21449	18	0.15935	27	0.28091	15
18	0.50526	22	9.91495	9	0.21467	19	0.15962	27	0.28075	16
19	0.50548	22	9.91504	8	0.21486	18	0.15989	27	0.28060	15
20	0.50570	22	9.91512	9	0.21504	18	0.16016	27	0.28045	15
21	0.50592	23	9.91521	9	0.21522	19	0.16043	27	0.28029	16
22	0.50615	22	9.91530	8	0.21541	18	0.16070	27	0.28014	15
23	0.50637	22	9.91538	9	0.21559	18	0.16097	27	0.27998	16
24	0.50659	22	9.91547	8	0.21577	18	0.16124	27	0.27983	15
25	0.50681	23	9.91556	9	0.21595	19	0.16151	27	0.27968	15
26	0.50704	22	9.91565	8	0.21614	18	0.16178	27	0.27952	16
27	0.50726	22	9.91573	9	0.21632	18	0.16205	27	0.27937	15
28	0.50748	22	9.91582	9	0.21650	19	0.16232	28	0.27922	15
29	0.50770	23	9.91591	8	0.21669	18	0.16260	27	0.27905	16
30	0.50793	22	9.91599	9	0.21687	18	0.16287	27	0.27891	15
31	0.50815	22	9.91608	9	0.21706	19	0.16314	27	0.27876	15
32	0.50837	23	9.91617	8	0.21724	18	0.16341	27	0.27860	16
33	0.50860	22	9.91625	9	0.21742	19	0.16368	27	0.27845	15
34	0.50882	22	9.91634	9	0.21761	18	0.16395	27	0.27830	15
35	0.50904	23	9.91643	8	0.21779	19	0.16422	27	0.27814	16
36	0.50927	22	9.91651	9	0.21798	18	0.16449	27	0.27799	15
37	0.50949	22	9.91660	9	0.21816	18	0.16476	27	0.27784	15
38	0.50971	23	9.91669	8	0.21835	19	0.16503	27	0.27769	16
39	0.50994	22	9.91677	9	0.21853	19	0.16530	28	0.27753	15
40	0.51016	23	9.91686	9	0.21872	18	0.16558	27	0.27738	15
41	0.51039	22	9.91695	8	0.21890	19	0.16585	27	0.27723	15
42	0.51061	22	9.91703	9	0.21909	18	0.16612	27	0.27707	16
43	0.51083	23	9.91712	8	0.21927	19	0.16639	27	0.27692	15
44	0.51106	22	9.91720	9	0.21946	18	0.16666	27	0.27677	15
45	0.51128	23	9.91729	9	0.21964	19	0.16693	28	0.27661	16
46	0.51151	22	9.91738	8	0.21983	18	0.16720	27	0.27646	15
47	0.51173	23	9.91746	9	0.25001	19	0.16748	27	0.27631	15
48	0.51196	22	9.91755	8	0.25020	19	0.16775	27	0.27616	15
49	0.51218	23	9.91763	9	0.25039	18	0.16802	27	0.27600	16
50	0.51241	22	9.91772	9	0.25057	19	0.16829	27	0.27585	15
51	0.51263	23	9.91781	8	0.25076	18	0.16856	27	0.27570	15
52	0.51286	22	9.91789	9	0.25094	19	0.16883	28	0.27555	15
53	0.51308	23	9.91798	8	0.25113	19	0.16911	27	0.27539	16
54	0.51331	22	9.91806	9	0.25132	18	0.16938	27	0.27524	15
55	0.51353	23	9.91815	8	0.25150	19	0.16965	27	0.27509	15
56	0.51376	22	9.91823	9	0.25169	19	0.16992	28	0.27494	15
57	0.51398	23	9.91832	8	0.25188	18	0.17020	27	0.27478	16
58	0.51421	23	9.91840	9	0.25206	19	0.17047	27	0.27463	15
59	0.51444	22	9.91849	8	0.25225	19	0.17074	27	0.27448	15
60	0.51466	22	9.91857	8	0.25244	19	0.17101	27	0.27433	1
			log cos $\omega$	Diff.	l. cosec $\omega$	Diff.	log cotg $\omega$	Diff.	$z'$	Diff.
			log Sec z		log Cotg z		l. Cosec z			$\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.51466		9.91857		0.25241		0.17101		0.27133		60
1	0.51489	23	9.91866	9	0.25263	19	0.17129	28	0.27117	16	59
2	0.51511	23	9.91874	9	0.25281	19	0.17156	27	0.27102	15	58
3	0.51534	23	9.91883	9	0.25300	19	0.17183	27	0.27387	15	57
4	0.51557	23	9.91891	8	0.25319	19	0.17210	28	0.27372	16	56
5	0.51579	22	9.91900	8	0.25338	18	0.17238	27	0.27356	15	55
6	0.51602	22	9.91908	9	0.25356	19	0.17265	27	0.27341	15	54
7	0.51624	22	9.91917	9	0.25375	19	0.17292	27	0.27326	15	53
8	0.51647	23	9.91925	9	0.25394	19	0.17319	28	0.27311	15	52
9	0.51670	23	9.91934	8	0.25413	19	0.17347	27	0.27296	16	51
10	0.51693	22	9.91942	9	0.25432	19	0.17374	27	0.27280	15	50
11	0.51715	22	9.91951	9	0.25451	18	0.17401	28	0.27265	15	49
12	0.51738	23	9.91959	8	0.25469	19	0.17429	27	0.27250	15	48
13	0.51761	22	9.91968	8	0.25488	19	0.17456	27	0.27235	15	47
14	0.51783	23	9.91976	9	0.25507	19	0.17483	28	0.27220	16	46
15	0.51806	23	9.91985	9	0.25526	19	0.17511	27	0.27204	15	45
16	0.51829	23	9.91993	8	0.25545	19	0.17538	27	0.27189	15	44
17	0.51852	22	9.92002	8	0.25564	19	0.17565	28	0.27174	15	43
18	0.51874	23	9.92010	8	0.25583	19	0.17593	27	0.27159	15	42
19	0.51897	23	9.92018	8	0.25602	19	0.17620	28	0.27144	16	41
20	0.51920	23	9.92027	8	0.25621	19	0.17648	27	0.27128	15	40
21	0.51943	22	9.92035	9	0.25640	19	0.17675	27	0.27113	15	39
22	0.51965	23	9.92044	8	0.25659	19	0.17702	28	0.27098	15	38
23	0.51988	23	9.92052	8	0.25678	19	0.17730	27	0.27083	15	37
24	0.52011	23	9.92060	9	0.25697	19	0.17757	28	0.27068	15	36
25	0.52034	23	9.92069	8	0.25716	19	0.17785	27	0.27053	16	35
26	0.52057	23	9.92077	8	0.25735	19	0.17812	27	0.27037	15	34
27	0.52080	23	9.92086	9	0.25754	19	0.17839	28	0.27022	15	33
28	0.52103	22	9.92094	8	0.25773	19	0.17867	27	0.27007	15	32
29	0.52125	23	9.92102	9	0.25792	19	0.17894	28	0.26992	15	31
30	0.52148	23	9.92111	8	0.25811	19	0.17922	27	0.26977	15	30
31	0.52171	23	9.92119	8	0.25830	19	0.17949	28	0.26962	16	29
32	0.52194	23	9.92127	9	0.25849	19	0.17977	27	0.26946	15	28
33	0.52217	23	9.92135	8	0.25868	19	0.18004	28	0.26931	15	27
34	0.52240	23	9.92144	8	0.25887	20	0.18032	27	0.26916	15	26
35	0.52263	23	9.92152	9	0.25907	19	0.18059	28	0.26901	15	25
36	0.52286	23	9.92161	8	0.25926	19	0.18087	27	0.26886	15	24
37	0.52309	23	9.92169	8	0.25945	19	0.18114	28	0.26871	15	23
38	0.52332	23	9.92177	9	0.25964	19	0.18142	27	0.26856	15	22
39	0.52355	23	9.92186	8	0.25983	20	0.18169	28	0.26841	16	21
40	0.52378	23	9.92194	8	0.26003	19	0.18197	27	0.26825	15	20
41	0.52401	23	9.92202	9	0.26022	19	0.18224	28	0.26810	15	19
42	0.52424	23	9.92211	8	0.26041	19	0.18252	27	0.26795	15	18
43	0.52447	23	9.92219	8	0.26060	19	0.18279	28	0.26780	15	17
44	0.52470	23	9.92227	8	0.26079	20	0.18307	27	0.26765	15	16
45	0.52493	23	9.92235	9	0.26099	19	0.18334	28	0.26750	15	15
46	0.52516	23	9.92244	8	0.26118	19	0.18362	27	0.26735	15	14
47	0.52539	23	9.92252	8	0.26137	20	0.18389	28	0.26720	15	13
48	0.52562	23	9.92260	9	0.26157	19	0.18417	27	0.26705	16	12
49	0.52585	23	9.92269	9	0.26176	19	0.18444	28	0.26689	15	11
50	0.52608	23	9.92277	8	0.26195	20	0.18472	28	0.26674	15	10
51	0.52631	23	9.92285	8	0.26215	19	0.18500	27	0.26659	15	9
52	0.52654	23	9.92293	9	0.26234	19	0.18527	28	0.26644	15	8
53	0.52677	21	9.92302	8	0.26253	20	0.18555	27	0.26629	15	7
54	0.52701	23	9.92310	8	0.26273	19	0.18582	28	0.26614	15	6
55	0.52724	23	9.92318	8	0.26292	19	0.18610	28	0.26599	15	5
56	0.52747	23	9.92326	9	0.26311	20	0.18638	27	0.26584	15	4
57	0.52770	23	9.92335	8	0.26331	19	0.18665	28	0.26569	15	3
58	0.52793	23	9.92343	8	0.26350	20	0.18693	28	0.26554	15	2
59	0.52816	21	9.92351	8	0.26370	19	0.18721	27	0.26539	15	1
60	0.52840		9.92359	8	0.26389		0.18748		0.26524		0

$\omega = 57 \text{ Grad.}$

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$\omega'$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.52840	23	9.92359	8	0.26389	20	0.18748	28	0.26524	16	60
1	0.52863	23	9.92367	8	0.26409	19	0.18776	28	0.26508	15	59
2	0.52886	23	9.92376	8	0.26428	20	0.18801	27	0.26493	15	58
3	0.52909	23	9.92384	8	0.26448	19	0.18831	28	0.26478	15	57
4	0.52932	23	9.92392	8	0.26467	20	0.18859	28	0.26463	15	56
5	0.52956	21	9.92400	8	0.26487	19	0.18887	28	0.26448	15	55
6	0.52979	23	9.92408	8	0.26506	20	0.18914	28	0.26433	15	54
7	0.53002	23	9.92416	8	0.26526	19	0.18942	28	0.26418	15	53
8	0.53025	24	9.92425	8	0.26545	20	0.18970	27	0.26403	15	52
9	0.53049	23	9.92433	8	0.26565	19	0.18997	28	0.26388	15	51
10	0.53072	23	9.92441	8	0.26584	20	0.19025	28	0.26373	15	50
11	0.53095	24	9.92449	8	0.26604	19	0.19053	28	0.26358	15	49
12	0.53119	23	9.92457	8	0.26623	20	0.19081	27	0.26343	15	48
13	0.53142	23	9.92465	8	0.26643	20	0.19108	28	0.26328	15	47
14	0.53165	24	9.92473	8	0.26663	19	0.19136	28	0.26313	15	46
15	0.53189	23	9.92482	8	0.26682	20	0.19164	28	0.26298	15	45
16	0.53212	23	9.92490	8	0.26702	20	0.19192	27	0.26283	15	44
17	0.53235	24	9.92498	8	0.26722	19	0.19219	28	0.26268	15	43
18	0.53259	23	9.92506	8	0.26741	20	0.19247	28	0.26253	15	42
19	0.53282	24	9.92514	8	0.26761	20	0.19275	28	0.26238	15	41
20	0.53306	23	9.92522	8	0.26781	19	0.19303	28	0.26223	15	40
21	0.53329	23	9.92530	8	0.26800	20	0.19331	27	0.26208	15	39
22	0.53352	24	9.92538	8	0.26820	20	0.19358	28	0.26193	15	38
23	0.53376	23	9.92546	8	0.26840	20	0.19386	28	0.26178	15	37
24	0.53399	24	9.92555	8	0.26860	19	0.19414	28	0.26163	15	36
25	0.53423	23	9.92563	8	0.26879	20	0.19442	28	0.26148	15	35
26	0.53446	24	9.92571	8	0.26899	20	0.19470	28	0.26133	15	34
27	0.53470	23	9.92579	8	0.26919	20	0.19498	28	0.26118	15	33
28	0.53493	24	9.92587	8	0.26939	20	0.19526	27	0.26103	15	32
29	0.53517	23	9.92595	8	0.26959	19	0.19553	28	0.26088	15	31
30	0.53540	24	9.92603	8	0.26978	20	0.19581	28	0.26073	15	30
31	0.53564	23	9.92611	8	0.26998	20	0.19609	28	0.26058	15	29
32	0.53587	24	9.92619	8	0.27018	20	0.19637	28	0.26043	15	28
33	0.53611	23	9.92627	8	0.27038	20	0.19665	28	0.26028	15	27
34	0.53634	24	9.92635	8	0.27058	20	0.19693	28	0.26013	15	26
35	0.53658	23	9.92643	8	0.27078	20	0.19721	28	0.25998	15	25
36	0.53681	24	9.92651	8	0.27098	19	0.19749	28	0.25983	15	24
37	0.53705	24	9.92659	8	0.27117	20	0.19777	28	0.25968	15	23
38	0.53729	23	9.92667	8	0.27137	20	0.19805	27	0.25953	15	22
39	0.53752	24	9.92675	8	0.27157	20	0.19832	28	0.25938	15	21
40	0.53776	24	9.92683	8	0.27177	20	0.19860	28	0.25923	15	20
41	0.53800	23	9.92691	8	0.27197	20	0.19888	28	0.25908	15	19
42	0.53823	24	9.92699	8	0.27217	20	0.19916	28	0.25893	15	18
43	0.53847	23	9.92707	8	0.27237	20	0.19944	28	0.25878	15	17
44	0.53870	24	9.92715	8	0.27257	20	0.19972	28	0.25863	14	16
45	0.53894	24	9.92723	8	0.27277	20	0.20000	28	0.25849	15	15
46	0.53918	23	9.92731	8	0.27297	20	0.20028	28	0.25834	15	14
47	0.53941	24	9.92739	8	0.27317	20	0.20056	28	0.25819	15	13
48	0.53965	24	9.92747	8	0.27337	20	0.20084	28	0.25804	15	12
49	0.53989	24	9.92755	8	0.27357	21	0.20112	28	0.25789	15	11
50	0.54013	23	9.92763	8	0.27378	20	0.20140	28	0.25774	15	10
51	0.54036	24	9.92771	8	0.27398	20	0.20168	28	0.25759	15	9
52	0.54060	24	9.92779	8	0.27418	20	0.20196	28	0.25744	15	8
53	0.54084	21	9.92787	8	0.27438	20	0.20224	29	0.25729	15	7
54	0.54108	23	9.92795	8	0.27458	20	0.20253	28	0.25714	15	6
55	0.54131	24	9.92803	8	0.27478	20	0.20281	28	0.25699	15	5
56	0.54155	24	9.92810	8	0.27498	20	0.20309	28	0.25684	14	4
57	0.54179	24	9.92818	8	0.27518	21	0.20337	28	0.25670	15	3
58	0.54203	24	9.92826	8	0.27539	20	0.20365	28	0.25655	15	2
59	0.54227	23	9.92834	8	0.27559	20	0.20393	28	0.25640	15	1
60	0.54250		9.92842	8	0.27579	20	0.20421	28	0.25625		0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z l. Cotg z l. Cosc z

$\omega = 32 \text{ Grad.}$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.54250		9.92842		0.27579		0.20421		0.25625		60	
1	0.54274	24	9.92850	8	0.27599	20	0.20449	28	0.25610	15	59	
2	0.54298	24	9.92858	8	0.27619	20	0.20477	28	0.25595	15	58	
3	0.54322	24	9.92866	8	0.27640	20	0.20505	29	0.25580	15	57	
4	0.54346	24	9.92874	8	0.27660	20	0.20534	29	0.25565	15	56	
5	0.54370	24	9.92881	7	0.27680	20	0.20562	28	0.25550	15	55	
6	0.54394	24	9.92889	8	0.27701	20	0.20590	28	0.25535	14	54	
7	0.54418	23	9.92897	8	0.27721	20	0.20618	28	0.25521	15	53	
8	0.54441	24	9.92905	8	0.27741	21	0.20646	28	0.25506	15	52	
9	0.54465	24	9.92913	8	0.27762	20	0.20674	29	0.25491	15	51	
10	0.54489	24	9.92921	8	0.27782	20	0.20703	28	0.25476	15	50	
11	0.54513	24	9.92929	7	0.27802	21	0.20731	28	0.25461	15	49	
12	0.54537	24	9.92936	8	0.27823	20	0.20759	28	0.25446	15	48	
13	0.54561	24	9.92944	8	0.27843	20	0.20787	28	0.25431	14	47	
14	0.54585	24	9.92952	8	0.27863	21	0.20815	29	0.25417	15	46	
15	0.54609	24	9.92960	8	0.27884	20	0.20844	28	0.25402	15	45	
16	0.54633	24	9.92968	8	0.27904	21	0.20872	28	0.25387	15	44	
17	0.54657	24	9.92976	7	0.27925	20	0.20900	28	0.25372	15	43	
18	0.54681	24	9.92983	8	0.27945	21	0.20928	29	0.25357	15	42	
19	0.54705	24	9.92991	8	0.27966	20	0.20957	28	0.25342	15	41	
20	0.54729	24	9.92999	8	0.27986	20	0.20985	28	0.25327	14	40	
21	0.54753	25	9.93007	7	0.28006	21	0.21013	28	0.25313	15	39	
22	0.54778	24	9.93014	8	0.28027	21	0.21041	29	0.25298	15	38	
23	0.54802	24	9.93022	8	0.28048	20	0.21070	28	0.25283	15	37	
24	0.54826	24	9.93030	8	0.28068	21	0.21098	28	0.25268	15	36	
25	0.54850	24	9.93038	8	0.28089	20	0.21126	29	0.25253	15	35	
26	0.54874	24	9.93046	7	0.28109	21	0.21155	28	0.25238	15	34	
27	0.54898	24	9.93053	8	0.28130	20	0.21183	28	0.25224	15	33	
28	0.54922	24	9.93061	8	0.28150	21	0.21211	29	0.25209	15	32	
29	0.54946	25	9.93069	8	0.28171	20	0.21240	28	0.25194	15	31	
30	0.54971	24	9.93077	7	0.28191	21	0.21268	28	0.25179	15	30	
31	0.54995	24	9.93084	8	0.28212	21	0.21296	29	0.25164	15	29	
32	0.55019	24	9.93092	8	0.28233	20	0.21325	28	0.25149	14	28	
33	0.55043	24	9.93100	8	0.28253	21	0.21353	29	0.25135	15	27	
34	0.55067	25	9.93108	7	0.28274	21	0.21382	28	0.25120	15	26	
35	0.55092	24	9.93115	8	0.28295	20	0.21410	28	0.25105	15	25	
36	0.55116	24	9.93123	8	0.28315	21	0.21438	29	0.25090	15	24	
37	0.55140	24	9.93131	7	0.28336	21	0.21467	28	0.25075	14	23	
38	0.55164	25	9.93138	8	0.28357	21	0.21495	29	0.25061	15	22	
39	0.55189	24	9.93146	8	0.28378	20	0.21524	28	0.25046	15	21	
40	0.55213	24	9.93154	7	0.28398	21	0.21552	29	0.25031	15	20	
41	0.55237	25	9.93161	8	0.28419	21	0.21581	28	0.25016	14	19	
42	0.55262	24	9.93169	8	0.28440	21	0.21609	28	0.25002	15	18	
43	0.55286	24	9.93177	7	0.28461	20	0.21637	29	0.24987	15	17	
44	0.55310	25	9.93184	8	0.28481	21	0.21666	28	0.24972	15	16	
45	0.55335	24	9.93192	8	0.28502	21	0.21694	29	0.24957	15	15	
46	0.55359	24	9.93200	7	0.28523	21	0.21723	28	0.24942	14	14	
47	0.55383	25	9.93207	8	0.28544	21	0.21751	29	0.24928	15	13	
48	0.55408	24	9.93215	8	0.28565	21	0.21780	28	0.24913	15	12	
49	0.55432	24	9.93223	7	0.28586	21	0.21808	29	0.24898	15	11	
50	0.55456	25	9.93230	8	0.28607	20	0.21837	28	0.24883	14	10	
51	0.55481	24	9.93238	8	0.28627	21	0.21865	29	0.24869	15	9	
52	0.55505	25	9.93246	7	0.28648	21	0.21894	29	0.24854	15	8	
53	0.55530	24	9.93253	8	0.28669	21	0.21923	28	0.24839	15	7	
54	0.55554	25	9.93261	8	0.28690	21	0.21951	29	0.24824	14	6	
55	0.55579	24	9.93269	7	0.28711	21	0.21980	28	0.24810	15	5	
56	0.55603	25	9.93276	8	0.28732	21	0.22008	29	0.24795	15	4	
57	0.55628	24	9.93284	7	0.28753	21	0.22037	28	0.24780	15	3	
58	0.55652	25	9.93291	8	0.28774	21	0.22065	29	0.24765	14	2	
59	0.55677	24	9.93299	8	0.28795	21	0.22094	29	0.24751	15	1	
60	0.55701	24	9.93307	8	0.28816	21	0.22123	29	0.24736	15	0	

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
0	0.55701		9.93307	7	0.28816		0.22123		0.21736		60	
1	0.55726	25	9.93314	8	0.28837	21	0.22151	28	0.21721	15	59	
2	0.55750	21	9.93322	7	0.28858	21	0.22180	29	0.21706	15	58	
3	0.55775	25	9.93329	8	0.28879	21	0.22209	29	0.21692	14	57	
4	0.55799	24	9.93337	8	0.28900	21	0.22237	28	0.21677	15	56	
5	0.55824	25	9.93344	7	0.28921	21	0.22266	29	0.21662	15	55	
6	0.55849	25	9.93352	8	0.28942	21	0.22294	28	0.21647	15	54	
7	0.55873	21	9.93360	8	0.28964	22	0.22323	29	0.21633	14	53	
8	0.55898	25	9.93367	7	0.28985	21	0.22352	29	0.21618	15	52	
9	0.55922	24	9.93375	8	0.29006	21	0.22381	28	0.21603	14	51	
10	0.55947	25	9.93382	7	0.29027	21	0.22409	29	0.21589	15	50	
11	0.55972	25	9.93390	8	0.29048	21	0.22438	29	0.21574	15	49	
12	0.55996	24	9.93397	7	0.29069	22	0.22467	29	0.21559	15	48	
13	0.56021	25	9.93405	8	0.29091	21	0.22495	28	0.21544	14	47	
14	0.56046	25	9.93412	7	0.29112	21	0.22524	29	0.21530	15	46	
15	0.56070	24	9.93420	8	0.29133	21	0.22553	29	0.21515	15	45	
16	0.56095	25	9.93427	7	0.29154	21	0.22582	28	0.21500	14	44	
17	0.56120	25	9.93435	8	0.29176	22	0.22610	29	0.21486	15	43	
18	0.56145	24	9.93442	7	0.29197	21	0.22639	29	0.21471	15	42	
19	0.56169	25	9.93450	8	0.29218	21	0.22668	29	0.21456	14	41	
20	0.56194	25	9.93457	7	0.29239	22	0.22697	29	0.21442	15	40	
21	0.56219	24	9.93465	8	0.29261	21	0.22726	28	0.21427	15	39	
22	0.56244	25	9.93472	7	0.29282	21	0.22754	29	0.21412	15	38	
23	0.56268	24	9.93480	8	0.29303	21	0.22783	29	0.21397	14	37	
24	0.56293	25	9.93487	7	0.29325	22	0.22812	29	0.21383	15	36	
25	0.56318	25	9.93495	8	0.29346	21	0.22841	29	0.21368	15	35	
26	0.56343	25	9.93502	7	0.29367	22	0.22870	29	0.21353	15	34	
27	0.56368	24	9.93510	8	0.29389	21	0.22899	29	0.21339	14	33	
28	0.56393	25	9.93517	7	0.29410	21	0.22927	28	0.21324	15	32	
29	0.56418	25	9.93525	8	0.29432	22	0.22956	29	0.21309	15	31	
30	0.56442	24	9.93532	7	0.29453	21	0.22985	29	0.21295	14	30	
31	0.56467	25	9.93539	8	0.29475	22	0.23014	29	0.21280	15	29	
32	0.56492	25	9.93547	7	0.29496	21	0.23043	29	0.21265	15	28	
33	0.56517	24	9.93554	8	0.29518	22	0.23072	29	0.21251	14	27	
34	0.56542	25	9.93562	7	0.29539	21	0.23101	29	0.21236	15	26	
35	0.56567	25	9.93569	8	0.29561	22	0.23130	29	0.21222	14	25	
36	0.56592	24	9.93577	7	0.29582	21	0.23159	29	0.21207	15	24	
37	0.56617	25	9.93584	8	0.29604	22	0.23188	29	0.21192	15	23	
38	0.56642	25	9.93591	7	0.29625	21	0.23217	29	0.21178	14	22	
39	0.56667	24	9.93599	8	0.29647	22	0.23246	29	0.21163	15	21	
40	0.56692	25	9.93606	7	0.29668	21	0.23275	28	0.21148	14	20	
41	0.56717	25	9.93614	8	0.29690	22	0.23303	29	0.21134	15	19	
42	0.56742	24	9.93621	7	0.29712	21	0.23332	29	0.21119	15	18	
43	0.56767	25	9.93628	8	0.29733	22	0.23361	30	0.21104	14	17	
44	0.56792	25	9.93636	7	0.29755	21	0.23391	29	0.21090	15	16	
45	0.56817	24	9.93643	8	0.29776	22	0.23420	29	0.21075	14	15	
46	0.56842	25	9.93650	7	0.29798	21	0.23449	29	0.21061	15	14	
47	0.56867	25	9.93658	8	0.29820	22	0.23478	29	0.21046	15	13	
48	0.56892	24	9.93665	7	0.29841	21	0.23507	29	0.21031	14	12	
49	0.56918	25	9.93673	8	0.29863	22	0.23536	29	0.21017	14	11	
50	0.56943	25	9.93680	7	0.29885	22	0.23565	29	0.21002	15	10	
51	0.56968	24	9.93687	8	0.29907	21	0.23594	29	0.20987	14	9	
52	0.56993	25	9.93695	7	0.29928	22	0.23623	29	0.20973	15	8	
53	0.57018	25	9.93702	8	0.29950	22	0.23652	29	0.20958	14	7	
54	0.57043	24	9.93709	7	0.29972	21	0.23681	29	0.20944	15	6	
55	0.57069	25	9.93717	8	0.29994	22	0.23710	29	0.20929	15	5	
56	0.57094	25	9.93724	7	0.30016	21	0.23739	30	0.20914	14	4	
57	0.57119	24	9.93731	8	0.30037	22	0.23769	29	0.20900	15	3	
58	0.57144	25	9.93738	7	0.30059	21	0.23798	29	0.20885	15	2	
59	0.57169	25	9.93746	8	0.30081	22	0.23827	29	0.20871	14	1	
60	0.57195	26	9.93753	7	0.30103	22	0.23856	29	0.20856	15	0	

$\log \cos \omega$  Diff. 1. cosec  $\omega$  Diff.  $\log \cotg \omega$  Diff.  $z'$  Diff.  $\log \sec z$  1. Cotg  $z$  Diff.  $\omega$



$\omega$	$z'$	Diff.	$\log \text{Tg. } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.			
0	0.57195		9.93753		0.30103		0.23856		0.23856		60
1	0.57220	25	9.93760	7	0.30125	22	0.23885	29	0.23841	15	59
2	0.57245	25	9.93768	8	0.30147	22	0.23914	29	0.23827	14	58
3	0.57271	26	9.93775	7	0.30169	22	0.23944	30	0.23812	15	57
4	0.57296	25	9.93782	7	0.30191	22	0.23973	29	0.23798	14	56
5	0.57321	25	9.93789	8	0.30213	22	0.24002	29	0.23783	14	55
6	0.57347	26	9.93797	7	0.30235	22	0.24031	30	0.23769	15	54
7	0.57372	25	9.93804	7	0.30257	22	0.24061	29	0.23754	15	53
8	0.57397	26	9.93811	8	0.30279	22	0.24090	29	0.23739	15	52
9	0.57423	25	9.93819	7	0.30301	22	0.24119	29	0.23725	14	51
10	0.57448	25	9.93826	7	0.30323	22	0.24148	29	0.23710	15	50
11	0.57473	26	9.93833	7	0.30345	22	0.24178	30	0.23696	14	49
12	0.57499	25	9.93840	7	0.30367	22	0.24207	29	0.23681	15	48
13	0.57524	26	9.93847	8	0.30389	22	0.24236	29	0.23667	15	47
14	0.57550	25	9.93855	7	0.30411	22	0.24265	30	0.23652	14	46
15	0.57575	26	9.93862	7	0.30433	22	0.24295	29	0.23638	15	45
16	0.57601	25	9.93869	7	0.30455	22	0.24324	29	0.23623	15	44
17	0.57626	26	9.93876	8	0.30477	22	0.24353	30	0.23608	15	43
18	0.57652	25	9.93881	7	0.30499	22	0.24383	29	0.23594	14	42
19	0.57677	26	9.93891	7	0.30521	23	0.24412	30	0.23579	15	41
20	0.57703	25	9.93898	7	0.30544	22	0.24442	29	0.23565	14	40
21	0.57728	26	9.93905	7	0.30566	22	0.24471	29	0.23550	15	39
22	0.57754	25	9.93912	8	0.30588	22	0.24500	30	0.23536	14	38
23	0.57779	26	9.93920	7	0.30610	22	0.24530	29	0.23521	15	37
24	0.57805	25	9.93927	7	0.30632	23	0.24559	30	0.23507	14	36
25	0.57830	26	9.93934	7	0.30655	22	0.24589	29	0.23492	15	35
26	0.57856	26	9.93941	7	0.30677	22	0.24618	29	0.23478	14	34
27	0.57882	25	9.93948	7	0.30699	22	0.24647	30	0.23463	14	33
28	0.57907	26	9.93955	8	0.30721	23	0.24677	29	0.23449	15	32
29	0.57933	26	9.93963	7	0.30744	22	0.24706	30	0.23434	14	31
30	0.57959	25	9.93970	7	0.30766	22	0.24736	29	0.23420	15	30
31	0.57984	26	9.93977	7	0.30788	22	0.24765	30	0.23405	14	29
32	0.58010	26	9.93984	7	0.30811	22	0.24795	29	0.23391	15	28
33	0.58036	25	9.93991	7	0.30833	23	0.24824	29	0.23376	15	27
34	0.58061	26	9.93998	7	0.30856	22	0.24854	30	0.23361	14	26
35	0.58087	26	9.94005	7	0.30878	22	0.24883	30	0.23347	15	25
36	0.58113	25	9.94012	8	0.30900	23	0.24913	29	0.23332	14	24
37	0.58138	26	9.94020	7	0.30923	22	0.24942	30	0.23318	15	23
38	0.58164	26	9.94027	7	0.30945	23	0.24972	30	0.23303	15	22
39	0.58190	26	9.94034	7	0.30968	22	0.25002	29	0.23289	14	21
40	0.58216	26	9.94041	7	0.30990	22	0.25031	30	0.23275	15	20
41	0.58242	25	9.94048	7	0.31013	23	0.25061	29	0.23260	15	19
42	0.58267	26	9.94055	7	0.31035	23	0.25090	30	0.23246	14	18
43	0.58293	26	9.94062	7	0.31058	22	0.25120	29	0.23231	15	17
44	0.58319	26	9.94069	7	0.31080	23	0.25149	30	0.23217	14	16
45	0.58345	26	9.94076	7	0.31103	22	0.25179	30	0.23202	15	15
46	0.58371	25	9.94083	7	0.31125	23	0.25209	29	0.23188	14	14
47	0.58397	25	9.94090	8	0.31148	23	0.25238	30	0.23173	15	13
48	0.58422	26	9.94098	7	0.31171	22	0.25268	29	0.23159	14	12
49	0.58448	26	9.94105	7	0.31193	23	0.25298	30	0.23144	15	11
50	0.58474	26	9.94112	7	0.31216	22	0.25327	29	0.23130	14	10
51	0.58500	26	9.94119	7	0.31238	23	0.25357	30	0.23115	15	9
52	0.58526	26	9.94126	7	0.31261	23	0.25387	30	0.23101	14	8
53	0.58552	26	9.94133	7	0.31284	22	0.25417	29	0.23086	15	7
54	0.58578	26	9.94140	7	0.31306	23	0.25446	30	0.23072	14	6
55	0.58604	26	9.94147	7	0.31329	23	0.25476	30	0.23057	15	5
56	0.58630	25	9.94154	7	0.31352	23	0.25506	29	0.23043	14	4
57	0.58656	26	9.94161	7	0.31375	22	0.25535	30	0.23028	15	3
58	0.58682	26	9.94168	7	0.31397	23	0.25565	30	0.23014	14	2
59	0.58708	26	9.94175	7	0.31420	23	0.25595	30	0.23000	14	1
60	0.58734	26	9.94182	7	0.31443	23	0.25625	30	0.22985	15	0

$\log \cos \omega$  Diff. l. cosec  $\omega$  Diff.  $\log \cotg \omega$  Diff.  $z'$  Diff.  $\omega$   
 $\log \sec z$  l. Cotg  $z$  l. Cosc  $z$

$\omega = 61 \text{ Grad.}$

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$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.58734	26	9.91182	7	0.31413	23	0.25625	30	0.22985	14	60	
1	0.58760	26	9.99189	7	0.31466	22	0.25655	29	0.22971	15	59	
2	0.58786	26	9.91196	7	0.31488	23	0.25684	30	0.22956	14	58	
3	0.58812	27	9.91203	7	0.31511	23	0.25714	30	0.22942	15	57	
4	0.58839	26	9.91210	7	0.31534	23	0.25744	30	0.22927	14	56	
5	0.58865	26	9.91217	7	0.31557	23	0.25774	30	0.22913	14	55	
6	0.58891	26	9.91224	7	0.31580	23	0.25804	30	0.22899	15	54	
7	0.58917	26	9.91231	7	0.31603	23	0.25834	29	0.22884	14	53	
8	0.58943	26	9.91238	7	0.31626	23	0.25863	30	0.22870	14	52	
9	0.58969	26	9.91245	7	0.31649	23	0.25893	30	0.22855	14	51	
10	0.58995	27	9.91252	7	0.31672	23	0.25923	30	0.22841	15	50	
11	0.59022	26	9.91259	7	0.31695	22	0.25953	30	0.22826	14	49	
12	0.59048	26	9.91266	7	0.31717	23	0.25983	30	0.22812	14	48	
13	0.59074	26	9.91273	6	0.31740	23	0.26013	30	0.22798	15	47	
14	0.59100	27	9.91279	7	0.31763	24	0.26043	30	0.22783	14	46	
15	0.59127	26	9.91286	7	0.31787	23	0.26073	30	0.22769	15	45	
16	0.59153	26	9.91293	7	0.31810	23	0.26103	30	0.22754	14	44	
17	0.59179	26	9.91300	7	0.31833	23	0.26133	30	0.22740	14	43	
18	0.59205	27	9.91307	7	0.31856	23	0.26163	30	0.22726	15	42	
19	0.59232	26	9.91314	7	0.31879	23	0.26193	30	0.22711	14	41	
20	0.59258	26	9.91321	7	0.31902	23	0.26223	30	0.22697	15	40	
21	0.59284	27	9.91328	7	0.31925	23	0.26253	30	0.22682	14	39	
22	0.59311	26	9.91335	7	0.31948	23	0.26283	30	0.22668	14	38	
23	0.59337	27	9.91342	7	0.31971	23	0.26313	30	0.22654	15	37	
24	0.59364	26	9.91349	6	0.31994	24	0.26343	30	0.22639	14	36	
25	0.59390	26	9.91355	7	0.32018	23	0.26373	30	0.22625	15	35	
26	0.59416	27	9.91362	7	0.32041	23	0.26403	30	0.22610	14	34	
27	0.59443	26	9.91369	7	0.32064	23	0.26433	30	0.22596	14	33	
28	0.59469	27	9.91376	7	0.32087	23	0.26463	30	0.22582	14	32	
29	0.59496	26	9.91383	7	0.32110	24	0.26493	31	0.22567	14	31	
30	0.59522	27	9.91390	7	0.32134	23	0.26524	30	0.22553	15	30	
31	0.59549	26	9.91397	7	0.32157	23	0.26554	30	0.22538	14	29	
32	0.59575	27	9.91404	6	0.32180	24	0.26584	30	0.22524	14	28	
33	0.59602	26	9.91410	7	0.32204	23	0.26614	30	0.22510	15	27	
34	0.59628	27	9.91417	7	0.32227	23	0.26644	30	0.22495	14	26	
35	0.59655	26	9.91424	7	0.32250	24	0.26674	31	0.22481	14	25	
36	0.59681	27	9.91431	7	0.32274	23	0.26705	30	0.22467	15	24	
37	0.59708	26	9.91438	7	0.32297	23	0.26735	30	0.22452	14	23	
38	0.59734	27	9.91445	6	0.32320	24	0.26765	30	0.22438	14	22	
39	0.59761	27	9.91451	7	0.32344	23	0.26795	30	0.22424	15	21	
40	0.59788	26	9.91458	7	0.32367	24	0.26825	31	0.22409	14	20	
41	0.59814	27	9.91465	7	0.32391	23	0.26856	30	0.22395	14	19	
42	0.59841	27	9.91472	7	0.32414	24	0.26886	30	0.22381	15	18	
43	0.59868	26	9.91479	6	0.32438	23	0.26916	30	0.22366	14	17	
44	0.59894	27	9.91485	7	0.32461	24	0.26946	31	0.22352	15	16	
45	0.59921	27	9.91492	7	0.32485	23	0.26977	30	0.22337	14	15	
46	0.59948	27	9.91499	7	0.32508	24	0.27007	30	0.22323	14	14	
47	0.59975	26	9.91506	7	0.32532	23	0.27037	31	0.22309	15	13	
48	0.60001	27	9.91513	6	0.32555	24	0.27068	30	0.22294	14	12	
49	0.60028	27	9.91519	7	0.32579	23	0.27098	30	0.22280	11	11	
50	0.60055	27	9.91526	7	0.32602	24	0.27128	31	0.22266	15	10	
51	0.60082	26	9.91533	7	0.32626	24	0.27159	30	0.22251	14	9	
52	0.60108	27	9.91540	6	0.32650	23	0.27189	31	0.22237	14	8	
53	0.60135	27	9.91546	7	0.32673	24	0.27220	30	0.22223	14	7	
54	0.60162	27	9.91553	7	0.32697	23	0.27250	30	0.22209	15	6	
55	0.60189	26	9.91560	7	0.32720	24	0.27280	31	0.22194	14	5	
56	0.60215	27	9.91567	6	0.32744	24	0.27311	30	0.22180	14	4	
57	0.60242	27	9.91573	7	0.32768	24	0.27341	31	0.22166	15	3	
58	0.60269	27	9.91580	7	0.32792	23	0.27372	30	0.22151	14	2	
59	0.60296	27	9.91587	7	0.32815	23	0.27402	30	0.22137	14	1	
60	0.60323	27	9.91593	6	0.32839	24	0.27433	31	0.22123	14	0	

$\omega = 28 \text{ Grad.}$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.60323	27	9.94593	7	0.32339	24	0.27433	30	0.22123	15	60
1	0.60350	27	9.94600	7	0.32363	24	0.27463	31	0.22108	14	59
2	0.60377	27	9.94607	7	0.32387	23	0.27494	30	0.22094	14	58
3	0.60404	27	9.94614	6	0.32910	24	0.27524	31	0.22080	15	57
4	0.60431	27	9.94620	7	0.32934	24	0.27555	30	0.22065	15	56
5	0.60458	27	9.94627	7	0.32958	24	0.27585	31	0.22051	14	55
6	0.60485	27	9.94634	6	0.32982	24	0.27616	30	0.22037	14	54
7	0.60512	27	9.94640	7	0.33006	24	0.27646	31	0.22023	15	53
8	0.60539	27	9.94647	7	0.33030	24	0.27677	30	0.22008	14	52
9	0.60566	27	9.94654	6	0.33054	24	0.27707	31	0.21994	14	51
10	0.60593	27	9.94660	7	0.33078	23	0.27738	31	0.21980	15	50
11	0.60620	27	9.94667	7	0.33101	24	0.27769	30	0.21965	14	49
12	0.60647	27	9.94674	6	0.33125	24	0.27799	31	0.21951	14	48
13	0.60674	27	9.94680	7	0.33149	24	0.27830	30	0.21937	14	47
14	0.60701	27	9.94687	7	0.33173	24	0.27860	31	0.21923	15	46
15	0.60728	27	9.94694	6	0.33197	24	0.27891	31	0.21908	14	45
16	0.60755	27	9.94700	7	0.33221	24	0.27922	30	0.21894	14	44
17	0.60782	28	9.94707	7	0.33245	24	0.27952	31	0.21880	15	43
18	0.60810	27	9.94714	6	0.33269	25	0.27983	31	0.21865	14	42
19	0.60837	27	9.94720	7	0.33294	24	0.28014	31	0.21851	14	41
20	0.60864	27	9.94727	7	0.33318	24	0.28045	30	0.21837	14	40
21	0.60891	27	9.94734	6	0.33342	24	0.28075	31	0.21823	15	39
22	0.60918	27	9.94740	7	0.33366	24	0.28106	31	0.21808	14	38
23	0.60946	28	9.94747	6	0.33390	24	0.28137	30	0.21794	14	37
24	0.60973	27	9.94753	7	0.33414	24	0.28167	31	0.21780	14	36
25	0.61000	27	9.94760	7	0.33438	25	0.28198	31	0.21766	15	35
26	0.61028	28	9.94767	6	0.33463	24	0.28229	31	0.21751	14	34
27	0.61055	27	9.94773	7	0.33487	24	0.28260	31	0.21737	14	33
28	0.61082	27	9.94780	7	0.33511	24	0.28291	30	0.21723	14	32
29	0.61110	28	9.94786	6	0.33535	24	0.28321	31	0.21709	15	31
30	0.61137	27	9.94793	7	0.33559	25	0.28352	31	0.21694	14	30
31	0.61164	27	9.94799	6	0.33584	24	0.28383	31	0.21680	14	29
32	0.61192	28	9.94806	7	0.33608	24	0.28414	31	0.21666	14	28
33	0.61219	27	9.94813	6	0.33632	25	0.28445	31	0.21652	15	27
34	0.61246	28	9.94819	7	0.33657	24	0.28476	31	0.21637	14	26
35	0.61274	27	9.94826	6	0.33681	24	0.28507	31	0.21623	14	25
36	0.61301	28	9.94832	7	0.33705	25	0.28538	31	0.21609	14	24
37	0.61329	27	9.94839	6	0.33730	24	0.28569	30	0.21595	14	23
38	0.61356	28	9.94845	7	0.33754	25	0.28599	31	0.21581	15	22
39	0.61384	27	9.94852	6	0.33779	24	0.28630	31	0.21566	14	21
40	0.61411	28	9.94858	7	0.33803	24	0.28661	31	0.21552	14	20
41	0.61439	27	9.94865	6	0.33827	25	0.28692	31	0.21538	14	19
42	0.61466	28	9.94871	7	0.33852	24	0.28723	31	0.21524	15	18
43	0.61494	27	9.94878	7	0.33876	25	0.28754	31	0.21509	14	17
44	0.61521	28	9.94885	6	0.33901	24	0.28785	31	0.21495	14	16
45	0.61549	28	9.94891	7	0.33925	25	0.28816	31	0.21481	14	15
46	0.61577	27	9.94898	6	0.33950	25	0.28847	32	0.21467	14	14
47	0.61604	28	9.94904	7	0.33975	24	0.28879	31	0.21453	15	13
48	0.61632	27	9.94911	6	0.33999	25	0.28910	31	0.21438	14	12
49	0.61659	28	9.94917	6	0.34024	24	0.28941	31	0.21424	14	11
50	0.61687	28	9.94923	7	0.34048	25	0.28972	31	0.21410	14	10
51	0.61715	28	9.94930	6	0.34073	25	0.29003	31	0.21396	14	9
52	0.61743	27	9.94936	7	0.34098	24	0.29034	31	0.21382	15	8
53	0.61770	28	9.94943	6	0.34122	25	0.29065	31	0.21367	14	7
54	0.61798	28	9.94949	7	0.34147	25	0.29096	31	0.21353	14	6
55	0.61826	27	9.94956	6	0.34172	24	0.29127	32	0.21339	14	5
56	0.61853	28	9.94962	7	0.34196	25	0.29159	31	0.21325	14	4
57	0.61881	28	9.94969	6	0.34221	25	0.29190	31	0.21311	15	3
58	0.61909	28	9.94975	7	0.34246	25	0.29221	31	0.21296	14	2
59	0.61937	28	9.94982	6	0.34271	24	0.29252	31	0.21282	14	1
60	0.61965	28	9.94988	6	0.34295	24	0.29283	31	0.21268	14	0

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. z' Diff.  $\omega$   
log sec  $\omega$  log Cotg z l. Cosc z

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
0	0.61965		9.94988	7	0.34295	25	0.29283	32	0.21268	14	60	
1	0.61992	27	9.94995	6	0.34320	25	0.29315	31	0.21254	14	59	
2	0.62020	28	9.95001	6	0.34345	25	0.29346	31	0.21240	14	58	
3	0.62048	28	9.95007	7	0.34370	25	0.29377	31	0.21226	15	57	
4	0.62076	28	9.95011	6	0.34395	25	0.29408	32	0.21211	14	56	
5	0.62104	28	9.95020	7	0.34420	24	0.29440	31	0.21197	14	55	
6	0.62132	28	9.95027	6	0.34444	25	0.29471	31	0.21183	14	54	
7	0.62160	28	9.95033	6	0.34469	25	0.29502	32	0.21169	14	53	
8	0.62188	28	9.95039	7	0.34494	25	0.29534	31	0.21155	14	52	
9	0.62216	28	9.95046	6	0.34519	25	0.29565	31	0.21141	15	51	
10	0.62244	28	9.95052	7	0.34544	25	0.29596	32	0.21126	14	50	
11	0.62272	28	9.95059	6	0.34569	25	0.29628	31	0.21112	14	49	
12	0.62300	28	9.95065	6	0.34594	25	0.29659	32	0.21098	14	48	
13	0.62328	28	9.95071	7	0.34619	25	0.29691	31	0.21084	14	47	
14	0.62356	28	9.95078	6	0.34644	25	0.29722	31	0.21070	14	46	
15	0.62384	28	9.95084	6	0.34669	25	0.29753	31	0.21056	15	45	
16	0.62412	28	9.95090	7	0.34694	25	0.29785	31	0.21041	14	44	
17	0.62440	28	9.95097	6	0.34719	26	0.29816	32	0.21027	14	43	
18	0.62468	28	9.95103	7	0.34745	25	0.29848	31	0.21013	14	42	
19	0.62496	28	9.95110	6	0.34770	25	0.29879	32	0.20999	14	41	
20	0.62524	29	9.95116	6	0.34795	25	0.29911	31	0.20985	14	40	
21	0.62553	28	9.95122	7	0.34820	25	0.29942	32	0.20971	14	39	
22	0.62581	28	9.95129	6	0.34845	25	0.29974	31	0.20957	14	38	
23	0.62609	28	9.95135	6	0.34870	26	0.30005	32	0.20943	15	37	
24	0.62637	28	9.95141	7	0.34896	25	0.30037	31	0.20928	14	36	
25	0.62665	29	9.95148	6	0.34921	25	0.30068	32	0.20914	14	35	
26	0.62694	28	9.95154	6	0.34946	25	0.30100	32	0.20900	14	34	
27	0.62722	28	9.95160	7	0.34971	26	0.30132	31	0.20886	14	33	
28	0.62750	28	9.95167	6	0.34997	25	0.30163	32	0.20872	14	32	
29	0.62778	29	9.95173	6	0.35022	25	0.30195	31	0.20858	14	31	
30	0.62807	28	9.95179	6	0.35047	26	0.30226	32	0.20844	14	30	
31	0.62835	28	9.95185	7	0.35073	25	0.30258	32	0.20830	15	29	
32	0.62863	29	9.95192	6	0.35098	25	0.30290	31	0.20815	14	28	
33	0.62892	28	9.95198	6	0.35123	26	0.30321	31	0.20801	14	27	
34	0.62920	28	9.95204	7	0.35149	25	0.30353	32	0.20787	14	26	
35	0.62948	29	9.95211	6	0.35174	26	0.30385	31	0.20773	14	25	
36	0.62977	28	9.95217	6	0.35200	25	0.30416	32	0.20759	14	24	
37	0.63005	29	9.95223	6	0.35225	26	0.30448	32	0.20745	14	23	
38	0.63034	28	9.95229	7	0.35251	25	0.30480	32	0.20731	14	22	
39	0.63062	29	9.95236	6	0.35276	26	0.30512	31	0.20717	14	21	
40	0.63091	28	9.95242	6	0.35302	25	0.30543	32	0.20703	15	20	
41	0.63119	29	9.95248	6	0.35327	26	0.30575	32	0.20688	14	19	
42	0.63148	28	9.95254	7	0.35353	25	0.30607	32	0.20674	14	18	
43	0.63176	29	9.95261	6	0.35378	26	0.30639	32	0.20660	14	17	
44	0.63205	28	9.95267	6	0.35404	25	0.30671	31	0.20646	14	16	
45	0.63233	29	9.95273	6	0.35429	26	0.30702	32	0.20632	14	15	
46	0.63262	28	9.95279	7	0.35455	26	0.30734	32	0.20618	14	14	
47	0.63290	29	9.95286	6	0.35481	25	0.30766	32	0.20604	14	13	
48	0.63319	29	9.95292	6	0.35506	26	0.30798	32	0.20590	14	12	
49	0.63348	28	9.95298	6	0.35532	26	0.30830	32	0.20576	14	11	
50	0.63376	29	9.95304	6	0.35558	25	0.30862	32	0.20562	14	10	
51	0.63405	29	9.95310	7	0.35583	26	0.30894	32	0.20548	14	9	
52	0.63434	28	9.95317	6	0.35609	26	0.30926	32	0.20534	14	8	
53	0.63462	29	9.95323	6	0.35635	26	0.30958	32	0.20520	14	7	
54	0.63491	29	9.95329	6	0.35661	26	0.30990	32	0.20505	15	6	
55	0.63520	28	9.95335	6	0.35687	25	0.31022	32	0.20491	14	5	
56	0.63548	29	9.95341	7	0.35712	26	0.31054	32	0.20477	14	4	
57	0.63577	29	9.95348	6	0.35738	26	0.31086	32	0.20463	14	3	
58	0.63606	29	9.95354	6	0.35764	26	0.31118	32	0.20449	14	2	
59	0.63635	29	9.95360	6	0.35790	26	0.31150	32	0.20435	14	1	
60	0.63664	29	9.95366	6	0.35816	26	0.31182	32	0.20421	14	0	

$\log \cos \omega$  Diff.  $\log \sec \omega$  Diff.  $\log \cot g \omega$  Diff.  $z'$  Diff.  $\omega$



$\omega'$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
0	0.63664		9.95366	6	0.35816	26	0.31182	32	0.20421	14	60	
1	0.63692	28	9.95372	6	0.35842	26	0.31211	32	0.20407	14	59	
2	0.63721	29	9.95378	6	0.35868	26	0.31246	32	0.20393	14	58	
3	0.63750	29	9.95384	7	0.35894	26	0.31278	32	0.20379	14	57	
4	0.63779	29	9.95391	6	0.35920	26	0.31310	32	0.20365	14	56	
5	0.63808	29	9.95397	6	0.35946	26	0.31342	32	0.20351	14	55	
6	0.63837	29	9.95403	6	0.35972	26	0.31374	33	0.20337	14	54	
7	0.63866	29	9.95409	6	0.35998	26	0.31407	32	0.20323	14	53	
8	0.63895	29	9.95415	6	0.36024	26	0.31439	32	0.20309	14	52	
9	0.63924	29	9.95421	6	0.36050	26	0.31471	32	0.20295	14	51	
10	0.63953	29	9.95427	7	0.36076	26	0.31503	32	0.20281	14	50	
11	0.63982	29	9.95434	6	0.36102	26	0.31535	33	0.20267	14	49	
12	0.64011	29	9.95440	6	0.36128	26	0.31568	32	0.20253	14	48	
13	0.64040	29	9.95446	6	0.36154	26	0.31600	32	0.20239	15	47	
14	0.64069	29	9.95452	6	0.36180	26	0.31632	32	0.20224	14	46	
15	0.64098	29	9.95458	6	0.36206	27	0.31664	33	0.20210	14	45	
16	0.64127	29	9.95464	6	0.36233	26	0.31697	32	0.20196	14	44	
17	0.64156	29	9.95470	6	0.36259	26	0.31729	32	0.20182	14	43	
18	0.64185	29	9.95476	6	0.36285	26	0.31761	33	0.20168	14	42	
19	0.64214	29	9.95482	6	0.36311	27	0.31794	32	0.20154	14	41	
20	0.64243	30	9.95488	6	0.36338	26	0.31826	32	0.20140	14	40	
21	0.64273	29	9.95494	6	0.36364	26	0.31858	33	0.20126	14	39	
22	0.64302	29	9.95500	7	0.36390	27	0.31891	32	0.20112	14	38	
23	0.64331	29	9.95507	6	0.36417	26	0.31923	33	0.20098	14	37	
24	0.64360	29	9.95513	6	0.36443	26	0.31956	32	0.20084	14	36	
25	0.64389	30	9.95519	6	0.36469	27	0.31988	32	0.20070	14	35	
26	0.64419	29	9.95525	6	0.36496	26	0.32020	33	0.20056	14	34	
27	0.64448	29	9.95531	6	0.36522	27	0.32053	32	0.20042	14	33	
28	0.64477	30	9.95537	6	0.36549	26	0.32085	32	0.20028	14	32	
29	0.64507	29	9.95543	6	0.36575	27	0.32118	32	0.20014	14	31	
30	0.64536	29	9.95549	6	0.36602	26	0.32150	33	0.20000	14	30	
31	0.64565	30	9.95555	6	0.36628	27	0.32183	32	0.19986	14	29	
32	0.64595	29	9.95561	6	0.36655	26	0.32215	33	0.19972	14	28	
33	0.64624	29	9.95567	6	0.36681	27	0.32248	33	0.19958	14	27	
34	0.64653	30	9.95573	6	0.36708	26	0.32281	32	0.19944	14	26	
35	0.64683	29	9.95579	6	0.36734	27	0.32313	33	0.19930	14	25	
36	0.64712	30	9.95585	6	0.36761	26	0.32346	32	0.19916	14	24	
37	0.64742	29	9.95591	6	0.36787	27	0.32378	33	0.19902	14	23	
38	0.64771	30	9.95597	6	0.36814	27	0.32411	33	0.19888	14	22	
39	0.64801	29	9.95603	6	0.36841	26	0.32444	32	0.19874	14	21	
40	0.64830	30	9.95609	6	0.36867	27	0.32476	33	0.19860	14	20	
41	0.64860	29	9.95615	6	0.36894	27	0.32509	33	0.19846	14	19	
42	0.64889	30	9.95621	6	0.36921	27	0.32542	32	0.19832	13	18	
43	0.64919	30	9.95627	6	0.36948	26	0.32574	33	0.19819	14	17	
44	0.64949	29	9.95633	6	0.36974	27	0.32607	33	0.19805	14	16	
45	0.64978	30	9.95639	6	0.37001	27	0.32640	33	0.19791	14	15	
46	0.65008	29	9.95645	6	0.37028	27	0.32673	32	0.19777	14	14	
47	0.65037	30	9.95651	6	0.37055	27	0.32705	33	0.19763	14	13	
48	0.65067	30	9.95657	6	0.37082	26	0.32738	33	0.19749	14	12	
49	0.65097	29	9.95663	5	0.37108	27	0.32771	33	0.19735	14	11	
50	0.65126	30	9.95668	6	0.37135	27	0.32804	33	0.19721	14	10	
51	0.65156	30	9.95674	6	0.37162	27	0.32837	32	0.19707	14	9	
52	0.65186	30	9.95680	6	0.37189	27	0.32869	33	0.19693	14	8	
53	0.65216	29	9.95686	6	0.37216	27	0.32902	33	0.19679	14	7	
54	0.65245	30	9.95692	6	0.37243	27	0.32935	33	0.19665	14	6	
55	0.65275	30	9.95698	6	0.37270	27	0.32968	33	0.19651	14	5	
56	0.65305	30	9.95704	6	0.37297	27	0.33001	33	0.19637	14	4	
57	0.65335	30	9.95710	6	0.37324	27	0.33034	33	0.19623	14	3	
58	0.65365	30	9.95716	6	0.37351	27	0.33067	33	0.19609	14	2	
59	0.65395	29	9.95722	6	0.37378	27	0.33100	33	0.19595	14	1	
60	0.65424	29	9.95728	6	0.37405	27	0.33133	33	0.19581	14	0	

$\log \cos \omega$  Diff.  $\log \text{ Cotg } z$  Diff.  $\log \text{ Cosec } z$  Diff.  $z'$  Diff.  $\omega'$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.65424	30	9.95728	5	0.37405	27	0.33133	33	0.19581	14	60
1	0.65454	30	9.95733	6	0.37432	27	0.33166	33	0.19567	14	59
2	0.65484	30	9.95739	6	0.37459	27	0.33199	33	0.19553	14	58
3	0.65514	30	9.95745	6	0.37487	27	0.33232	33	0.19539	13	57
4	0.65544	30	9.95751	6	0.37514	27	0.33265	33	0.19526	14	56
5	0.65574	30	9.95757	6	0.37541	27	0.33298	33	0.19512	14	55
6	0.65604	30	9.95763	6	0.37568	27	0.33331	33	0.19498	14	54
7	0.65634	30	9.95769	6	0.37595	28	0.33364	33	0.19484	14	53
8	0.65664	30	9.95775	5	0.37623	27	0.33397	33	0.19470	14	52
9	0.65694	30	9.95780	6	0.37650	27	0.33430	33	0.19456	14	51
10	0.65724	30	9.95786	6	0.37677	27	0.33463	33	0.19442	14	50
11	0.65754	31	9.95792	6	0.37704	28	0.33497	33	0.19428	14	49
12	0.65785	30	9.95798	6	0.37732	27	0.33530	33	0.19414	14	48
13	0.65815	30	9.95804	6	0.37759	27	0.33563	33	0.19400	14	47
14	0.65845	30	9.95810	5	0.37786	28	0.33596	33	0.19386	14	46
15	0.65875	30	9.95815	6	0.37814	27	0.33629	34	0.19372	14	45
16	0.65905	30	9.95821	6	0.37841	28	0.33663	33	0.19358	13	44
17	0.65935	31	9.95827	6	0.37869	27	0.33696	33	0.19345	14	43
18	0.65966	30	9.95833	6	0.37896	28	0.33729	33	0.19331	14	42
19	0.65996	30	9.95839	5	0.37924	27	0.33762	34	0.19317	14	41
20	0.66026	30	9.95844	6	0.37951	28	0.33796	33	0.19303	14	40
21	0.66056	31	9.95850	6	0.37979	27	0.33829	33	0.19289	14	39
22	0.66087	30	9.95856	6	0.38006	28	0.33862	34	0.19275	14	38
23	0.66117	30	9.95862	6	0.38034	27	0.33896	33	0.19261	14	37
24	0.66147	31	9.95868	5	0.38061	28	0.33929	33	0.19247	14	36
25	0.66178	30	9.95873	6	0.38089	28	0.33962	34	0.19233	14	35
26	0.66208	30	9.95879	6	0.38117	27	0.33996	33	0.19219	13	34
27	0.66238	31	9.95885	6	0.38144	28	0.34029	34	0.19206	14	33
28	0.66269	30	9.95891	6	0.38172	28	0.34063	33	0.19192	14	32
29	0.66299	31	9.95897	5	0.38200	27	0.34096	34	0.19178	14	31
30	0.66330	30	9.95902	6	0.38227	28	0.34130	33	0.19164	14	30
31	0.66360	31	9.95908	6	0.38255	28	0.34163	34	0.19150	14	29
32	0.66391	30	9.95914	6	0.38283	28	0.34197	33	0.19136	14	28
33	0.66421	31	9.95920	5	0.38311	27	0.34230	34	0.19122	14	27
34	0.66452	30	9.95925	6	0.38338	28	0.34264	33	0.19108	13	26
35	0.66482	31	9.95931	6	0.38366	28	0.34297	34	0.19095	14	25
36	0.66513	30	9.95937	5	0.38394	28	0.34331	33	0.19081	14	24
37	0.66543	31	9.95942	6	0.38422	28	0.34364	34	0.19067	14	23
38	0.66574	31	9.95948	6	0.38450	28	0.34398	34	0.19053	14	22
39	0.66605	30	9.95954	6	0.38478	28	0.34432	33	0.19039	14	21
40	0.66635	31	9.95960	5	0.38506	28	0.34465	34	0.19025	14	20
41	0.66666	31	9.95965	6	0.38534	28	0.34499	34	0.19011	14	19
42	0.66697	30	9.95971	6	0.38562	27	0.34533	33	0.18997	13	18
43	0.66727	31	9.95977	5	0.38589	29	0.34566	34	0.18984	14	17
44	0.66758	31	9.95982	6	0.38618	28	0.34600	34	0.18970	14	16
45	0.66789	31	9.95988	6	0.38646	28	0.34634	33	0.18956	14	15
46	0.66820	30	9.95994	6	0.38674	28	0.34667	34	0.18942	14	14
47	0.66850	31	9.96000	5	0.38702	28	0.34701	34	0.18928	14	13
48	0.66881	31	9.96005	6	0.38730	28	0.34735	34	0.18914	14	12
49	0.66912	31	9.96011	6	0.38758	28	0.34769	34	0.18900	13	11
50	0.66943	31	9.96017	5	0.38786	28	0.34803	33	0.18887	14	10
51	0.66974	31	9.96022	6	0.38814	28	0.34836	34	0.18873	14	9
52	0.67005	31	9.96028	6	0.38842	29	0.34870	34	0.18859	14	8
53	0.67036	31	9.96034	5	0.38871	28	0.34904	34	0.18845	14	7
54	0.67067	31	9.96039	6	0.38899	28	0.34938	34	0.18831	14	6
55	0.67098	30	9.96045	5	0.38927	28	0.34972	34	0.18817	13	5
56	0.67128	31	9.96050	6	0.38955	29	0.35006	34	0.18804	14	4
57	0.67159	31	9.96056	6	0.38984	28	0.35040	34	0.18790	14	3
58	0.67190	31	9.96062	5	0.39012	28	0.35074	34	0.18776	14	2
59	0.67221	31	9.96067	6	0.39040	29	0.35108	34	0.18762	14	1
60	0.67253	32	9.96073	6	0.39069	29	0.35142	34	0.18748	14	0

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.     $z'$     Diff.     $\omega$   
 log Sec z    l. Cotg z    l. Cosec z



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega'$	Diff.	log Cos z log sec $\omega'$	Diff.	log Sin z log tg $\omega'$	Diff.			
0	0.67253		9.96073		0.39069		0.35142		0.18748		60
1	0.67284	31	9.96079	6	0.39097	28	0.35176	34	0.18734	14	59
2	0.67315	31	9.96084	5	0.39125	28	0.35210	34	0.18721	13	58
3	0.67346	31	9.96090	6	0.39154	29	0.35244	34	0.18707	14	57
4	0.67377	31	9.96095	5	0.39182	28	0.35278	34	0.18693	14	56
5	0.67408	31	9.96101	6	0.39211	29	0.35312	34	0.18679	14	55
6	0.67439	31	9.96107	5	0.39239	28	0.35346	34	0.18665	13	54
7	0.67470	32	9.96112	6	0.39268	28	0.35380	34	0.18652	13	53
8	0.67502	31	9.96118	5	0.39296	29	0.35414	34	0.18638	14	52
9	0.67533	31	9.96123	6	0.39325	29	0.35448	35	0.18624	14	51
10	0.67564	31	9.96129	6	0.39354	28	0.35483	34	0.18610	14	49
11	0.67595	32	9.96135	5	0.39382	29	0.35517	34	0.18596	14	48
12	0.67627	31	9.96140	6	0.39411	28	0.35551	34	0.18582	13	47
13	0.67658	31	9.96146	5	0.39439	29	0.35585	31	0.18569	14	46
14	0.67689	32	9.96151	6	0.39468	29	0.35619	35	0.18555	11	45
15	0.67721	31	9.96157	5	0.39497	29	0.35654	34	0.18541	14	44
16	0.67752	32	9.96162	6	0.39526	28	0.35688	31	0.18527	14	44
17	0.67781	31	9.96168	6	0.39554	29	0.35722	35	0.18513	13	43
18	0.67815	31	9.96174	5	0.39583	29	0.35757	34	0.18500	14	42
19	0.67846	32	9.96179	6	0.39612	29	0.35791	31	0.18486	11	41
20	0.67878	31	9.96185	5	0.39641	28	0.35825	35	0.18472	14	40
21	0.67909	32	9.96190	6	0.39669	29	0.35860	34	0.18458	14	39
22	0.67941	31	9.96196	5	0.39698	29	0.35894	34	0.18444	13	38
23	0.67972	32	9.96201	6	0.39727	29	0.35928	35	0.18431	11	37
24	0.68001	31	9.96207	5	0.39756	29	0.35963	34	0.18417	14	36
25	0.68035	32	9.96212	6	0.39785	29	0.35997	35	0.18403	14	35
26	0.68067	32	9.96218	5	0.39814	29	0.36032	34	0.18389	14	34
27	0.68099	31	9.96223	6	0.39843	29	0.36066	35	0.18376	14	33
28	0.68130	32	9.96229	5	0.39872	29	0.36101	31	0.18362	14	31
29	0.68162	32	9.96234	6	0.39901	29	0.36135	35	0.18348	14	32
30	0.68194	31	9.96240	5	0.39930	29	0.36170	34	0.18334	14	30
31	0.68225	32	9.96245	6	0.39959	28	0.36204	35	0.18320	13	29
32	0.68257	32	9.96251	5	0.39988	29	0.36239	35	0.18307	14	28
33	0.68289	32	9.96256	6	0.40017	29	0.36274	34	0.18293	14	27
34	0.68321	31	9.96262	5	0.40046	30	0.36308	35	0.18279	14	26
35	0.68352	32	9.96267	6	0.40076	29	0.36343	34	0.18265	13	25
36	0.68384	32	9.96273	5	0.40105	29	0.36377	35	0.18252	14	24
37	0.68416	32	9.96278	6	0.40134	29	0.36412	35	0.18238	14	23
38	0.68448	32	9.96284	5	0.40163	29	0.36447	34	0.18224	14	22
39	0.68480	31	9.96289	5	0.40192	30	0.36481	35	0.18210	13	21
40	0.68511	32	9.96294	6	0.40222	29	0.36516	35	0.18197	14	20
41	0.68543	32	9.96300	5	0.40251	29	0.36551	35	0.18183	14	19
42	0.68575	32	9.96305	6	0.40280	30	0.36586	35	0.18169	14	18
43	0.68607	32	9.96311	5	0.40310	29	0.36621	34	0.18155	13	17
44	0.68639	32	9.96316	6	0.40339	29	0.36655	35	0.18142	14	16
45	0.68671	32	9.96322	5	0.40368	30	0.36690	35	0.18128	14	15
46	0.68703	32	9.96327	6	0.40398	29	0.36725	35	0.18114	14	14
47	0.68735	32	9.96333	5	0.40427	30	0.36760	35	0.18100	14	13
48	0.68767	32	9.96338	5	0.40457	29	0.36795	35	0.18087	14	12
49	0.68799	33	9.96343	6	0.40486	30	0.36830	35	0.18073	14	11
50	0.68832	32	9.96349	5	0.40516	29	0.36865	34	0.18059	14	10
51	0.68864	32	9.96354	6	0.40545	30	0.36899	35	0.18045	13	9
52	0.68896	32	9.96360	5	0.40575	29	0.36934	35	0.18032	14	8
53	0.68928	32	9.96365	5	0.40604	30	0.36969	35	0.18018	14	7
54	0.68960	32	9.96370	6	0.40634	30	0.37004	35	0.18004	14	6
55	0.68992	33	9.96376	5	0.40664	29	0.37039	35	0.17990	13	5
56	0.69025	32	9.96381	6	0.40693	30	0.37074	36	0.17977	14	4
57	0.69057	32	9.96387	5	0.40723	30	0.37110	35	0.17963	14	3
58	0.69089	32	9.96392	5	0.40753	29	0.37145	35	0.17949	14	2
59	0.69121	32	9.96397	6	0.40782	30	0.37180	35	0.17935	13	1
60	0.69154	33	9.96403	6	0.40812	30	0.37215	35	0.17922	13	0

log cos  $\omega'$   
log Sec z

Diff.

l. cosec  $\omega'$   
log Cotg z

Diff.

log cotg  $\omega'$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega'$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.69154	32	9.96403	5	0.40812	30	0.37215	35	0.17922	14	60	
1	0.69186	32	9.96408	5	0.40812	30	0.37250	35	0.17908	11	59	
2	0.69218	33	9.96413	6	0.40872	30	0.37285	35	0.17891	13	58	
3	0.69251	32	9.96419	5	0.40902	29	0.37320	35	0.17881	14	57	
4	0.69283	33	9.96421	5	0.40931	30	0.37355	36	0.17867	14	56	
5	0.69316	32	9.96429	6	0.40961	30	0.37391	35	0.17853	14	55	
6	0.69348	33	9.96435	5	0.40991	30	0.37426	35	0.17839	13	51	
7	0.69381	32	9.96440	5	0.41021	30	0.37461	35	0.17826	14	53	
8	0.69413	33	9.96445	6	0.41051	30	0.37496	36	0.17812	14	52	
9	0.69446	32	9.96451	5	0.41081	30	0.37532	35	0.17798	13	51	
10	0.69478	33	9.96456	5	0.41111	30	0.37567	35	0.17785	14	50	
11	0.69511	32	9.96461	6	0.41141	30	0.37602	36	0.17771	14	49	
12	0.69543	33	9.96467	5	0.41171	30	0.37638	35	0.17757	14	48	
13	0.69576	33	9.96472	5	0.41201	30	0.37673	35	0.17743	13	47	
14	0.69609	32	9.96477	6	0.41231	30	0.37708	36	0.17730	14	46	
15	0.69641	33	9.96483	5	0.41261	30	0.37744	35	0.17716	14	45	
16	0.69674	33	9.96488	5	0.41291	31	0.37779	36	0.17702	13	41	
17	0.69707	32	9.96493	5	0.41322	30	0.37815	35	0.17689	14	43	
18	0.69739	33	9.96498	6	0.41352	30	0.37850	36	0.17675	14	42	
19	0.69772	33	9.96504	5	0.41382	30	0.37886	35	0.17661	13	41	
20	0.69805	33	9.96509	5	0.41412	31	0.37921	36	0.17648	14	40	
21	0.69838	32	9.96514	6	0.41443	30	0.37957	35	0.17634	14	39	
22	0.69870	33	9.96520	5	0.41473	30	0.37992	36	0.17620	14	38	
23	0.69903	33	9.96525	5	0.41503	30	0.38028	36	0.17606	13	37	
24	0.69936	33	9.96530	5	0.41533	31	0.38064	35	0.17593	11	36	
25	0.69969	33	9.96535	6	0.41564	30	0.38099	36	0.17579	14	35	
26	0.70002	33	9.96541	5	0.41594	31	0.38135	35	0.17565	13	34	
27	0.70035	33	9.96546	5	0.41625	30	0.38170	36	0.17552	14	33	
28	0.70068	33	9.96551	5	0.41655	31	0.38206	36	0.17538	14	32	
29	0.70101	33	9.96556	6	0.41686	30	0.38242	36	0.17524	13	31	
30	0.70134	33	9.96562	5	0.41716	31	0.38278	35	0.17511	14	29	
31	0.70167	33	9.96567	5	0.41747	30	0.38313	36	0.17497	14	29	
32	0.70200	33	9.96572	5	0.41777	31	0.38349	36	0.17483	13	28	
33	0.70233	33	9.96577	5	0.41808	30	0.38385	36	0.17470	14	27	
34	0.70266	33	9.96582	6	0.41838	31	0.38421	35	0.17456	14	26	
35	0.70299	33	9.96588	5	0.41869	30	0.38456	36	0.17442	13	25	
36	0.70332	33	9.96593	5	0.41899	31	0.38492	36	0.17429	14	24	
37	0.70365	34	9.96598	5	0.41930	31	0.38528	36	0.17415	14	23	
38	0.70399	33	9.96603	5	0.41961	31	0.38564	36	0.17401	13	22	
39	0.70432	33	9.96608	6	0.41992	30	0.38600	36	0.17388	14	21	
40	0.70465	33	9.96614	5	0.42022	31	0.38636	36	0.17374	14	20	
41	0.70498	34	9.96619	5	0.42053	31	0.38672	36	0.17360	13	19	
42	0.70532	33	9.96624	5	0.42084	31	0.38708	36	0.17347	11	18	
43	0.70565	33	9.96629	5	0.42115	30	0.38744	36	0.17333	11	17	
44	0.70598	34	9.96634	6	0.42145	31	0.38780	36	0.17319	13	16	
45	0.70632	33	9.96640	5	0.42176	31	0.38816	36	0.17306	13	15	
46	0.70665	33	9.96645	5	0.42207	31	0.38852	36	0.17292	11	14	
47	0.70698	34	9.96650	5	0.42238	31	0.38888	36	0.17279	14	13	
48	0.70732	33	9.96655	5	0.42269	31	0.38924	36	0.17265	14	12	
49	0.70765	34	9.96660	5	0.42300	31	0.38960	36	0.17251	13	11	
50	0.70799	33	9.96665	5	0.42331	31	0.38996	37	0.17238	11	10	
51	0.70832	34	9.96670	6	0.42362	31	0.39033	36	0.17224	14	9	
52	0.70866	33	9.96676	5	0.42393	31	0.39069	36	0.17210	13	8	
53	0.70899	34	9.96681	5	0.42424	31	0.39105	36	0.17197	14	7	
54	0.70933	33	9.96686	5	0.42455	31	0.39141	36	0.17183	14	6	
55	0.70966	34	9.96691	5	0.42486	32	0.39177	37	0.17169	13	5	
56	0.71000	34	9.96696	5	0.42518	31	0.39214	36	0.17156	14	4	
57	0.71034	33	9.96701	5	0.42549	31	0.39250	36	0.17142	13	3	
58	0.71067	34	9.96706	5	0.42580	31	0.39286	37	0.17129	14	2	
59	0.71101	34	9.96711	6	0.42611	31	0.39323	36	0.17115	14	1	
60	0.71135		9.96717		0.42642		0.39359		0.17101		0	

log co:  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

z'

Diff.

$\omega$



$\omega'$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{tg } \omega$	Diff.				
0	0.71135		9.96717		0.42642		0.39359		36	0.17101	13	60
1	0.71169	34	9.96722	5	0.42674	32	0.39395	36	37	0.17088	14	59
2	0.71202	34	9.96727	5	0.42705	31	0.39432	36	36	0.17074	14	58
3	0.71236	34	9.96732	5	0.42736	32	0.39468	37	37	0.17060	13	57
4	0.71270	34	9.96737	5	0.42768	31	0.39505	36	36	0.17047	14	56
5	0.71304	34	9.96742	5	0.42799	32	0.39541	37	37	0.17033	13	55
6	0.71338	33	9.96747	5	0.42831	31	0.39578	36	36	0.17020	14	54
7	0.71371	34	9.96752	5	0.42862	31	0.39614	37	37	0.17006	14	53
8	0.71405	34	9.96757	5	0.42893	32	0.39651	36	36	0.16992	13	52
9	0.71439	34	9.96762	5	0.42925	31	0.39687	37	37	0.16979	14	51
10	0.71473	34	9.96767	5	0.42956	32	0.39724	36	36	0.16965	14	50
11	0.71507	34	9.96772	5	0.42988	32	0.39760	37	37	0.16951	13	49
12	0.71541	34	9.96778	6	0.43020	31	0.39797	37	37	0.16938	14	48
13	0.71575	34	9.96783	5	0.43051	32	0.39834	36	36	0.16924	13	47
14	0.71609	34	9.96788	5	0.43083	31	0.39870	37	37	0.16911	14	46
15	0.71643	34	9.96793	5	0.43114	32	0.39907	37	37	0.16897	14	45
16	0.71677	35	9.96798	5	0.43146	32	0.39944	37	37	0.16883	13	44
17	0.71712	34	9.96803	5	0.43178	32	0.39981	36	36	0.16870	14	43
18	0.71746	34	9.96808	5	0.43210	31	0.40017	37	37	0.16856	13	42
19	0.71780	34	9.96813	5	0.43241	32	0.40054	37	37	0.16843	14	41
20	0.71814	34	9.96818	5	0.43273	32	0.40091	37	37	0.16829	14	40
21	0.71848	35	9.96823	5	0.43305	32	0.40128	37	37	0.16815	13	39
22	0.71883	34	9.96828	5	0.43337	32	0.40165	36	36	0.16802	14	38
23	0.71917	34	9.96833	5	0.43369	32	0.40201	37	37	0.16788	13	37
24	0.71951	35	9.96838	5	0.43401	31	0.40238	37	37	0.16775	14	36
25	0.71986	34	9.96843	5	0.43432	32	0.40275	37	37	0.16761	13	35
26	0.72020	34	9.96848	5	0.43464	32	0.40312	37	37	0.16748	14	34
27	0.72054	35	9.96853	5	0.43496	32	0.40349	37	37	0.16734	14	33
28	0.72089	34	9.96858	5	0.43528	32	0.40386	37	37	0.16720	13	32
29	0.72123	35	9.96863	5	0.43560	32	0.40423	37	37	0.16707	14	31
30	0.72158	34	9.96868	5	0.43592	33	0.40460	37	37	0.16693	13	30
31	0.72192	35	9.96873	5	0.43625	32	0.40497	37	37	0.16680	14	29
32	0.72227	34	9.96878	5	0.43657	32	0.40534	37	37	0.16666	14	28
33	0.72261	35	9.96883	5	0.43689	32	0.40571	38	38	0.16652	13	27
34	0.72296	34	9.96888	5	0.43721	32	0.40609	37	37	0.16639	14	26
35	0.72330	35	9.96893	5	0.43753	32	0.40646	37	37	0.16625	13	25
36	0.72365	34	9.96898	5	0.43785	33	0.40683	37	37	0.16612	14	24
37	0.72399	35	9.96903	5	0.43818	32	0.40720	37	37	0.16598	13	23
38	0.72434	35	9.96907	5	0.43850	32	0.40757	38	38	0.16585	14	22
39	0.72469	35	9.96912	5	0.43882	33	0.40795	37	37	0.16571	13	21
40	0.72504	34	9.96917	5	0.43915	32	0.40832	37	37	0.16558	14	20
41	0.72538	35	9.96922	5	0.43947	32	0.40869	37	37	0.16544	14	19
42	0.72573	35	9.96927	5	0.43979	33	0.40906	38	38	0.16530	13	18
43	0.72608	35	9.96932	5	0.44012	32	0.40944	37	37	0.16517	14	17
44	0.72643	35	9.96937	5	0.44044	33	0.40981	38	38	0.16503	13	16
45	0.72678	34	9.96942	5	0.44077	32	0.41019	37	37	0.16490	14	15
46	0.72712	35	9.96947	5	0.44109	33	0.41056	37	37	0.16476	13	14
47	0.72747	35	9.96952	5	0.44142	32	0.41093	38	38	0.16463	14	13
48	0.72782	35	9.96957	5	0.44174	33	0.41131	37	37	0.16449	13	12
49	0.72817	35	9.96962	5	0.44207	32	0.41168	38	38	0.16436	14	11
50	0.72852	35	9.96966	5	0.44239	33	0.41206	37	37	0.16422	14	10
51	0.72887	35	9.96971	5	0.44272	33	0.41243	38	38	0.16408	13	9
52	0.72922	35	9.96976	5	0.44305	32	0.41281	38	38	0.16395	14	8
53	0.72957	35	9.96981	5	0.44337	33	0.41319	37	37	0.16381	13	7
54	0.72992	35	9.96986	5	0.44370	33	0.41356	38	38	0.16368	14	6
55	0.73027	36	9.96991	5	0.44403	33	0.41394	37	37	0.16354	13	5
56	0.73063	35	9.96996	5	0.44436	32	0.41431	38	38	0.16341	14	4
57	0.73098	35	9.97001	4	0.44468	33	0.41469	38	38	0.16327	13	3
58	0.73133	35	9.97005	5	0.44501	33	0.41507	38	38	0.16314	14	2
59	0.73168	35	9.97010	5	0.44534	33	0.41545	37	37	0.16300	13	1
60	0.73203	35	9.97015	5	0.44567	33	0.41582	37	37	0.16287	13	0

$\log \cos \omega$  Diff.  $\log \text{ cosec } \omega$  Diff.  $\log \cotg \omega$  Diff.  $z'$  Diff.

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
0	0.73203	36	9.97015	5	0.44567	33	0.41582	38	0.16287	11	60	
1	0.73239	35	9.97020	5	0.44600	33	0.41620	38	0.16273	13	59	
2	0.73274	35	9.97025	5	0.44633	33	0.41658	38	0.16260	14	58	
3	0.73309	36	9.97030	5	0.44666	33	0.41696	37	0.16246	14	57	
4	0.73345	35	9.97035	4	0.44699	33	0.41733	38	0.16232	13	56	
5	0.73380	35	9.97039	5	0.44732	33	0.41771	38	0.16219	14	55	
6	0.73415	36	9.97044	5	0.44765	33	0.41809	38	0.16205	13	54	
7	0.73451	35	9.97049	5	0.44798	33	0.41847	38	0.16192	14	53	
8	0.73486	36	9.97054	5	0.44831	33	0.41885	38	0.16178	13	52	
9	0.73522	35	9.97059	4	0.44864	34	0.41923	38	0.16165	11	51	
10	0.73557	36	9.97063	5	0.44898	33	0.41961	38	0.16151	13	50	
11	0.73593	35	9.97068	5	0.44931	33	0.41999	38	0.16138	14	49	
12	0.73628	36	9.97073	5	0.44964	33	0.42037	38	0.16124	13	48	
13	0.73664	35	9.97078	5	0.44997	31	0.42075	38	0.16111	14	47	
14	0.73699	36	9.97083	4	0.45031	33	0.42113	38	0.16097	13	46	
15	0.73735	36	9.97087	5	0.45064	33	0.42151	39	0.16084	14	45	
16	0.73771	35	9.97092	5	0.45097	34	0.42190	38	0.16070	13	44	
17	0.73806	36	9.97097	5	0.45131	33	0.42228	38	0.16057	14	43	
18	0.73842	36	9.97102	5	0.45164	34	0.42266	38	0.16043	13	42	
19	0.73878	36	9.97107	4	0.45198	33	0.42304	38	0.16030	14	41	
20	0.73914	36	9.97111	5	0.45231	34	0.42342	39	0.16016	13	40	
21	0.73950	35	9.97116	5	0.45265	33	0.42381	38	0.16003	14	39	
22	0.73985	36	9.97121	5	0.45298	34	0.42419	38	0.15989	13	38	
23	0.74021	36	9.97126	4	0.45332	33	0.42457	39	0.15976	11	37	
24	0.74057	36	9.97130	5	0.45365	34	0.42496	38	0.15962	13	36	
25	0.74093	36	9.97135	5	0.45399	34	0.42534	38	0.15949	14	35	
26	0.74129	36	9.97140	5	0.45433	33	0.42572	39	0.15935	13	34	
27	0.74165	36	9.97145	4	0.45466	34	0.42611	38	0.15922	11	33	
28	0.74201	36	9.97149	5	0.45500	34	0.42649	39	0.15908	13	32	
29	0.74237	36	9.97154	5	0.45534	33	0.42688	38	0.15895	14	31	
30	0.74273	36	9.97159	4	0.45567	31	0.42726	39	0.15881	13	30	
31	0.74309	36	9.97163	5	0.45601	34	0.42765	38	0.15868	14	29	
32	0.74345	36	9.97168	5	0.45635	34	0.42803	39	0.15854	13	28	
33	0.74381	37	9.97173	5	0.45669	34	0.42842	38	0.15841	14	27	
34	0.74418	36	9.97178	4	0.45703	31	0.42880	39	0.15827	13	26	
35	0.74454	36	9.97182	5	0.45737	34	0.42919	39	0.15814	14	25	
36	0.74490	36	9.97187	5	0.45771	34	0.42958	38	0.15800	13	24	
37	0.74526	37	9.97192	4	0.45805	34	0.42996	39	0.15787	14	23	
38	0.74563	36	9.97196	5	0.45839	31	0.43035	39	0.15773	13	22	
39	0.74599	36	9.97201	5	0.45873	34	0.43074	39	0.15760	14	21	
40	0.74635	37	9.97206	4	0.45907	34	0.43113	38	0.15746	13	20	
41	0.74672	36	9.97210	5	0.45941	34	0.43151	39	0.15733	13	19	
42	0.74708	36	9.97215	5	0.45975	34	0.43190	39	0.15720	14	18	
43	0.74744	37	9.97220	4	0.46009	34	0.43229	39	0.15706	13	17	
44	0.74781	36	9.97224	5	0.46043	35	0.43268	39	0.15693	14	16	
45	0.74817	37	9.97229	5	0.46078	34	0.43307	39	0.15679	13	15	
46	0.74854	36	9.97234	4	0.46112	34	0.43346	39	0.15666	14	14	
47	0.74890	37	9.97238	5	0.46146	35	0.43385	39	0.15652	13	13	
48	0.74927	37	9.97243	5	0.46181	34	0.43424	39	0.15639	11	12	
49	0.74964	36	9.97248	4	0.46215	34	0.43463	39	0.15625	13	11	
50	0.75000	37	9.97252	5	0.46249	35	0.43502	39	0.15612	14	10	
51	0.75037	37	9.97257	5	0.46284	34	0.43541	39	0.15598	13	9	
52	0.75074	36	9.97262	4	0.46318	35	0.43580	39	0.15585	14	8	
53	0.75110	37	9.97266	5	0.46353	34	0.43619	39	0.15571	13	7	
54	0.75147	37	9.97271	5	0.46387	35	0.43658	39	0.15558	13	6	
55	0.75184	37	9.97276	4	0.46422	34	0.43697	39	0.15545	11	5	
56	0.75221	36	9.97280	5	0.46456	35	0.43736	40	0.15531	13	4	
57	0.75257	37	9.97285	4	0.46491	34	0.43775	39	0.15518	14	3	
58	0.75294	37	9.97289	5	0.46525	35	0.43815	39	0.15504	13	2	
59	0.75331	37	9.97294	5	0.46560	35	0.43854	39	0.15491	14	1	
60	0.75368		9.97299		0.46595		0.43893		0.15477		0	



$\omega'$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{tg } \omega$	Diff.				
0	0.75368	37	9.97299		0.46595	35	0.43893	40	0.15477		13	60
1	0.75405	37	9.97303	4	0.46630	34	0.43933	39	0.15464		14	59
2	0.75442	37	9.97308	5	0.46664	35	0.43972	39	0.15450		13	58
3	0.75479	37	9.97312	5	0.46699	35	0.44011	40	0.15437		13	57
4	0.75516	37	9.97317	5	0.46734	35	0.44051	39	0.15424		14	56
5	0.75553	37	9.97322	5	0.46769	35	0.44090	40	0.15410		13	55
6	0.75590	37	9.97326	5	0.46804	35	0.44130	39	0.15397		14	54
7	0.75627	38	9.97331	5	0.46839	35	0.44169	40	0.15383		13	53
8	0.75665	37	9.97335	5	0.46874	34	0.44209	39	0.15370		14	52
9	0.75702	37	9.97340	4	0.46908	36	0.44248	40	0.15356		13	51
10	0.75739	37	9.97344	5	0.46944	35	0.44288	39	0.15343		13	49
11	0.75776	38	9.97349	5	0.46979	35	0.44327	40	0.15330		14	50
12	0.75814	37	9.97353	5	0.47014	35	0.44367	40	0.15316		13	48
13	0.75851	37	9.97358	5	0.47049	35	0.44407	39	0.15303		14	47
14	0.75888	38	9.97363	4	0.47084	35	0.44446	40	0.15289		13	46
15	0.75926	37	9.97367	5	0.47119	35	0.44486	40	0.15276		14	45
16	0.75963	37	9.97372	5	0.47154	35	0.44526	40	0.15262		13	44
17	0.76000	38	9.97376	5	0.47189	36	0.44566	39	0.15249		13	43
18	0.76038	37	9.97381	4	0.47225	35	0.44605	40	0.15236		14	42
19	0.76075	38	9.97385	5	0.47260	35	0.44645	40	0.15222		13	41
20	0.76113	37	9.97390	5	0.47295	36	0.44685	40	0.15209		14	40
21	0.76150	38	9.97394	5	0.47331	35	0.44725	40	0.15195		13	39
22	0.76188	38	9.97399	4	0.47366	36	0.44765	40	0.15182		14	38
23	0.76226	37	9.97403	5	0.47402	35	0.44805	40	0.15168		13	37
24	0.76263	38	9.97408	4	0.47437	36	0.44845	40	0.15155		13	36
25	0.76301	38	9.97412	5	0.47473	35	0.44885	40	0.15142		14	35
26	0.76339	37	9.97417	5	0.47508	36	0.44925	40	0.15128		13	34
27	0.76376	38	9.97421	5	0.47544	35	0.44965	40	0.15115		14	33
28	0.76414	38	9.97426	4	0.47579	36	0.45005	40	0.15101		13	32
29	0.76452	38	9.97430	5	0.47615	35	0.45045	40	0.15088		13	31
30	0.76490	38	9.97435	5	0.47650	36	0.45085	40	0.15075		14	30
31	0.76528	39	9.97439	5	0.47686	36	0.45125	40	0.15061		13	29
32	0.76565	38	9.97444	4	0.47722	36	0.45165	41	0.15048		13	28
33	0.76603	38	9.97448	5	0.47758	35	0.45205	41	0.15034		14	27
34	0.76641	38	9.97453	5	0.47793	36	0.45246	40	0.15021		13	26
35	0.76679	38	9.97457	4	0.47829	36	0.45286	41	0.15008		14	25
36	0.76717	38	9.97461	5	0.47865	36	0.45327	40	0.14994		13	24
37	0.76755	39	9.97466	5	0.47901	36	0.45367	40	0.14981		14	23
38	0.76794	38	9.97470	5	0.47937	36	0.45407	41	0.14967		13	22
39	0.76832	38	9.97475	4	0.47973	36	0.45448	40	0.14954		13	21
40	0.76870	38	9.97479	5	0.48009	36	0.45488	41	0.14941		14	20
41	0.76908	38	9.97484	4	0.48045	36	0.45529	40	0.14927		13	19
42	0.76946	38	9.97488	4	0.48081	36	0.45569	41	0.14914		13	18
43	0.76984	39	9.97492	5	0.48117	36	0.45610	40	0.14901		14	17
44	0.77023	38	9.97497	4	0.48153	36	0.45650	41	0.14887		13	16
45	0.77061	38	9.97501	5	0.48189	37	0.45691	40	0.14874		14	15
46	0.77099	39	9.97506	4	0.48226	36	0.45731	41	0.14860		13	14
47	0.77138	38	9.97510	5	0.48262	36	0.45772	41	0.14847		13	13
48	0.77176	38	9.97515	4	0.48298	36	0.45813	40	0.14834		14	12
49	0.77214	39	9.97519	4	0.48334	37	0.45853	41	0.14820		13	11
50	0.77253	38	9.97523	5	0.48371	33	0.45894	41	0.14807		13	10
51	0.77291	39	9.97528	4	0.48407	36	0.45935	40	0.14794		11	9
52	0.77330	39	9.97532	4	0.48443	37	0.45975	41	0.14780		13	8
53	0.77369	38	9.97536	5	0.48480	36	0.46016	41	0.14767		14	7
54	0.77407	39	9.97541	4	0.48516	37	0.46057	41	0.14753		13	6
55	0.77446	38	9.97545	5	0.48553	36	0.46098	41	0.14740		13	5
56	0.77484	39	9.97550	4	0.48589	37	0.46139	41	0.14727		14	4
57	0.77523	39	9.97554	4	0.48626	36	0.46180	41	0.14713		13	3
58	0.77562	39	9.97558	5	0.48662	37	0.46221	41	0.14700		13	2
59	0.77601	38	9.97563	4	0.48699	37	0.46262	41	0.14687		13	1
60	0.77639	38	9.97567	4	0.48736	37	0.46303	41	0.14673		11	0

$\log \cos \omega$  Diff.  $\log \sec \omega$  Diff.  $\log \text{cotg } \omega$  Diff.  $\log \text{cosec } \omega$  Diff.  $z'$  Diff.  $\omega$

# ω = 71 Grad.

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ω	z'	Diff.	log Tg z log sin ω	Diff.	log Cos z log sec ω	Diff.	log Sin z log tg ω	Diff.	log cos ω	Diff.	log cotg ω l. Cosc z	Diff.	z'	Diff.	ω
0	0.77639		9.97567		0.48736		0.46303		0.11673						60
1	0.77678	39	9.97571	4	0.48773	37	0.46344	41	0.11660	13					59
2	0.77717	39	9.97576	5	0.48809	36	0.46385	41	0.11646	11					58
3	0.77756	39	9.97580	4	0.48846	37	0.46426	41	0.11633	13					57
4	0.77795	39	9.97584	5	0.48883	37	0.46467	41	0.11620	13					56
5	0.77834	39	9.97589	4	0.48920	37	0.46508	41	0.11606	11					55
6	0.77873	39	9.97593	4	0.48957	37	0.46550	42	0.11593	13					54
7	0.77912	39	9.97597	5	0.48993	36	0.46591	41	0.11580	13					53
8	0.77951	39	9.97602	4	0.49030	37	0.46632	41	0.11566	14					52
9	0.77990	39	9.97606	4	0.49067	37	0.46673	41	0.11553	13					51
10	0.78029	39	9.97610	5	0.49104	38	0.46715	42	0.11540	13					50
11	0.78068	39	9.97615	4	0.49142	37	0.46756	42	0.11526	14					49
12	0.78107	40	9.97619	4	0.49179	37	0.46798	42	0.11513	13					48
13	0.78147	39	9.97623	5	0.49216	37	0.46839	41	0.11500	13					47
14	0.78186	39	9.97628	4	0.49253	37	0.46880	42	0.11486	14					46
15	0.78225	39	9.97632	4	0.49290	37	0.46922	42	0.11473	13					45
16	0.78264	40	9.97636	4	0.49327	37	0.46963	42	0.11460	13					44
17	0.78304	39	9.97640	5	0.49365	38	0.47005	42	0.11446	14					43
18	0.78343	40	9.97645	4	0.49402	37	0.47047	42	0.11433	13					42
19	0.78383	39	9.97649	4	0.49439	37	0.47088	41	0.11420	13					41
20	0.78422	40	9.97653	4	0.49477	38	0.47130	42	0.11406	14					40
21	0.78462	39	9.97657	5	0.49514	37	0.47171	41	0.11393	13					39
22	0.78501	40	9.97662	4	0.49551	37	0.47213	42	0.11380	13					38
23	0.78541	39	9.97666	4	0.49589	38	0.47255	42	0.11366	14					37
24	0.78580	40	9.97670	4	0.49626	37	0.47297	42	0.11353	13					36
25	0.78620	39	9.97674	5	0.49664	38	0.47339	42	0.11340	13					35
26	0.78659	40	9.97679	4	0.49702	38	0.47380	42	0.11326	14					34
27	0.78699	40	9.97683	4	0.49739	37	0.47422	42	0.11313	13					33
28	0.78739	40	9.97687	4	0.49777	38	0.47464	42	0.11300	13					32
29	0.78779	39	9.97691	5	0.49815	38	0.47506	42	0.11286	14					31
30	0.78818	40	9.97696	4	0.49852	37	0.47548	42	0.11273	13					30
31	0.78858	40	9.97700	4	0.49890	38	0.47590	42	0.11260	13					29
32	0.78898	40	9.97704	4	0.49928	38	0.47632	42	0.11246	14					28
33	0.78938	40	9.97708	4	0.49966	38	0.47674	42	0.11233	13					27
34	0.78978	40	9.97713	5	0.50004	38	0.47716	42	0.11220	13					26
35	0.79018	40	9.97717	4	0.50042	38	0.47758	42	0.11206	14					25
36	0.79058	40	9.97721	4	0.50080	38	0.47800	42	0.11193	13					24
37	0.79098	40	9.97725	4	0.50118	38	0.47843	43	0.11180	13					23
38	0.79138	40	9.97729	5	0.50156	38	0.47885	42	0.11166	14					22
39	0.79178	40	9.97734	4	0.50194	38	0.47927	42	0.11153	13					21
40	0.79218	41	9.97738	4	0.50232	38	0.47969	43	0.11140	13					20
41	0.79259	40	9.97742	4	0.50270	38	0.48012	42	0.11127	14					19
42	0.79299	40	9.97746	4	0.50308	38	0.48054	43	0.11113	13					18
43	0.79339	40	9.97750	4	0.50346	39	0.48097	42	0.11100	13					17
44	0.79379	41	9.97754	5	0.50385	38	0.48139	42	0.11087	14					16
45	0.79420	40	9.97759	4	0.50423	38	0.48181	43	0.11073	13					15
46	0.79460	40	9.97763	4	0.50461	39	0.48224	42	0.11060	13					14
47	0.79500	41	9.97767	4	0.50500	38	0.48266	43	0.11047	14					13
48	0.79541	40	9.97771	4	0.50538	38	0.48309	43	0.11033	13					12
49	0.79581	41	9.97775	5	0.50576	39	0.48352	42	0.11020	13					11
50	0.79622	40	9.97779	4	0.50615	38	0.48394	43	0.11007	14					10
51	0.79662	41	9.97784	4	0.50653	39	0.48437	43	0.10993	13					9
52	0.79703	40	9.97788	4	0.50692	39	0.48480	42	0.10980	13					8
53	0.79743	41	9.97792	4	0.50731	38	0.48522	43	0.10967	13					7
54	0.79784	41	9.97796	4	0.50769	39	0.48565	43	0.10954	14					6
55	0.79825	41	9.97800	4	0.50808	39	0.48608	43	0.10940	13					5
56	0.79866	40	9.97804	4	0.50847	38	0.48651	43	0.10927	13					4
57	0.79906	41	9.97808	4	0.50885	39	0.48694	42	0.10914	13					3
58	0.79947	41	9.97812	5	0.50924	39	0.48736	43	0.10900	14					2
59	0.79988	41	9.97817	4	0.50963	39	0.48779	43	0.10887	13					1
60	0.80029	41	9.97821	4	0.51002	39	0.48822	43	0.10874	13					0



$\omega'$	$z'$	Diff.	$\log \text{Tg. } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.			
0	0.80029	41	9.97821	4	0.51002	39	0.48822	43	0.13874	13	60
1	0.80070	41	9.97825	4	0.51041	39	0.48865	43	0.13861	14	59
2	0.80111	41	9.97829	4	0.51080	39	0.48908	44	0.13847	13	58
3	0.80152	41	9.97833	4	0.51119	39	0.48952	43	0.13834	13	57
4	0.80193	41	9.97837	4	0.51158	39	0.48995	43	0.13821	13	56
5	0.80234	41	9.97841	4	0.51197	39	0.49038	43	0.13807	14	55
6	0.80275	41	9.97845	4	0.51236	39	0.49081	43	0.13794	13	54
7	0.80316	41	9.97849	4	0.51275	39	0.49124	43	0.13781	13	53
8	0.80357	41	9.97853	4	0.51314	39	0.49167	44	0.13768	13	52
9	0.80398	41	9.97857	4	0.51353	40	0.49211	43	0.13754	13	51
10	0.80439	42	9.97861	5	0.51393	39	0.49254	43	0.13741	13	50
11	0.80481	41	9.97866	4	0.51432	39	0.49297	44	0.13728	13	49
12	0.80522	41	9.97870	4	0.51471	39	0.49341	43	0.13715	14	48
13	0.80563	42	9.97874	4	0.51510	40	0.49384	44	0.13701	13	47
14	0.80605	41	9.97878	4	0.51550	39	0.49428	43	0.13688	13	46
15	0.80646	42	9.97882	4	0.51589	40	0.49471	43	0.13675	13	45
16	0.80688	41	9.97886	4	0.51629	39	0.49515	41	0.13662	13	44
17	0.80729	42	9.97890	4	0.51668	40	0.49558	44	0.13649	14	43
18	0.80771	41	9.97894	4	0.51708	40	0.49602	43	0.13635	13	42
19	0.80812	42	9.97898	4	0.51748	39	0.49645	44	0.13622	14	41
20	0.80854	41	9.97902	4	0.51787	40	0.49689	41	0.13608	13	40
21	0.80895	42	9.97906	4	0.51827	40	0.49733	44	0.13595	13	39
22	0.80937	42	9.97910	4	0.51867	39	0.49777	43	0.13582	13	38
23	0.80979	42	9.97914	4	0.51906	40	0.49820	44	0.13569	14	37
24	0.81021	41	9.97918	4	0.51946	40	0.49864	41	0.13555	13	36
25	0.81062	42	9.97922	4	0.51986	40	0.49908	44	0.13542	13	35
26	0.81104	42	9.97926	4	0.52026	40	0.49952	44	0.13529	13	34
27	0.81146	42	9.97930	4	0.52066	40	0.49996	44	0.13516	14	33
28	0.81188	42	9.97934	4	0.52106	40	0.50040	44	0.13502	13	32
29	0.81230	42	9.97938	4	0.52146	40	0.50084	44	0.13489	13	31
30	0.81272	42	9.97942	4	0.52186	40	0.50128	44	0.13476	13	30
31	0.81314	42	9.97946	4	0.52226	40	0.50172	44	0.13463	14	29
32	0.81356	42	9.97950	4	0.52266	40	0.50216	44	0.13449	13	28
33	0.81398	42	9.97954	4	0.52306	40	0.50260	44	0.13436	13	27
34	0.81440	43	9.97958	4	0.52346	41	0.50304	44	0.13423	13	26
35	0.81483	42	9.97962	4	0.52387	40	0.50348	45	0.13410	13	25
36	0.81525	42	9.97966	4	0.52427	40	0.50393	44	0.13397	13	24
37	0.81567	42	9.97970	4	0.52467	41	0.50437	44	0.13384	14	23
38	0.81609	43	9.97974	4	0.52508	40	0.50481	45	0.13370	13	22
39	0.81652	42	9.97978	4	0.52548	41	0.50526	44	0.13357	13	21
40	0.81694	42	9.97982	4	0.52589	40	0.50570	45	0.13344	14	20
41	0.81736	43	9.97986	3	0.52629	41	0.50615	44	0.13330	13	19
42	0.81779	42	9.97989	4	0.52670	40	0.50659	45	0.13317	13	18
43	0.81821	43	9.97993	4	0.52710	41	0.50704	44	0.13304	13	17
44	0.81864	43	9.97997	4	0.52751	40	0.50748	45	0.13291	14	16
45	0.81907	42	9.98001	4	0.52791	41	0.50793	44	0.13277	13	15
46	0.81949	43	9.98005	4	0.52832	41	0.50837	45	0.13264	13	14
47	0.81992	43	9.98009	4	0.52873	41	0.50882	45	0.13251	13	13
48	0.82035	42	9.98013	4	0.52914	41	0.50927	44	0.13238	14	12
49	0.82077	43	9.98017	4	0.52955	40	0.50971	45	0.13224	13	11
50	0.82120	43	9.98021	4	0.52995	41	0.51016	45	0.13211	13	10
51	0.82163	43	9.98025	4	0.53036	41	0.51061	45	0.13198	13	9
52	0.82206	43	9.98029	3	0.53077	41	0.51106	45	0.13185	13	8
53	0.82249	43	9.98032	4	0.53118	41	0.51151	45	0.13172	14	7
54	0.82292	43	9.98036	4	0.53159	41	0.51195	45	0.13158	13	6
55	0.82335	43	9.98040	4	0.53200	42	0.51241	45	0.13145	13	5
56	0.82378	43	9.98044	4	0.53242	41	0.51286	45	0.13132	13	4
57	0.82421	43	9.98048	4	0.53283	41	0.51331	45	0.13119	13	3
58	0.82464	43	9.98052	4	0.53324	41	0.51376	45	0.13106	14	2
59	0.82507	43	9.98056	4	0.53365	41	0.51421	45	0.13092	13	1
60	0.82550	43	9.98060	4	0.53406	41	0.51466	45	0.13079	13	0

$\log \cos \omega$   
 $\log \sec z$

Diff.

$\log \cos \omega$   
 $\log \cotg z$

Diff.

$\log \cotg \omega$   
 $\log \csc z$

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.						
0	0.82550	43	9.98060	3	0.53106	42	0.51166	45	0.13079	13	60			
1	0.82593	44	9.98063	4	0.53148	41	0.51511	46	0.13066	13	59			
2	0.82637	43	9.98067	4	0.53189	42	0.51557	45	0.13053	13	58			
3	0.82680	43	9.98071	4	0.53231	41	0.51602	45	0.13039	13	57			
4	0.82723	44	9.98075	4	0.53272	42	0.51647	46	0.13026	13	56			
5	0.82767	43	9.98079	4	0.53314	41	0.51693	45	0.13013	13	55			
6	0.82810	44	9.98083	4	0.53355	42	0.51738	45	0.13000	13	54			
7	0.82854	43	9.98087	3	0.53397	41	0.51783	46	0.12987	13	53			
8	0.82897	44	9.98090	4	0.53438	42	0.51829	45	0.12973	13	52			
9	0.82941	43	9.98094	4	0.53480	42	0.51874	46	0.12960	13	51			
10	0.82984	44	9.98098	4	0.53522	42	0.51920	45	0.12947	13	50			
11	0.83028	44	9.98102	4	0.53564	41	0.51965	46	0.12934	13	49			
12	0.83072	43	9.98106	4	0.53605	42	0.52011	46	0.12921	13	48			
13	0.83115	44	9.98110	3	0.53647	42	0.52057	46	0.12907	13	47			
14	0.83159	44	9.98113	4	0.53689	42	0.52103	45	0.12894	13	46			
15	0.83203	44	9.98117	4	0.53731	42	0.52148	46	0.12881	13	45			
16	0.83247	44	9.98121	4	0.53773	42	0.52194	46	0.12868	13	44			
17	0.83291	44	9.98125	4	0.53815	42	0.52240	46	0.12855	13	43			
18	0.83335	44	9.98129	3	0.53857	42	0.52286	46	0.12842	13	42			
19	0.83379	44	9.98132	4	0.53899	43	0.52332	46	0.12828	13	41			
20	0.83423	44	9.98136	4	0.53942	42	0.52378	46	0.12815	13	40			
21	0.83467	44	9.98140	4	0.53984	42	0.52424	46	0.12802	13	39			
22	0.83511	44	9.98144	3	0.54026	42	0.52470	46	0.12789	13	38			
23	0.83555	44	9.98147	4	0.54068	43	0.52516	46	0.12776	13	37			
24	0.83599	44	9.98151	4	0.54111	42	0.52562	46	0.12762	13	36			
25	0.83643	45	9.98155	4	0.54153	43	0.52608	46	0.12749	13	35			
26	0.83688	44	9.98159	3	0.54196	42	0.52654	47	0.12736	13	34			
27	0.83732	44	9.98162	4	0.54238	43	0.52701	46	0.12723	13	33			
28	0.83776	45	9.98166	4	0.54281	42	0.52747	46	0.12710	13	32			
29	0.83821	44	9.98170	4	0.54323	43	0.52793	47	0.12697	13	31			
30	0.83865	45	9.98174	3	0.54366	42	0.52840	46	0.12683	13	30			
31	0.83910	44	9.98177	4	0.54408	43	0.52886	46	0.12670	13	29			
32	0.83954	45	9.98181	4	0.54451	43	0.52932	46	0.12657	13	28			
33	0.83999	45	9.98185	4	0.54494	43	0.52979	46	0.12644	13	27			
34	0.84044	44	9.98189	3	0.54537	43	0.53025	47	0.12631	13	26			
35	0.84088	45	9.98192	4	0.54580	43	0.53072	47	0.12617	13	25			
36	0.84133	45	9.98196	4	0.54623	42	0.53119	46	0.12604	13	24			
37	0.84178	45	9.98200	4	0.54665	43	0.53165	47	0.12591	13	23			
38	0.84223	44	9.98204	3	0.54708	43	0.53212	47	0.12578	13	22			
39	0.84267	45	9.98207	4	0.54751	43	0.53259	47	0.12565	13	21			
40	0.84312	45	9.98211	4	0.54794	43	0.53306	46	0.12552	13	20			
41	0.84357	45	9.98215	3	0.54837	43	0.53352	47	0.12538	13	19			
42	0.84402	45	9.98218	4	0.54880	43	0.53399	47	0.12525	13	18			
43	0.84447	45	9.98222	4	0.54923	43	0.53446	47	0.12512	13	17			
44	0.84492	45	9.98226	3	0.54965	41	0.53493	47	0.12499	13	16			
45	0.84537	46	9.98229	4	0.55008	43	0.53540	47	0.12486	13	15			
46	0.84583	45	9.98233	4	0.55052	43	0.53587	47	0.12473	13	14			
47	0.84628	45	9.98237	3	0.55095	41	0.53634	47	0.12460	13	13			
48	0.84673	45	9.98240	4	0.55138	43	0.53681	48	0.12446	13	12			
49	0.84718	46	9.98244	4	0.55181	44	0.53729	47	0.12433	13	11			
50	0.84764	45	9.98248	3	0.55224	44	0.53776	47	0.12420	13	10			
51	0.84809	46	9.98251	4	0.55267	43	0.53823	47	0.12407	13	9			
52	0.84855	45	9.98255	4	0.55311	44	0.53870	47	0.12394	13	8			
53	0.84900	46	9.98259	3	0.55354	41	0.53918	47	0.12381	13	7			
54	0.84946	45	9.98262	4	0.55398	43	0.53965	48	0.12367	13	6			
55	0.84991	46	9.98266	4	0.55441	43	0.54013	47	0.12354	13	5			
56	0.85037	45	9.98270	3	0.55484	41	0.54060	48	0.12341	13	4			
57	0.85082	46	9.98273	4	0.55528	44	0.54108	47	0.12328	13	3			
58	0.85128	46	9.98277	4	0.55572	44	0.54155	48	0.12315	13	2			
59	0.85174	46	9.98281	3	0.55615	41	0.54203	47	0.12302	13	1			
60	0.85220	46	9.98284	3	0.55659	41	0.54250	47	0.12289	13	0			



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.					
0	0.85220	46	9.98284	4	0.55966	44	0.54250	48	0.12289	14	60		
1	0.85266	46	9.98288	3	0.56010	44	0.54296	48	0.12275	13	59		
2	0.85312	45	9.98291	4	0.56054	45	0.54346	48	0.12262	13	58		
3	0.85357	46	9.98295	4	0.56099	44	0.54394	47	0.12249	13	57		
4	0.85403	46	9.98299	3	0.56143	44	0.54441	48	0.12236	13	56		
5	0.85449	47	9.98302	4	0.56187	44	0.54489	48	0.12223	13	55		
6	0.85496	46	9.98306	3	0.56231	45	0.54537	48	0.12210	13	54		
7	0.85542	46	9.98309	4	0.56276	44	0.54585	48	0.12197	14	53		
8	0.85588	46	9.98313	4	0.56320	45	0.54633	48	0.12183	13	52		
9	0.85634	46	9.98317	3	0.56365	44	0.54681	48	0.12170	13	51		
10	0.85680	47	9.98320	4	0.56409	45	0.54729	49	0.12157	13	50		
11	0.85727	46	9.98324	3	0.56454	44	0.54778	48	0.12144	13	49		
12	0.85773	47	9.98327	4	0.56498	45	0.54826	48	0.12131	13	48		
13	0.85820	46	9.98331	3	0.56543	45	0.54874	48	0.12118	13	47		
14	0.85866	47	9.98334	4	0.56588	45	0.54922	49	0.12105	13	46		
15	0.85913	46	9.98338	4	0.56633	44	0.54971	48	0.12092	14	45		
16	0.85959	47	9.98342	3	0.56677	45	0.55019	48	0.12078	13	44		
17	0.86006	46	9.98345	4	0.56722	45	0.55067	49	0.12065	13	43		
18	0.86052	47	9.98349	3	0.56767	45	0.55116	48	0.12052	13	42		
19	0.86099	47	9.98352	4	0.56812	45	0.55164	49	0.12039	13	41		
20	0.86146	47	9.98356	3	0.56857	45	0.55213	49	0.12026	13	40		
21	0.86193	46	9.98359	4	0.56902	45	0.55262	48	0.12013	13	39		
22	0.86239	47	9.98363	3	0.56947	45	0.55310	49	0.12000	13	38		
23	0.86286	47	9.98366	4	0.56992	46	0.55359	49	0.11987	14	37		
24	0.86333	47	9.98370	3	0.57038	45	0.55408	48	0.11973	13	36		
25	0.86380	47	9.98373	4	0.57083	45	0.55456	49	0.11960	13	35		
26	0.86427	47	9.98377	4	0.57128	46	0.55505	49	0.11947	13	34		
27	0.86474	47	9.98381	3	0.57174	45	0.55554	49	0.11934	13	33		
28	0.86522	47	9.98384	4	0.57219	46	0.55603	49	0.11921	13	32		
29	0.86569	47	9.98388	3	0.57265	45	0.55652	49	0.11908	13	31		
30	0.86616	47	9.98391	4	0.57310	46	0.55701	49	0.11895	13	30		
31	0.86663	48	9.98395	3	0.57356	45	0.55750	49	0.11882	13	29		
32	0.86711	47	9.98398	4	0.57401	46	0.55799	50	0.11869	14	28		
33	0.86758	48	9.98402	3	0.57447	46	0.55849	49	0.11855	13	27		
34	0.86806	47	9.98405	4	0.57493	46	0.55898	49	0.11842	13	26		
35	0.86853	48	9.98409	3	0.57539	45	0.55947	49	0.11829	13	25		
36	0.86901	47	9.98412	3	0.57584	46	0.55996	50	0.11816	13	24		
37	0.86948	48	9.98415	4	0.57630	46	0.56046	49	0.11803	13	23		
38	0.86996	48	9.98419	3	0.57676	46	0.56095	50	0.11790	13	22		
39	0.87044	47	9.98422	4	0.57722	46	0.56145	49	0.11777	13	21		
40	0.87091	48	9.98426	3	0.57768	46	0.56194	50	0.11764	13	20		
41	0.87139	48	9.98429	4	0.57814	46	0.56244	49	0.11751	13	19		
42	0.87187	48	9.98433	3	0.57860	47	0.56293	50	0.11738	14	18		
43	0.87235	48	9.98436	4	0.57907	46	0.56343	50	0.11724	13	17		
44	0.87283	48	9.98440	3	0.57953	46	0.56393	49	0.11711	13	16		
45	0.87331	48	9.98443	4	0.57999	47	0.56442	50	0.11698	13	15		
46	0.87379	48	9.98447	3	0.58046	46	0.56492	50	0.11685	13	14		
47	0.87427	48	9.98450	3	0.58092	47	0.56542	50	0.11672	13	13		
48	0.87475	48	9.98453	4	0.58139	46	0.56592	50	0.11659	13	12		
49	0.87523	49	9.98457	3	0.58185	47	0.56642	50	0.11646	13	11		
50	0.87572	48	9.98460	4	0.58232	46	0.56692	50	0.11633	13	10		
51	0.87620	48	9.98464	3	0.58278	47	0.56742	50	0.11620	13	9		
52	0.87668	49	9.98467	4	0.58325	47	0.56792	50	0.11607	13	8		
53	0.87717	48	9.98471	3	0.58372	46	0.56842	50	0.11594	14	7		
54	0.87765	49	9.98474	3	0.58418	47	0.56892	50	0.11580	13	6		
55	0.87814	48	9.98477	4	0.58465	47	0.56943	51	0.11567	13	5		
56	0.87862	49	9.98481	3	0.58512	47	0.56993	50	0.11554	13	4		
57	0.87911	49	9.98484	4	0.58559	47	0.57043	51	0.11541	13	3		
58	0.87960	48	9.98488	3	0.58606	47	0.57094	50	0.11528	13	2		
59	0.88008	49	9.98491	3	0.58653	47	0.57144	51	0.11515	13	1		
60	0.88057	49	9.98494	3	0.58700	47	0.57195	51	0.11502	13	0		

$\omega = 75 \text{ Grad.}$

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
0	0.88057	49	9.98494	4	0.58700		0.57195	50	0.11502	13	60
1	0.88106	49	9.98498	3	0.58748	48	0.57245	51	0.11489	13	59
2	0.88155	49	9.98501	4	0.58795	47	0.57296	51	0.11476	13	58
3	0.88204	49	9.98505	3	0.58842	47	0.57347	51	0.11463	13	57
4	0.88253	49	9.98508	3	0.58889	48	0.57397	51	0.11450	13	56
5	0.88302	49	9.98511	4	0.58937	47	0.57448	51	0.11437	14	55
6	0.88351	49	9.98515	3	0.58981	48	0.57499	51	0.11423	13	54
7	0.88400	49	9.98518	3	0.59032	47	0.57550	51	0.11410	13	53
8	0.88449	50	9.98521	3	0.59079	47	0.57601	51	0.11397	13	52
9	0.88499	49	9.98525	3	0.59127	48	0.57652	51	0.11384	13	51
10	0.88548	49	9.98528	3	0.59175	47	0.57703	51	0.11371	13	50
11	0.88597	50	9.98531	3	0.59222	48	0.57754	51	0.11358	13	49
12	0.88647	49	9.98535	3	0.59270	48	0.57805	51	0.11345	13	48
13	0.88696	50	9.98538	3	0.59318	48	0.57856	51	0.11332	13	47
14	0.88746	49	9.98541	4	0.59366	48	0.57907	52	0.11319	13	46
15	0.88795	50	9.98545	3	0.59414	48	0.57959	51	0.11306	13	45
16	0.88845	50	9.98548	3	0.59462	48	0.58010	51	0.11293	13	44
17	0.88895	49	9.98551	4	0.59510	48	0.58061	52	0.11280	13	43
18	0.88944	50	9.98555	3	0.59558	48	0.58113	51	0.11267	13	42
19	0.88994	50	9.98558	3	0.59606	48	0.58164	52	0.11254	13	41
20	0.89044	50	9.98561	4	0.59654	49	0.58216	51	0.11241	13	40
21	0.89094	50	9.98565	3	0.59703	48	0.58267	52	0.11228	14	39
22	0.89144	50	9.98568	3	0.59751	49	0.58319	52	0.11214	13	38
23	0.89194	50	9.98571	3	0.59800	48	0.58371	51	0.11201	13	37
24	0.89244	50	9.98574	4	0.59848	49	0.58422	52	0.11188	13	36
25	0.89294	50	9.98578	3	0.59897	48	0.58474	52	0.11175	13	35
26	0.89344	51	9.98581	3	0.59945	49	0.58526	52	0.11162	13	34
27	0.89395	50	9.98584	4	0.59994	48	0.58578	52	0.11149	13	33
28	0.89445	50	9.98588	3	0.60042	49	0.58630	52	0.11136	13	32
29	0.89495	51	9.98591	3	0.60091	49	0.58682	52	0.11123	13	31
30	0.89546	50	9.98594	3	0.60140	49	0.58734	52	0.11110	13	30
31	0.89596	51	9.98597	4	0.60189	49	0.58786	53	0.11097	13	29
32	0.89647	50	9.98601	3	0.60238	49	0.58839	52	0.11084	13	28
33	0.89697	51	9.98604	3	0.60287	49	0.58891	52	0.11071	13	27
34	0.89748	51	9.98607	3	0.60336	49	0.58943	52	0.11058	13	26
35	0.89799	51	9.98610	4	0.60385	49	0.58995	53	0.11045	13	25
36	0.89850	50	9.98614	3	0.60434	49	0.59048	52	0.11032	13	24
37	0.89900	51	9.98617	3	0.60483	50	0.59100	53	0.11019	13	23
38	0.89951	51	9.98620	3	0.60533	49	0.59153	52	0.11006	13	22
39	0.90002	51	9.98623	4	0.60582	49	0.59205	53	0.10993	13	21
40	0.90053	51	9.98627	3	0.60631	50	0.59258	53	0.10980	13	20
41	0.90104	51	9.98630	3	0.60681	49	0.59311	53	0.10967	13	19
42	0.90155	52	9.98633	3	0.60730	50	0.59364	52	0.10954	14	18
43	0.90207	51	9.98636	4	0.60780	50	0.59416	53	0.10940	13	17
44	0.90258	51	9.98640	3	0.60830	49	0.59469	53	0.10927	13	16
45	0.90309	51	9.98643	3	0.60879	50	0.59522	53	0.10914	13	15
46	0.90360	52	9.98646	3	0.60929	50	0.59575	53	0.10901	13	14
47	0.90412	51	9.98649	3	0.60979	50	0.59628	53	0.10888	13	13
48	0.90463	52	9.98652	4	0.61029	50	0.59681	53	0.10875	13	12
49	0.90515	51	9.98656	3	0.61079	50	0.59734	54	0.10862	13	11
50	0.90566	52	9.98659	3	0.61129	50	0.59788	54	0.10849	13	10
51	0.90618	52	9.98662	3	0.61179	50	0.59841	53	0.10836	13	9
52	0.90670	52	9.98665	3	0.61229	50	0.59894	54	0.10823	13	8
53	0.90722	51	9.98668	3	0.61279	51	0.59948	53	0.10810	13	7
54	0.90773	52	9.98671	4	0.61330	50	0.60001	54	0.10797	13	6
55	0.90825	52	9.98675	3	0.61380	50	0.60055	53	0.10784	13	5
56	0.90877	52	9.98678	3	0.61430	51	0.60108	54	0.10771	13	4
57	0.90929	52	9.98681	3	0.61481	50	0.60162	53	0.10758	13	3
58	0.90981	52	9.98684	3	0.61531	51	0.60215	54	0.10745	13	2
59	0.91033	53	9.98687	3	0.61582	50	0.60269	54	0.10732	13	1
60	0.91086		9.98690	3	0.61632	50	0.60323	54	0.10719	13	0



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
0	0.91086	52	9.98690	4	0.61632	51	0.60323	54	0.10719	13	60
1	0.91138	52	9.98694	3	0.61683	51	0.60377	54	0.10706	13	59
2	0.91190	53	9.98697	3	0.61734	51	0.60431	54	0.10693	13	58
3	0.91243	52	9.98700	3	0.61785	51	0.60485	54	0.10680	13	57
4	0.91295	52	9.98703	3	0.61836	51	0.60539	54	0.10667	13	56
5	0.91347	53	9.98706	3	0.61887	51	0.60593	54	0.10654	13	55
6	0.91400	53	9.98709	3	0.61938	51	0.60647	54	0.10641	13	54
7	0.91453	52	9.98712	3	0.61989	51	0.60701	54	0.10628	13	53
8	0.91505	53	9.98715	3	0.62040	51	0.60755	55	0.10615	13	52
9	0.91558	53	9.98719	3	0.62091	51	0.60810	54	0.10602	13	51
10	0.91611	53	9.98722	3	0.62142	52	0.60864	54	0.10589	13	50
11	0.91664	53	9.98725	3	0.62194	51	0.60918	55	0.10576	13	49
12	0.91717	53	9.98728	3	0.62245	52	0.60973	55	0.10563	13	48
13	0.91770	53	9.98731	3	0.62297	51	0.61028	54	0.10550	13	47
14	0.91823	53	9.98734	3	0.62348	52	0.61082	55	0.10537	13	46
15	0.91876	53	9.98737	3	0.62400	51	0.61137	55	0.10524	13	45
16	0.91929	53	9.98740	3	0.62451	51	0.61192	54	0.10511	13	44
17	0.91982	54	9.98743	3	0.62503	52	0.61246	55	0.10498	13	43
18	0.92036	53	9.98746	4	0.62555	52	0.61301	55	0.10485	13	42
19	0.92089	53	9.98750	3	0.62607	52	0.61356	55	0.10472	13	41
20	0.92142	54	9.98753	3	0.62659	52	0.61411	55	0.10459	13	40
21	0.92196	53	9.98756	3	0.62711	52	0.61466	55	0.10446	13	39
22	0.92249	54	9.98759	3	0.62763	52	0.61521	56	0.10433	13	38
23	0.92303	54	9.98762	3	0.62815	52	0.61577	55	0.10420	13	37
24	0.92357	54	9.98765	3	0.62867	52	0.61632	55	0.10407	13	36
25	0.92411	53	9.98768	3	0.62919	53	0.61687	56	0.10394	13	35
26	0.92464	54	9.98771	3	0.62972	52	0.61743	55	0.10381	13	34
27	0.92518	54	9.98774	3	0.63024	52	0.61798	55	0.10368	13	33
28	0.92572	54	9.98777	3	0.63076	53	0.61853	56	0.10355	13	32
29	0.92626	54	9.98780	3	0.63129	52	0.61909	56	0.10342	13	31
30	0.92680	54	9.98783	3	0.63181	53	0.61965	55	0.10329	13	30
31	0.92734	55	9.98786	3	0.63234	53	0.62020	56	0.10316	13	29
32	0.92789	54	9.98789	3	0.63287	53	0.62076	56	0.10303	13	28
33	0.92843	54	9.98792	3	0.63340	52	0.62132	56	0.10290	13	27
34	0.92897	55	9.98795	3	0.63392	53	0.62188	56	0.10277	13	26
35	0.92952	54	9.98798	3	0.63445	53	0.62244	56	0.10264	13	25
36	0.93006	55	9.98801	3	0.63498	53	0.62300	56	0.10251	13	24
37	0.93061	54	9.98804	3	0.63551	54	0.62356	56	0.10238	13	23
38	0.93115	55	9.98807	3	0.63605	53	0.62412	56	0.10225	13	22
39	0.93170	55	9.98810	3	0.63658	53	0.62468	56	0.10212	13	21
40	0.93225	55	9.98813	3	0.63711	53	0.62524	57	0.10199	13	20
41	0.93280	54	9.98816	3	0.63764	54	0.62581	56	0.10186	13	19
42	0.93334	55	9.98819	3	0.63818	53	0.62637	57	0.10173	13	18
43	0.93389	55	9.98822	3	0.63871	54	0.62694	56	0.10160	13	17
44	0.93444	56	9.98825	3	0.63925	53	0.62750	57	0.10147	13	16
45	0.93500	55	9.98828	3	0.63978	54	0.62807	56	0.10134	13	15
46	0.93555	55	9.98831	3	0.64032	54	0.62863	57	0.10121	13	14
47	0.93610	55	9.98834	3	0.64086	54	0.62920	57	0.10108	13	13
48	0.93665	56	9.98837	3	0.64140	54	0.62977	57	0.10095	13	12
49	0.93721	55	9.98840	3	0.64194	54	0.63034	57	0.10082	13	11
50	0.93776	55	9.98843	3	0.64248	54	0.63091	57	0.10069	13	10
51	0.93831	56	9.98846	3	0.64302	54	0.63148	57	0.10056	13	9
52	0.93887	56	9.98849	3	0.64356	54	0.63205	57	0.10043	13	8
53	0.93943	55	9.98852	3	0.64410	54	0.63262	57	0.10030	13	7
54	0.93998	56	9.98855	3	0.64464	55	0.63319	57	0.10017	13	6
55	0.94054	56	9.98858	3	0.64519	54	0.63376	58	0.10004	13	5
56	0.94110	56	9.98861	3	0.64573	54	0.63434	57	(1)9991.3	12.9	4
57	0.94166	56	9.98864	3	0.64627	55	0.63491	57	(1)9978.4	13.0	3
58	0.94222	56	9.98867	2	0.64682	55	0.63548	58	(1)9965.4	13.0	2
59	0.94278	56	9.98869	3	0.64737	54	0.63606	58	(1)9952.4	12.9	1
60	0.94334		9.98872		0.64791		0.63664		(1)9939.5		0

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

l. cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega'$

$\omega'$	$z'$	Diff.	log Tg z log sin $\omega'$	Diff.	log Cos z log sec $\omega'$	Diff.	log Sin z log tg $\omega'$	Diff.			
0	0.94334		9.98872		0.64791		0.63664		(19939.5		60
1	0.94390	56	9.98875	3	0.64846	55	0.63721	57	(19926.5	13.0	59
2	0.94447	57	9.98878	3	0.64901	55	0.63779	58	(19913.6	12.9	58
3		56		3		55		58		13.0	57
4	0.94503	56	9.98881	3	0.64956	55	0.63837	58	(19900.6	13.0	56
5	0.94559	57	9.98884	3	0.65011	55	0.63895	58	(19887.6	12.9	55
6	0.94616	56	9.98887	3	0.65066	55	0.63953	58	(19874.7	13.0	54
7	0.94672	57	9.98890	3	0.65121	55	0.64011	58	(19861.7	13.0	53
8	0.94729	57	9.98893	3	0.65176	55	0.64069	58	(19848.7	12.9	52
9	0.94786	56	9.98896	2	0.65231	56	0.64127	58	(19835.8	13.0	51
10	0.94842	57	9.98898	3	0.65287	55	0.64185	58	(19822.8	12.9	50
11	0.94899	57	9.98901	3	0.65342	56	0.64243	59	(19809.9	13.0	49
12	0.94956	57	9.98904	3	0.65398	55	0.64302	58	(19796.9	12.9	48
13	0.95013	57	9.98907	3	0.65453	56	0.64360	59	(19784.0	13.0	47
14	0.95070	57	9.98910	3	0.65509	55	0.64419	58	(19771.0	13.0	46
15	0.95127	58	9.98913	3	0.65564	56	0.64477	59	(19758.0	12.9	45
16	0.95185	57	9.98916	3	0.65620	56	0.64536	59	(19745.1	13.0	44
17	0.95242	57	9.98919	3	0.65676	56	0.64595	58	(19732.1	12.9	43
18	0.95299	58	9.98921	2	0.65732	56	0.64653	59	(19719.2	13.0	42
19	0.95357	57	9.98924	3	0.65788	56	0.64712	59	(19706.2	12.9	41
20	0.95414	58	9.98927	3	0.65844	56	0.64771	59	(19693.3	13.0	40
21	0.95472	57	9.98930	3	0.65900	57	0.64830	59	(19680.3	12.9	39
22	0.95529	58	9.98933	3	0.65957	56	0.64889	60	(19667.4	13.0	38
23	0.95587	58	9.98936	2	0.66013	56	0.64949	59	(19654.4	12.9	37
24	0.95645	58	9.98938	3	0.66069	57	0.65008	59	(19641.5	12.9	36
25	0.95703	58	9.98941	3	0.66126	56	0.65067	59	(19628.6	13.0	35
26	0.95761	58	9.98944	3	0.66182	57	0.65126	60	(19615.6	12.9	34
27	0.95819	58	9.98947	3	0.66239	57	0.65186	59	(19602.7	13.0	33
28	0.95877	58	9.98950	3	0.66296	57	0.65245	60	(19589.7	12.9	32
29	0.95935	58	9.98953	2	0.66353	56	0.65305	60	(19576.8	13.0	31
30	0.95993	59	9.98955	3	0.66409	57	0.65365	59	(19563.8	12.9	30
31	0.96052	58	9.98958	3	0.66466	57	0.65424	60	(19550.9	12.9	29
32	0.96110	58	9.98961	3	0.66523	57	0.65484	60	(19538.0	13.0	28
33	0.96168	59	9.98964	3	0.66580	58	0.65544	60	(19525.0	12.9	27
34	0.96227	59	9.98967	2	0.66638	57	0.65604	60	(19512.1	12.9	26
35	0.96286	58	9.98969	3	0.66695	57	0.65664	60	(19499.2	13.0	25
36	0.96344	59	9.98972	3	0.66752	58	0.65724	61	(19486.2	12.9	24
37	0.96403	59	9.98975	3	0.66810	57	0.65785	60	(19473.3	13.0	23
38	0.96462	59	9.98978	2	0.66867	58	0.65845	60	(19460.3	12.9	22
39	0.96521	59	9.98980	3	0.66925	57	0.65905	61	(19447.4	12.9	21
40	0.96580	59	9.98983	3	0.66982	58	0.65966	60	(19434.5	13.0	20
41	0.96639	59	9.98986	3	0.67040	58	0.66026	61	(19421.5	12.9	19
42	0.96698	60	9.98989	2	0.67098	58	0.66087	60	(19408.6	12.9	18
43	0.96758	59	9.98991	3	0.67156	58	0.66147	61	(19395.7	12.9	17
44	0.96817	59	9.98994	3	0.67214	58	0.66208	61	(19382.8	13.0	16
45	0.96876	60	9.98997	3	0.67272	58	0.66269	61	(19369.8	12.9	15
46	0.96936	59	9.99000	2	0.67330	58	0.66330	61	(19356.9	12.9	14
47	0.96995	60	9.99002	2	0.67388	59	0.66391	61	(19344.0	13.0	13
48	0.97055	60	9.99005	3	0.67447	58	0.66452	61	(19331.0	12.9	12
49	0.97115	60	9.99008	3	0.67505	58	0.66513	61	(19318.1	12.9	11
50	0.97175	59	9.99011	2	0.67563	59	0.66574	61	(19305.2	12.9	10
51	0.97234	60	9.99013	3	0.67622	59	0.66635	62	(19292.3	13.0	9
52	0.97291	61	9.99016	3	0.67681	58	0.66697	61	(19279.3	12.9	8
53	0.97355	60	9.99019	3	0.67739	59	0.66758	62	(19266.4	12.9	7
54	0.97415	60	9.99022	2	0.67798	59	0.66820	61	(19253.5	12.9	6
55	0.97475	60	9.99024	3	0.67857	59	0.66881	62	(19240.6	12.9	5
56	0.97535	61	9.99027	3	0.67916	59	0.66943	62	(19227.7	13.0	4
57	0.97596	60	9.99030	2	0.67975	59	0.67005	62	(19214.7	12.9	3
58	0.97656	61	9.99032	3	0.68034	59	0.67067	61	(19201.8	12.9	2
59	0.97717	60	9.99035	3	0.68093	60	0.67128	62	(19188.9	12.9	1
60	0.97777	61	9.99038	2	0.68153	59	0.67190	63	(19176.0	12.9	0
	0.97838		9.99040		0.68212		0.67253		(19163.1		
			log cos $\omega'$ log Sec z	Diff.	l. cosec $\omega'$ l. Cotg z	Diff.	log cotg $\omega'$ l. Cosec z	Diff.	$z'$	Diff.	$\omega'$



$\omega$	$z'$	Dif.	log Tg z log sin $\omega$	Dif.	log Cos z log sec $\omega$	Dif.	log Sin z log tg $\omega$	Dif.				
0	0.97838	61	9.99040	3	0.68212	60	0.67253	62	(1)9163.1	12.9	60	
1	0.97899	61	9.99043	3	0.68272	59	0.67315	62	(1)9150.2	13.0	59	
2	0.97960	61	9.99046	2	0.68331	60	0.67377	62	(1)9137.2	12.9	58	
3	0.98021	61	9.99048	3	0.68391	60	0.67439	63	(1)9124.3	12.9	57	
4	0.98082	61	9.99051	3	0.68451	59	0.67502	62	(1)9111.4	12.9	56	
5	0.98143	61	9.99054	2	0.68510	60	0.67564	63	(1)9098.5	12.9	55	
6	0.98204	61	9.99056	3	0.68570	60	0.67627	62	(1)9085.6	12.9	54	
7	0.98265	62	9.99059	3	0.68630	60	0.67689	63	(1)9072.7	12.9	53	
8	0.98327	61	9.99062	2	0.68690	60	0.67752	63	(1)9059.8	12.9	52	
9	0.98388	62	9.99064	3	0.68750	61	0.67815	63	(1)9046.9	12.9	51	
10	0.98450	61	9.99067	3	0.68811	60	0.67878	63	(1)9034.0	12.9	50	
11	0.98511	62	9.99070	2	0.68871	61	0.67941	63	(1)9021.1	12.9	49	
12	0.98573	62	9.99072	3	0.68932	60	0.68004	63	(1)9008.2	13.0	48	
13	0.98635	62	9.99075	3	0.68992	61	0.68067	63	(1)8995.2	12.9	47	
14	0.98697	62	9.99078	2	0.69053	60	0.68130	64	(1)8982.3	12.9	46	
15	0.98759	62	9.99080	3	0.69113	61	0.68194	63	(1)8969.4	12.9	45	
16	0.98821	62	9.99083	3	0.69174	61	0.68257	64	(1)8956.5	12.9	44	
17	0.98883	62	9.99086	2	0.69235	61	0.68321	63	(1)8943.6	12.9	43	
18	0.98945	63	9.99088	3	0.69296	61	0.68384	64	(1)8930.7	12.9	42	
19	0.99008	62	9.99091	3	0.69357	61	0.68448	63	(1)8917.8	12.9	41	
20	0.99070	63	9.99093	3	0.69418	61	0.68511	61	(1)8904.9	12.9	40	
21	0.99133	62	9.99096	3	0.69479	62	0.68575	64	(1)8892.0	12.9	39	
22	0.99195	63	9.99099	3	0.69541	61	0.68639	64	(1)8879.1	12.9	38	
23	0.99258	63	9.99101	3	0.69602	62	0.68703	61	(1)8866.2	12.9	37	
24	0.99321	63	9.99104	2	0.69664	61	0.68767	65	(1)8853.3	12.9	36	
25	0.99384	63	9.99106	3	0.69725	62	0.68832	64	(1)8840.4	12.9	35	
26	0.99447	63	9.99109	3	0.69787	62	0.68896	61	(1)8827.5	12.8	34	
27	0.99510	63	9.99112	2	0.69849	61	0.68960	65	(1)8814.7	12.9	33	
28	0.99573	63	9.99114	3	0.69910	62	0.69025	64	(1)8801.8	12.9	32	
29	0.99636	63	9.99117	2	0.69972	62	0.69089	65	(1)8788.9	12.9	31	
30	0.99699	64	9.99119	3	0.70034	63	0.69154	61	(1)8776.0	12.9	30	
31	0.99763	63	9.99122	2	0.70097	62	0.69218	65	(1)8763.1	12.9	29	
32	0.99826	64	9.99124	3	0.70159	62	0.69283	65	(1)8750.2	12.9	28	
33	0.99890	64	9.99127	3	0.70221	63	0.69348	65	(1)8737.3	12.9	27	
34	0.99954	63	9.99130	2	0.70284	62	0.69413	65	(1)8724.4	12.9	26	
35	1.00017	64	9.99132	3	0.70346	63	0.69478	65	(1)8711.5	12.9	25	
36	1.00081	64	9.99135	2	0.70409	62	0.69543	66	(1)8698.6	12.9	24	
37	1.00145	64	9.99137	3	0.70471	63	0.69609	65	(1)8685.7	12.8	23	
38	1.00209	64	9.99140	2	0.70534	63	0.69674	65	(1)8672.9	12.9	22	
39	1.00273	65	9.99142	3	0.70597	63	0.69739	66	(1)8660.0	12.9	21	
40	1.00338	64	9.99145	2	0.70660	63	0.69805	65	(1)8647.1	12.9	20	
41	1.00402	64	9.99147	3	0.70723	63	0.69870	66	(1)8634.2	12.9	19	
42	1.00466	65	9.99150	2	0.70786	64	0.69936	66	(1)8621.3	12.9	18	
43	1.00531	64	9.99152	3	0.70850	63	0.70002	66	(1)8608.4	12.8	17	
44	1.00595	65	9.99155	2	0.70913	63	0.70068	66	(1)8595.6	12.9	16	
45	1.00660	65	9.99157	3	0.70976	64	0.70134	66	(1)8582.7	12.9	15	
46	1.00725	65	9.99160	2	0.71040	64	0.70200	66	(1)8569.8	12.9	14	
47	1.00790	65	9.99162	3	0.71104	63	0.70266	66	(1)8556.9	12.9	13	
48	1.00855	65	9.99165	2	0.71167	64	0.70332	67	(1)8544.0	12.8	12	
49	1.00920	65	9.99167	3	0.71231	64	0.70399	66	(1)8531.2	12.9	11	
50	1.00985	65	9.99170	2	0.71295	64	0.70465	67	(1)8518.3	12.9	10	
51	1.01050	66	9.99172	3	0.71359	64	0.70532	66	(1)8505.4	12.9	9	
52	1.01116	65	9.99175	2	0.71423	65	0.70598	67	(1)8492.5	12.8	8	
53	1.01181	66	9.99177	3	0.71488	64	0.70665	67	(1)8479.7	12.9	7	
54	1.01247	66	9.99180	2	0.71552	64	0.70732	67	(1)8466.8	12.9	6	
55	1.01313	65	9.99182	3	0.71616	65	0.70799	67	(1)8453.9	12.9	5	
56	1.01378	66	9.99185	2	0.71681	65	0.70866	67	(1)8441.0	12.8	4	
57	1.01444	66	9.99187	3	0.71746	64	0.70933	67	(1)8428.2	12.9	3	
58	1.01510	66	9.99190	2	0.71810	65	0.71000	67	(1)8415.3	12.9	2	
59	1.01576	66	9.99192	3	0.71875	65	0.71067	68	(1)8402.4	12.8	1	
60	1.01642	66	9.99195	3	0.71940	65	0.71133	68	(1)8389.6	12.8	0	

log cos  $\omega$     Dif.    l. cosec  $\omega$     Dif.    log cotg  $\omega$     Dif.    z'    Dif.     $\omega$

$\theta'$	$z'$	Diff.	$\log Tg z$ $\log \sin \theta$	Diff.	$\log Cos z$ $\log \sec \theta$	Diff.	$\log Sin z$ $\log tg \theta$	Diff.			
0	1.01642	67	9.99195	2	0.71940	65	0.71135	67	(1)8389.6	12.9	60
1	1.01709	66	9.99197	3	0.72005	65	0.71202	68	(1)8376.7	12.9	59
2	1.01775	66	9.99200	2	0.72070	66	0.71270	68	(1)8363.8	12.9	58
3	1.01841	67	9.99202	2	0.72136	65	0.71338	67	(1)8350.9	12.8	57
4	1.01908	67	9.99201	3	0.72201	65	0.71405	68	(1)8338.1	12.9	56
5	1.01975	66	9.99207	2	0.72266	66	0.71473	68	(1)8325.2	12.9	55
6	1.02041	67	9.99209	3	0.72332	66	0.71541	68	(1)8312.3	12.8	54
7	1.02108	67	9.99212	2	0.72398	65	0.71609	68	(1)8299.5	12.9	53
8	1.02175	67	9.99214	3	0.72463	66	0.71677	69	(1)8286.6	12.8	52
9	1.02242	67	9.99217	2	0.72529	66	0.71746	68	(1)8273.8	12.9	51
10	1.02309	68	9.99219	2	0.72595	66	0.71814	69	(1)8260.9	12.9	50
11	1.02377	67	9.99221	3	0.72661	66	0.71883	68	(1)8248.0	12.8	49
12	1.02444	68	9.99224	2	0.72727	67	0.71951	69	(1)8235.2	12.9	48
13	1.02512	67	9.99226	3	0.72794	66	0.72020	69	(1)8222.3	12.9	47
14	1.02579	68	9.99229	2	0.72860	67	0.72089	69	(1)8209.4	12.8	46
15	1.02647	68	9.99231	2	0.72927	66	0.72158	69	(1)8196.6	12.9	45
16	1.02715	67	9.99233	3	0.72993	67	0.72227	69	(1)8183.7	12.8	44
17	1.02782	68	9.99236	2	0.73060	67	0.72296	69	(1)8170.9	12.9	43
18	1.02850	69	9.99238	3	0.73127	67	0.72365	69	(1)8158.0	12.8	42
19	1.02919	68	9.99241	2	0.73194	67	0.72434	70	(1)8145.2	12.9	41
20	1.02987	68	9.99243	2	0.73261	67	0.72504	69	(1)8132.3	12.8	40
21	1.03055	68	9.99245	3	0.73328	67	0.72573	70	(1)8119.5	12.9	39
22	1.03123	69	9.99248	2	0.73395	67	0.72643	69	(1)8106.6	12.9	38
23	1.03191	69	9.99250	2	0.73462	68	0.72712	70	(1)8093.7	12.8	37
24	1.03261	68	9.99252	3	0.73530	67	0.72782	70	(1)8080.9	12.9	36
25	1.03329	69	9.99255	2	0.73597	68	0.72852	70	(1)8068.0	12.8	35
26	1.03398	69	9.99257	3	0.73665	68	0.72922	70	(1)8055.2	12.9	34
27	1.03467	69	9.99260	2	0.73733	68	0.72992	71	(1)8042.3	12.8	33
28	1.03536	69	9.99262	2	0.73801	68	0.73063	70	(1)8029.5	12.9	32
29	1.03605	70	9.99264	3	0.73869	68	0.73133	70	(1)8016.6	12.8	31
30	1.03675	69	9.99267	2	0.73937	68	0.73203	71	(1)8003.8	12.9	30
31	1.03744	69	9.99269	2	0.74005	68	0.73274	71	(1)7990.9	12.8	29
32	1.03813	70	9.99271	3	0.74073	69	0.73345	70	(1)7978.1	12.9	28
33	1.03883	70	9.99274	2	0.74142	68	0.73415	71	(1)7965.2	12.8	27
34	1.03953	70	9.99276	2	0.74210	69	0.73486	71	(1)7952.4	12.8	26
35	1.04023	69	9.99278	3	0.74279	69	0.73557	71	(1)7939.6	12.9	25
36	1.04092	70	9.99281	2	0.74348	69	0.73628	71	(1)7926.7	12.8	24
37	1.04162	69	9.99283	2	0.74417	69	0.73699	72	(1)7913.9	12.9	23
38	1.04233	70	9.99285	3	0.74486	69	0.73771	71	(1)7901.0	12.8	22
39	1.04303	70	9.99288	2	0.74555	69	0.73842	72	(1)7888.2	12.9	21
40	1.04373	71	9.99290	2	0.74624	69	0.73914	71	(1)7875.3	12.8	20
41	1.04444	70	9.99292	2	0.74693	70	0.73985	72	(1)7862.5	12.8	19
42	1.04514	71	9.99294	3	0.74763	69	0.74057	72	(1)7849.7	12.9	18
43	1.04585	71	9.99297	2	0.74832	70	0.74129	72	(1)7836.8	12.8	17
44	1.04656	71	9.99299	2	0.74902	70	0.74201	72	(1)7824.0	12.9	16
45	1.04727	71	9.99301	3	0.74972	70	0.74273	72	(1)7811.1	12.8	15
46	1.04798	71	9.99304	2	0.75042	70	0.74345	73	(1)7798.3	12.8	14
47	1.04869	71	9.99306	2	0.75112	70	0.74418	72	(1)7785.5	12.9	13
48	1.04940	72	9.99308	2	0.75182	70	0.74490	73	(1)7772.6	12.8	12
49	1.05012	71	9.99310	3	0.75252	71	0.74563	72	(1)7759.8	12.8	11
50	1.05083	72	9.99313	2	0.75323	70	0.74635	73	(1)7747.0	12.9	10
51	1.05155	72	9.99315	2	0.75393	70	0.74708	73	(1)7734.1	12.8	9
52	1.05227	71	9.99317	2	0.75464	71	0.74781	73	(1)7721.3	12.8	8
53	1.05298	72	9.99319	3	0.75534	71	0.74854	73	(1)7708.5	12.9	7
54	1.05370	73	9.99322	2	0.75605	71	0.74927	73	(1)7695.6	12.8	6
55	1.05443	72	9.99324	2	0.75676	71	0.75000	74	(1)7682.8	12.8	5
56	1.05515	72	9.99326	2	0.75747	72	0.75074	73	(1)7670.0	12.9	4
57	1.05587	73	9.99328	3	0.75819	71	0.75147	74	(1)7657.1	12.8	3
58	1.05660	72	9.99331	2	0.75890	71	0.75221	73	(1)7644.3	12.8	2
59	1.05732	73	9.99333	2	0.75961	72	0.75294	74	(1)7631.5	12.9	1
60	1.05805	73	9.99335	2	0.76033	72	0.75368	74	(1)7618.6	12.9	0

$\log \cos \theta$   
 $\log \sec z$

Diff.

$\log \cos \theta$   
 $\log \sec z$

Diff.

$\log \cotg \theta$   
 $\log \csc z$

Diff.

$z'$

Diff.

$\theta$



$\omega$	$z'$	Diff.	$\log Tg z$ $\log \sin \omega$	Diff.	$\log Cos z$ $\log \sec \omega$	Diff.	$\log Sin z$ $\log tg \omega$	Diff.			
0	1.05805	73	9.99335	2	0.76033	72	0.75368	74	(1)7618.6	12.8	60
1	1.05878	73	9.99337	3	0.76105	72	0.75442	74	(1)7605.8	12.8	59
2	1.05951	73	9.99340	2	0.76177	71	0.75516	74	(1)7593.0	12.8	58
3	1.06024	73	9.99342	2	0.76248	73	0.75590	75	(1)7580.2	12.9	57
4	1.06097	73	9.99344	2	0.76321	72	0.75665	74	(1)7567.3	12.8	56
5	1.06170	74	9.99346	2	0.76393	72	0.75739	75	(1)7554.5	12.8	55
6	1.06244	73	9.99348	3	0.76465	73	0.75814	74	(1)7541.7	12.8	54
7	1.06317	74	9.99351	2	0.76538	72	0.75888	75	(1)7528.9	12.9	53
8	1.06391	73	9.99353	2	0.76610	73	0.75963	75	(1)7516.0	12.8	52
9	1.06464	74	9.99355	2	0.76683	73	0.76038	75	(1)7503.2	12.8	51
10	1.06538	74	9.99357	2	0.76756	73	0.76113	75	(1)7490.4	12.8	50
11	1.06612	75	9.99359	3	0.76829	73	0.76188	75	(1)7477.6	12.8	49
12	1.06687	74	9.99362	2	0.76902	73	0.76263	76	(1)7464.8	12.9	48
13	1.06761	74	9.99364	2	0.76975	73	0.76339	75	(1)7451.9	12.8	47
14	1.06835	75	9.99366	2	0.77048	74	0.76414	76	(1)7439.1	12.8	46
15	1.06910	74	9.99368	2	0.77122	73	0.76490	75	(1)7426.3	12.8	45
16	1.06984	75	9.99370	2	0.77195	74	0.76565	76	(1)7413.5	12.8	44
17	1.07059	75	9.99372	3	0.77269	74	0.76641	76	(1)7400.7	12.9	43
18	1.07134	75	9.99375	2	0.77343	74	0.76717	77	(1)7387.8	12.8	42
19	1.07209	75	9.99377	2	0.77417	74	0.76794	76	(1)7375.0	12.8	41
20	1.07284	76	9.99379	2	0.77491	74	0.76870	76	(1)7362.2	12.8	40
21	1.07360	75	9.99381	2	0.77565	74	0.76946	77	(1)7349.4	12.8	39
22	1.07435	76	9.99383	2	0.77649	75	0.77023	76	(1)7336.6	12.8	38
23	1.07511	75	9.99385	3	0.77714	75	0.77099	77	(1)7323.8	12.8	37
24	1.07586	76	9.99388	2	0.77789	74	0.77176	77	(1)7311.0	12.9	36
25	1.07662	76	9.99390	2	0.77863	75	0.77253	77	(1)7298.1	12.8	35
26	1.07738	76	9.99392	2	0.77938	75	0.77330	77	(1)7285.3	12.8	34
27	1.07814	76	9.99394	2	0.78013	75	0.77407	77	(1)7272.5	12.8	33
28	1.07890	77	9.99396	2	0.78088	76	0.77484	78	(1)7259.7	12.8	32
29	1.07967	76	9.99398	2	0.78164	75	0.77562	77	(1)7246.9	12.8	31
30	1.08043	77	9.99400	2	0.78239	76	0.77639	78	(1)7234.1	12.8	30
31	1.08120	77	9.99402	2	0.78315	75	0.77717	78	(1)7221.3	12.8	29
32	1.08197	76	9.99404	3	0.78390	76	0.77795	78	(1)7208.5	12.8	28
33	1.08273	77	9.99407	2	0.78466	76	0.77873	78	(1)7195.7	12.8	27
34	1.08350	78	9.99409	2	0.78542	76	0.77951	78	(1)7182.9	12.8	26
35	1.08428	77	9.99411	2	0.78618	76	0.78029	78	(1)7170.1	12.8	25
36	1.08505	77	9.99413	2	0.78694	77	0.78107	79	(1)7157.3	12.8	24
37	1.08582	78	9.99415	2	0.78771	76	0.78186	78	(1)7144.5	12.9	23
38	1.08660	78	9.99417	2	0.78847	77	0.78264	79	(1)7131.6	12.8	22
39	1.08738	77	9.99419	2	0.78924	77	0.78343	79	(1)7118.8	12.8	21
40	1.08815	78	9.99421	2	0.79001	77	0.78422	79	(1)7106.0	12.8	20
41	1.08893	78	9.99423	2	0.79078	77	0.78501	79	(1)7093.2	12.8	19
42	1.08971	79	9.99425	2	0.79155	77	0.78580	79	(1)7080.4	12.8	18
43	1.09050	78	9.99427	2	0.79232	77	0.78659	80	(1)7067.6	12.8	17
44	1.09128	79	9.99429	3	0.79309	78	0.78739	79	(1)7054.8	12.8	16
45	1.09207	78	9.99432	2	0.79387	78	0.78818	80	(1)7042.0	12.8	15
46	1.09285	79	9.99434	2	0.79465	77	0.78898	80	(1)7029.2	12.8	14
47	1.09364	79	9.99436	2	0.79542	78	0.78978	80	(1)7016.4	12.8	13
48	1.09443	79	9.99438	2	0.79620	78	0.79058	80	(1)7003.6	12.8	12
49	1.09522	79	9.99440	2	0.79698	79	0.79138	80	(1)6990.8	12.8	11
50	1.09601	80	9.99442	2	0.79777	78	0.79218	81	(1)6978.0	12.8	10
51	1.09681	79	9.99444	2	0.79855	78	0.79299	80	(1)6965.2	12.7	9
52	1.09760	80	9.99446	2	0.79933	79	0.79379	81	(1)6952.5	12.8	8
53	1.09840	80	9.99448	2	0.80012	79	0.79460	81	(1)6939.7	12.8	7
54	1.09920	80	9.99450	2	0.80091	79	0.79541	81	(1)6926.9	12.8	6
55	1.10000	80	9.99452	2	0.80170	79	0.79622	81	(1)6914.1	12.8	5
56	1.10080	80	9.99454	2	0.80249	79	0.79703	81	(1)6901.3	12.8	4
57	1.10160	80	9.99456	2	0.80328	80	0.79784	82	(1)6888.5	12.8	3
58	1.10240	81	9.99458	2	0.80408	79	0.79866	81	(1)6875.7	12.8	2
59	1.10321	81	9.99460	2	0.80487	80	0.79947	82	(1)6862.9	12.8	1
60	1.10402	81	9.99462		0.80567		0.80029		(1)6850.1		0

$\log \cos \omega$  Diff.  $\log \sec z$   $\log \cos \omega$  Diff.  $\log \sec z$   $\log \sin \omega$  Diff.  $\log \tan \omega$   $\log \sin z$  Diff.  $\log \tan z$

$\omega$	$z'$	Diff.	$\log Tg z$ $\log \sin \omega$	Diff.	$\log Cos z$ $\log \sec \omega$	Diff.	$\log Sin z$ $\log tg \omega$	Diff.			
0	1.10402	80	9.99462	2	0.80567	80	0.80029	82	(1)6850.1	12.8	60
1	1.10482	81	9.99464	2	0.80647	80	0.80111	82	(1)6837.3	12.8	59
2	1.10563	82	9.99466	2	0.80727	80	0.80193	82	(1)6824.5	12.8	58
3	1.10645	81	9.99468	2	0.80807	80	0.80275	82	(1)6811.7	12.7	57
4	1.10726	81	9.99470	2	0.80887	80	0.80357	82	(1)6799.0	12.8	56
5	1.10807	82	9.99472	2	0.80967	81	0.80439	83	(1)6786.2	12.8	55
6	1.10889	82	9.99474	2	0.81048	81	0.80522	83	(1)6773.4	12.8	54
7	1.10971	81	9.99476	2	0.81129	81	0.80605	83	(1)6760.6	12.8	53
8	1.11052	82	9.99478	2	0.81210	81	0.80688	83	(1)6747.8	12.8	52
9	1.11134	83	9.99480	2	0.81291	81	0.80771	83	(1)6735.0	12.8	51
10	1.11217	82	9.99482	2	0.81372	81	0.80854	83	(1)6722.2	12.8	50
11	1.11299	83	9.99484	2	0.81453	82	0.80937	84	(1)6709.4	12.7	49
12	1.11382	82	9.99486	2	0.81535	82	0.81021	83	(1)6696.7	12.8	48
13	1.11464	83	9.99488	2	0.81617	81	0.81104	84	(1)6683.9	12.8	47
14	1.11547	83	9.99490	2	0.81698	82	0.81188	84	(1)6671.1	12.8	46
15	1.11630	83	9.99492	2	0.81780	83	0.81272	84	(1)6658.3	12.8	45
16	1.11713	83	9.99494	1	0.81863	82	0.81356	84	(1)6645.5	12.7	44
17	1.11796	84	9.99495	2	0.81945	82	0.81440	85	(1)6632.8	12.8	43
18	1.11880	83	9.99497	2	0.82027	83	0.81525	84	(1)6620.0	12.8	42
19	1.11963	84	9.99499	2	0.82110	83	0.81609	85	(1)6607.2	12.8	41
20	1.12047	84	9.99501	2	0.82193	83	0.81694	85	(1)6594.4	12.8	40
21	1.12131	81	9.99503	2	0.82277	83	0.81779	85	(1)6581.6	12.7	39
22	1.12215	84	9.99505	2	0.82359	83	0.81864	85	(1)6568.9	12.8	38
23	1.12299	85	9.99507	2	0.82442	84	0.81949	86	(1)6556.1	12.8	37
24	1.12384	84	9.99509	2	0.82526	83	0.82035	85	(1)6543.3	12.8	36
25	1.12468	85	9.99511	2	0.82609	84	0.82120	86	(1)6530.5	12.7	35
26	1.12553	85	9.99513	2	0.82693	84	0.82206	86	(1)6517.8	12.8	34
27	1.12638	85	9.99515	2	0.82777	84	0.82292	86	(1)6505.0	12.8	33
28	1.12723	85	9.99517	1	0.82861	84	0.82378	86	(1)6492.2	12.8	32
29	1.12808	86	9.99518	2	0.82945	85	0.82464	86	(1)6479.4	12.7	31
30	1.12894	85	9.99520	2	0.83030	84	0.82550	87	(1)6466.7	12.8	30
31	1.12979	86	9.99522	2	0.83114	85	0.82637	86	(1)6453.9	12.9	29
32	1.13065	86	9.99524	2	0.83199	85	0.82723	87	(1)6441.1	12.8	28
33	1.13151	86	9.99526	2	0.83284	85	0.82810	87	(1)6428.3	12.7	27
34	1.13237	86	9.99528	2	0.83369	86	0.82897	87	(1)6415.6	12.8	26
35	1.13323	86	9.99530	2	0.83455	85	0.82984	88	(1)6402.8	12.8	25
36	1.13409	87	9.99532	1	0.83540	86	0.83072	87	(1)6390.0	12.7	24
37	1.13496	87	9.99533	2	0.83626	85	0.83159	88	(1)6377.3	12.8	23
38	1.13583	87	9.99535	2	0.83711	86	0.83247	88	(1)6364.5	12.8	22
39	1.13670	87	9.99537	2	0.83797	87	0.83335	88	(1)6351.7	12.8	21
40	1.13757	87	9.99539	2	0.83884	86	0.83423	88	(1)6338.9	12.7	20
41	1.13844	87	9.99541	2	0.83970	86	0.83511	88	(1)6326.2	12.8	19
42	1.13931	88	9.99543	2	0.84056	87	0.83599	89	(1)6313.4	12.8	18
43	1.14019	88	9.99545	1	0.84143	87	0.83688	88	(1)6300.6	12.7	17
44	1.14107	88	9.99546	2	0.84230	87	0.83776	89	(1)6287.9	12.8	16
45	1.14195	88	9.99548	2	0.84317	87	0.83865	89	(1)6275.1	12.8	15
46	1.14283	88	9.99550	2	0.84404	88	0.83954	90	(1)6262.3	12.7	14
47	1.14371	89	9.99552	2	0.84492	87	0.84044	89	(1)6249.6	12.8	13
48	1.14460	88	9.99554	2	0.84579	88	0.84133	90	(1)6236.8	12.7	12
49	1.14548	89	9.99556	1	0.84667	88	0.84223	89	(1)6224.1	12.8	11
50	1.14637	89	9.99557	2	0.84755	88	0.84312	90	(1)6211.3	12.8	10
51	1.14726	89	9.99559	2	0.84843	88	0.84402	90	(1)6198.5	12.7	9
52	1.14815	90	9.99561	2	0.84931	89	0.84492	91	(1)6185.8	12.8	8
53	1.14905	89	9.99563	2	0.85020	89	0.84583	90	(1)6173.0	12.8	7
54	1.14994	90	9.99565	1	0.85109	88	0.84673	91	(1)6160.2	12.7	6
55	1.15084	90	9.99566	2	0.85197	89	0.84764	91	(1)6147.5	12.8	5
56	1.15174	90	9.99568	2	0.85286	90	0.84855	91	(1)6134.7	12.7	4
57	1.15264	90	9.99570	2	0.85376	89	0.84946	91	(1)6122.0	12.8	3
58	1.15354	91	9.99572	2	0.85465	90	0.85037	91	(1)6109.2	12.7	2
59	1.15445	91	9.99574	1	0.85555	89	0.85128	92	(1)6096.5	12.8	1
60	1.15536	91	9.99575	1	0.85644	89	0.85220	92	(1)6083.7	12.8	0

$\log \cos \omega$   
 $\log \sec z$

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

l. cotg  $\omega$   
l. Cosc z

Diff.

$z'$

Diff.

$\omega$



$\omega'$	$z'$	Diff.	$\log \text{Tg } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.			
0	1.15536		9.99575	2	0.85644		0.85220		(1)6083.7		60
1	1.15626	90	9.99577	2	0.85734	90	0.85312	92	(1)6070.9	12.8	59
2	1.15718	92	9.99579	2	0.85825	91	0.85403	91	(1)6058.2	12.7	58
3	1.15809	91	9.99581	2	0.85915	90	0.85496	93	(1)6045.4	12.8	
4	1.15900	91	9.99582	1	0.86006	91	0.85588	92	(1)6032.7	12.7	57
5	1.15992	92	9.99584	2	0.86096	90	0.85680	92	(1)6019.9	12.8	56
6	1.16084	92	9.99586	2	0.86187	91	0.85773	93	(1)6007.2	12.7	55
7	1.16176	92	9.99588	2	0.86278	91	0.85866	93	(1)5994.4	12.8	54
8	1.16268	92	9.99589	1	0.86370	92	0.85959	93	(1)5981.7	12.7	53
9	1.16360	92	9.99591	2	0.86461	91	0.86052	93	(1)5968.9	12.8	52
10	1.16453	93	9.99593	2	0.86553	92	0.86146	94	(1)5956.1	12.8	51
11	1.16546	93	9.99595	2	0.86645	92	0.86239	93	(1)5943.4	12.7	50
12	1.16639	93	9.99596	1	0.86737	92	0.86333	94	(1)5930.6	12.8	49
13	1.16732	93	9.99598	2	0.86829	92	0.86427	94	(1)5917.9	12.7	48
14	1.16825	94	9.99600	2	0.86922	93	0.86522	95	(1)5905.1	12.8	47
15	1.16919	94	9.99601	1	0.87015	93	0.86616	94	(1)5892.4	12.7	46
16	1.17013	94	9.99603	2	0.87108	93	0.86711	95	(1)5879.6	12.8	45
17	1.17107	94	9.99605	2	0.87201	93	0.86806	95	(1)5866.9	12.7	44
18	1.17201	94	9.99607	2	0.87294	93	0.86901	95	(1)5854.1	12.8	43
19	1.17295	95	9.99608	1	0.87388	94	0.86996	95	(1)5841.4	12.7	42
20	1.17390	95	9.99610	2	0.87481	93	0.87091	95	(1)5828.7	12.7	41
21	1.17485	95	9.99612	2	0.87575	94	0.87187	96	(1)5815.9	12.8	40
22	1.17580	95	9.99613	1	0.87669	94	0.87283	96	(1)5803.2	12.7	39
23	1.17675	95	9.99615	2	0.87764	95	0.87379	96	(1)5790.4	12.8	38
24	1.17770	96	9.99617	2	0.87858	94	0.87475	96	(1)5777.7	12.7	37
25	1.17866	96	9.99618	1	0.87953	95	0.87572	97	(1)5764.9	12.8	36
26	1.17962	96	9.99620	2	0.88048	95	0.87668	96	(1)5752.2	12.7	35
27	1.18058	96	9.99622	2	0.88143	95	0.87765	97	(1)5739.4	12.8	34
28	1.18154	96	9.99624	2	0.88239	96	0.87862	97	(1)5726.7	12.7	33
29	1.18250	97	9.99625	1	0.88334	95	0.87960	98	(1)5713.9	12.8	32
30	1.18347	97	9.99627	2	0.88430	96	0.88057	97	(1)5701.2	12.7	31
31	1.18444	97	9.99629	2	0.88526	96	0.88155	98	(1)5688.5	12.8	30
32	1.18541	97	9.99630	1	0.88623	97	0.88253	98	(1)5675.7	12.7	29
33	1.18638	97	9.99632	2	0.88719	96	0.88351	98	(1)5663.0	12.8	28
34	1.18736	98	9.99633	1	0.88816	97	0.88449	98	(1)5650.2	12.7	27
35	1.18834	98	9.99635	2	0.88913	97	0.88548	99	(1)5637.5	12.8	26
36	1.18932	98	9.99637	2	0.89010	97	0.88647	99	(1)5624.8	12.7	25
37	1.19030	98	9.99638	1	0.89107	97	0.88746	99	(1)5612.0	12.8	24
38	1.19128	99	9.99640	2	0.89205	98	0.88845	99	(1)5599.3	12.7	23
39	1.19227	99	9.99642	2	0.89303	98	0.88944	99	(1)5586.5	12.8	22
40	1.19326	99	9.99643	1	0.89401	98	0.89044	100	(1)5573.8	12.7	21
41	1.19425	99	9.99645	2	0.89499	98	0.89144	100	(1)5561.1	12.8	20
42	1.19524	100	9.99647	2	0.89598	99	0.89244	100	(1)5548.3	12.7	19
43	1.19624	99	9.99648	1	0.89696	98	0.89344	100	(1)5535.6	12.8	18
44	1.19723	100	9.99650	2	0.89795	99	0.89445	101	(1)5522.9	12.7	17
45	1.19823	101	9.99651	1	0.89894	99	0.89546	101	(1)5510.1	12.8	16
46	1.19924	100	9.99653	2	0.89994	100	0.89647	101	(1)5497.4	12.7	15
47	1.20024	101	9.99655	2	0.90093	99	0.89748	101	(1)5484.7	12.8	14
48	1.20125	101	9.99656	1	0.90193	100	0.89850	102	(1)5471.9	12.7	13
49	1.20226	101	9.99658	2	0.90293	100	0.89951	101	(1)5459.2	12.8	12
50	1.20327	101	9.99659	1	0.90394	101	0.90053	102	(1)5446.5	12.7	11
51	1.20428	101	9.99661	2	0.90494	100	0.90155	102	(1)5433.7	12.8	10
52	1.20530	102	9.99663	2	0.90595	101	0.90258	103	(1)5421.0	12.7	9
53	1.20632	102	9.99664	1	0.90696	101	0.90360	102	(1)5408.3	12.8	8
54	1.20734	102	9.99666	2	0.90798	102	0.90463	103	(1)5395.6	12.7	7
55	1.20836	103	9.99667	1	0.90899	101	0.90566	103	(1)5382.8	12.8	6
56	1.20939	103	9.99669	2	0.91001	102	0.90670	104	(1)5370.1	12.7	5
57	1.21042	103	9.99670	1	0.91103	102	0.90773	103	(1)5357.3	12.8	4
58	1.21145	103	9.99672	2	0.91205	102	0.90877	104	(1)5344.6	12.7	3
59	1.21248	103	9.99674	2	0.91308	103	0.90981	104	(1)5331.9	12.8	2
60	1.21351	103	9.99675	1	0.91411	103	0.91086	105	(1)5319.2	12.7	1
			$\log \cos \omega$	Diff.	$\log \text{Cotg } z$	Diff.	$\log \text{Cotg } \omega$	Diff.	$z'$	Diff.	$\omega'$

$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.		
0	1.21351		9.99675		0.91411		0.91086		(1)5319.2	60
1	1.21455	104	9.99677	2	0.91514	103	0.91190	104	(1)5306.4	12.8 59
2	1.21559	104	9.99678	1	0.91617	103	0.91295	105	(1)5293.7	12.7 58
3	1.21663	104	9.99680	2	0.91720	103	0.91400	105	(1)5281.0	12.7 57
4	1.21768	105	9.99681	1	0.91824	104	0.91505	105	(1)5268.2	12.8 56
5	1.21873	105	9.99683	2	0.91928	104	0.91611	106	(1)5255.5	12.7 55
6	1.21978	105	9.99684	1	0.92032	104	0.91717	106	(1)5242.8	12.7 54
7	1.22083	105	9.99686	2	0.92137	105	0.91823	106	(1)5230.1	12.7 53
8	1.22189	106	9.99687	1	0.92242	105	0.91929	106	(1)5217.3	12.8 52
9	1.22294	105	9.99689	2	0.92347	105	0.92036	107	(1)5204.6	12.7 51
10	1.22400	106	9.99690	1	0.92452	105	0.92142	106	(1)5191.9	12.7 50
11	1.22507	107	9.99692	2	0.92558	106	0.92249	107	(1)5179.2	12.7 49
12	1.22613	106	9.99693	1	0.92663	105	0.92357	108	(1)5166.5	12.7 48
13	1.22720	107	9.99695	2	0.92769	106	0.92464	107	(1)5153.7	12.8 47
14	1.22827	107	9.99696	1	0.92876	106	0.92572	108	(1)5141.0	12.7 46
15	1.22935	108	9.99698	2	0.92982	106	0.92680	108	(1)5128.3	12.7 45
16	1.23042	107	9.99699	1	0.93089	107	0.92789	109	(1)5115.6	12.7 44
17	1.23150	108	9.99701	2	0.93196	107	0.92897	108	(1)5102.8	12.8 43
18	1.23258	108	9.99702	1	0.93304	108	0.93006	109	(1)5090.1	12.7 42
19	1.23367	109	9.99704	2	0.93411	107	0.93115	109	(1)5077.4	12.7 41
20	1.23475	108	9.99705	1	0.93519	108	0.93225	110	(1)5064.7	12.7 40
21	1.23584	109	9.99707	2	0.93628	109	0.93334	109	(1)5052.0	12.7 39
22	1.23694	110	9.99708	1	0.93736	108	0.93444	110	(1)5039.2	12.8 38
23	1.23803	109	9.99710	2	0.93845	109	0.93555	111	(1)5026.5	12.7 37
24	1.23913	110	9.99711	1	0.93954	109	0.93666	110	(1)5013.8	12.7 36
25	1.24023	110	9.99713	2	0.94063	109	0.93776	111	(1)5001.1	12.7 35
26	1.24133	110	9.99714	1	0.94173	110	0.93887	111	(1)4988.4	12.7 34
27	1.24244	111	9.99716	2	0.94283	110	0.93998	111	(1)4975.7	12.7 33
28	1.24355	111	9.99717	1	0.94393	110	0.94110	112	(1)4962.9	12.8 32
29	1.24466	111	9.99718	2	0.94503	111	0.94222	112	(1)4950.2	12.7 31
30	1.24577	111	9.99720	1	0.94614	111	0.94334	112	(1)4937.5	12.7 30
31	1.24689	112	9.99721	2	0.94725	111	0.94447	113	(1)4924.8	12.7 29
32	1.24801	112	9.99723	1	0.94836	112	0.94559	112	(1)4912.1	12.7 28
33	1.24913	113	9.99724	2	0.94948	112	0.94672	113	(1)4899.4	12.7 27
34	1.25026	113	9.99726	1	0.95060	112	0.94786	114	(1)4886.7	12.7 26
35	1.25139	113	9.99727	2	0.95172	113	0.94899	113	(1)4873.9	12.8 25
36	1.25252	114	9.99728	1	0.95285	112	0.95013	114	(1)4861.2	12.7 24
37	1.25366	114	9.99730	2	0.95397	113	0.95127	114	(1)4848.5	12.7 23
38	1.25479	113	9.99731	1	0.95510	113	0.95242	115	(1)4835.8	12.7 22
39	1.25593	114	9.99733	2	0.95624	114	0.95357	115	(1)4823.1	12.7 21
40	1.25708	115	9.99734	1	0.95738	114	0.95472	115	(1)4810.4	12.7 20
41	1.25822	114	9.99736	2	0.95851	113	0.95587	116	(1)4797.7	12.7 19
42	1.25937	115	9.99737	1	0.95966	115	0.95703	116	(1)4785.0	12.7 18
43	1.26053	116	9.99738	2	0.96080	114	0.95819	116	(1)4772.3	12.7 17
44	1.26168	115	9.99740	1	0.96195	115	0.95935	117	(1)4759.5	12.8 16
45	1.26284	116	9.99741	2	0.96310	115	0.96052	117	(1)4746.8	12.7 15
46	1.26400	116	9.99742	1	0.96426	116	0.96168	116	(1)4734.1	12.7 14
47	1.26517	117	9.99744	2	0.96542	116	0.96286	118	(1)4721.4	12.7 13
48	1.26634	117	9.99745	1	0.96658	116	0.96403	117	(1)4708.7	12.7 12
49	1.26751	117	9.99747	2	0.96774	116	0.96521	118	(1)4696.0	12.7 11
50	1.26868	118	9.99748	1	0.96891	117	0.96639	118	(1)4683.3	12.7 10
51	1.26986	118	9.99749	2	0.97008	117	0.96758	119	(1)4670.6	12.7 9
52	1.27104	118	9.99751	1	0.97126	118	0.96876	118	(1)4657.9	12.7 8
53	1.27223	118	9.99752	2	0.97243	117	0.96995	119	(1)4645.2	12.7 7
54	1.27341	119	9.99753	1	0.97361	118	0.97115	120	(1)4632.5	12.7 6
55	1.27460	119	9.99755	2	0.97480	119	0.97234	119	(1)4619.8	12.7 5
56	1.27580	120	9.99756	1	0.97598	118	0.97355	121	(1)4607.1	12.7 4
57	1.27699	119	9.99757	2	0.97717	119	0.97475	120	(1)4594.4	12.7 3
58	1.27819	120	9.99759	1	0.97837	120	0.97596	121	(1)4581.7	12.7 2
59	1.27940	121	9.99760	2	0.97957	120	0.97717	121	(1)4569.0	12.7 1
60	1.28060	120	9.99761	1	0.98077	120	0.97838	121	(1)4556.3	12.7 0

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega'$





$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
10'	1.29286	21	9.99775	0	0.99296	20	0.99070	21	(1)4429.2	2.1	50'
10	1.29307	20	9.99775	0	0.99316	21	0.99091	21	(1)4427.1	2.1	50
20	1.29327	21	9.99775	0	0.99337	21	0.99112	21	(1)4425.0	2.1	40
30	1.29348	21	9.99775	0	0.99358	20	0.99133	21	(1)4422.9	2.1	30
40	1.29369	21	9.99775	1	0.99378	20	0.99154	20	(1)4420.8	2.1	20
50	1.29390	21	9.99776	0	0.99399	21	0.99174	21	(1)4418.7	2.2	10
11'	1.29411	20	9.99776	0	0.99419	21	0.99195	21	(1)4416.5	2.1	49'
10	1.29431	21	9.99776	0	0.99440	21	0.99216	21	(1)4414.4	2.1	50
20	1.29452	21	9.99776	0	0.99461	21	0.99237	21	(1)4412.3	2.1	40
30	1.29473	21	9.99776	1	0.99482	20	0.99258	21	(1)4410.2	2.1	30
40	1.29494	21	9.99777	0	0.99502	20	0.99279	21	(1)4408.1	2.1	20
50	1.29515	20	9.99777	0	0.99523	21	0.99300	21	(1)4406.0	2.1	10
12'	1.29535	21	9.99777	0	0.99544	20	0.99321	21	(1)4403.9	2.2	48'
10	1.29556	21	9.99777	1	0.99564	21	0.99342	21	(1)4401.7	2.1	50
20	1.29577	21	9.99778	0	0.99585	21	0.99363	21	(1)4399.6	2.1	40
30	1.29598	21	9.99778	0	0.99606	21	0.99384	21	(1)4397.5	2.1	30
40	1.29619	21	9.99778	0	0.99627	20	0.99405	21	(1)4395.4	2.1	20
50	1.29640	21	9.99778	0	0.99647	21	0.99426	21	(1)4393.3	2.1	10
13'	1.29661	20	9.99778	1	0.99668	21	0.99447	21	(1)4391.2	2.2	47'
10	1.29681	21	9.99779	0	0.99689	21	0.99468	21	(1)4389.0	2.1	50
20	1.29702	21	9.99779	0	0.99710	21	0.99489	21	(1)4386.9	2.1	40
30	1.29723	21	9.99779	0	0.99731	20	0.99510	21	(1)4384.8	2.1	30
40	1.29744	21	9.99779	0	0.99751	21	0.99531	21	(1)4382.7	2.1	20
50	1.29765	21	9.99779	1	0.99772	21	0.99552	21	(1)4380.6	2.1	10
14'	1.29786	21	9.99780	0	0.99793	21	0.99573	21	(1)4378.5	2.2	46'
10	1.29807	21	9.99780	0	0.99814	21	0.99594	21	(1)4376.3	2.1	50
20	1.29828	21	9.99780	0	0.99835	21	0.99615	21	(1)4374.2	2.1	40
30	1.29849	21	9.99780	1	0.99856	21	0.99636	21	(1)4372.1	2.1	30
40	1.29870	21	9.99781	0	0.99877	20	0.99657	21	(1)4370.0	2.1	20
50	1.29891	21	9.99781	0	0.99897	21	0.99678	21	(1)4367.9	2.1	10
15'	1.29912	21	9.99781	0	0.99918	21	0.99699	21	(1)4365.8	2.2	45'
10	1.29933	21	9.99781	0	0.99939	21	0.99720	21	(1)4363.6	2.1	50
20	1.29954	21	9.99781	1	0.99960	21	0.99742	21	(1)4361.5	2.1	40
30	1.29975	21	9.99782	0	0.99981	21	0.99763	21	(1)4359.4	2.1	30
40	1.29996	21	9.99782	0	1.00002	21	0.99784	21	(1)4357.3	2.1	20
50	1.30017	21	9.99782	0	1.00023	21	0.99805	21	(1)4355.2	2.1	10
16'	1.30038	21	9.99782	0	1.00044	21	0.99826	21	(1)4353.1	2.2	44'
10	1.30059	21	9.99782	1	1.00065	21	0.99847	22	(1)4350.9	2.1	50
20	1.30080	22	9.99783	0	1.00086	21	0.99869	21	(1)4348.8	2.1	40
30	1.30102	21	9.99783	0	1.00107	21	0.99890	21	(1)4346.7	2.1	30
40	1.30123	21	9.99783	0	1.00128	21	0.99911	21	(1)4344.6	2.1	20
50	1.30144	21	9.99783	0	1.00149	21	0.99932	22	(1)4342.5	2.1	10
17'	1.30165	21	9.99783	1	1.00170	21	0.99954	21	(1)4340.4	2.2	43'
10	1.30186	21	9.99784	0	1.00191	21	0.99975	21	(1)4338.2	2.1	50
20	1.30207	21	9.99784	0	1.00212	21	0.99996	21	(1)4336.1	2.1	40
30	1.30228	22	9.99784	0	1.00233	21	1.00017	22	(1)4334.0	2.1	30
40	1.30250	21	9.99784	0	1.00254	21	1.00039	21	(1)4331.9	2.1	20
50	1.30271	21	9.99785	1	1.00275	21	1.00060	21	(1)4329.8	2.1	10
18'	1.30292	21	9.99785	0	1.00296	22	1.00081	21	(1)4327.7	2.1	42'
10	1.30313	21	9.99785	0	1.00318	21	1.00102	22	(1)4325.6	2.2	50
20	1.30334	22	9.99785	0	1.00339	21	1.00124	21	(1)4323.4	2.1	40
30	1.30356	21	9.99785	1	1.00360	21	1.00145	21	(1)4321.3	2.1	30
40	1.30377	21	9.99786	0	1.00381	21	1.00166	22	(1)4319.2	2.1	20
50	1.30398	21	9.99786	0	1.00402	21	1.00188	21	(1)4317.1	2.1	10
19'	1.30419	22	9.99786	0	1.00423	21	1.00209	22	(1)4315.0	2.1	41'
10	1.30441	21	9.99786	0	1.00444	22	1.00231	21	(1)4312.9	2.2	50
20	1.30462	21	9.99786	1	1.00466	21	1.00252	21	(1)4310.7	2.1	40
30	1.30483	21	9.99787	0	1.00487	21	1.00273	22	(1)4308.6	2.1	30
40	1.30504	22	9.99787	0	1.00508	21	1.00295	21	(1)4306.5	2.1	20
50	1.30526	21	9.99787	0	1.00529	21	1.00316	22	(1)4304.4	2.1	10
20'	1.30547	21	9.99787	0	1.00550	21	1.00338	22	(1)4302.3	2.1	40'



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>20'</b>	1.30547	21	9.99787	0	1.00550	22	1.00338	21	(1)4302.3	2.1	<b>40'</b>	
10	1.30568	22	9.99787	1	1.00572	21	1.00359	21	(1)4300.2	2.2	50	
20	1.30590	21	9.99788	0	1.00593	21	1.00380	22	(1)4298.0	2.1	40	
30	1.30611	21	9.99788	0	1.00614	21	1.00402	21	(1)4295.9	2.1	30	
40	1.30632	22	9.99788	0	1.00635	22	1.00423	22	(1)4293.8	2.1	20	
50	1.30654	21	9.99788	0	1.00657	21	1.00445	21	(1)4291.7	2.1	10	
<b>21'</b>	1.30675	22	9.99788	1	1.00678	21	1.00466	22	(1)4289.6	2.1	<b>39'</b>	
10	1.30697	21	9.99789	0	1.00699	21	1.00488	21	(1)4287.5	2.1	50	
20	1.30718	22	9.99789	0	1.00720	22	1.00509	22	(1)4285.4	2.2	40	
30	1.30739	21	9.99789	0	1.00742	22	1.00531	21	(1)4283.2	2.1	30	
40	1.30761	22	9.99789	1	1.00763	21	1.00552	22	(1)4281.1	2.1	20	
50	1.30782	22	9.99790	0	1.00784	22	1.00574	21	(1)4279.0	2.1	10	
<b>22'</b>	1.30804	21	9.99790	0	1.00806	21	1.00595	22	(1)4276.9	2.1	<b>38'</b>	
10	1.30825	22	9.99790	0	1.00827	21	1.00617	22	(1)4274.8	2.1	50	
20	1.30847	21	9.99790	0	1.00848	22	1.00639	21	(1)4272.7	2.2	40	
30	1.30868	22	9.99790	1	1.00870	21	1.00660	22	(1)4270.5	2.1	30	
40	1.30890	21	9.99791	0	1.00891	22	1.00682	21	(1)4268.4	2.1	20	
50	1.30911	22	9.99791	0	1.00913	21	1.00703	22	(1)4266.3	2.1	10	
<b>23'</b>	1.30933	21	9.99791	0	1.00934	21	1.00725	22	(1)4264.2	2.1	<b>37'</b>	
10	1.30954	22	9.99791	0	1.00955	22	1.00747	21	(1)4262.1	2.1	50	
20	1.30976	21	9.99791	1	1.00977	21	1.00768	22	(1)4260.0	2.2	40	
30	1.30997	22	9.99792	0	1.00998	22	1.00790	22	(1)4257.8	2.1	30	
40	1.31019	21	9.99792	0	1.01020	21	1.00812	21	(1)4255.7	2.1	20	
50	1.31040	22	9.99792	0	1.01041	22	1.00833	22	(1)4253.6	2.1	10	
<b>24'</b>	1.31062	21	9.99792	0	1.01063	21	1.00855	22	(1)4251.5	2.1	<b>36'</b>	
10	1.31083	22	9.99792	1	1.01084	22	1.00877	21	(1)4249.4	2.1	50	
20	1.31105	22	9.99793	0	1.01106	21	1.00898	22	(1)4247.3	2.1	40	
30	1.31127	21	9.99793	0	1.01127	22	1.00920	22	(1)4245.2	2.2	30	
40	1.31148	22	9.99793	0	1.01149	21	1.00942	21	(1)4243.0	2.1	20	
50	1.31170	22	9.99793	0	1.01170	22	1.00963	22	(1)4240.9	2.1	10	
<b>25'</b>	1.31192	21	9.99793	1	1.01192	21	1.00985	22	(1)4238.8	2.1	<b>35'</b>	
10	1.31213	22	9.99794	0	1.01213	22	1.01007	22	(1)4236.7	2.1	50	
20	1.31235	21	9.99794	0	1.01235	21	1.01029	21	(1)4234.6	2.1	40	
30	1.31256	22	9.99794	0	1.01256	22	1.01050	22	(1)4232.5	2.2	30	
40	1.31278	22	9.99794	0	1.01278	21	1.01072	22	(1)4230.3	2.1	20	
50	1.31300	22	9.99794	1	1.01299	22	1.01094	22	(1)4228.2	2.1	10	
<b>26'</b>	1.31322	21	9.99795	0	1.01321	22	1.01116	22	(1)4226.1	2.1	<b>34'</b>	
10	1.31343	22	9.99795	0	1.01343	21	1.01138	21	(1)4224.0	2.1	50	
20	1.31365	22	9.99795	0	1.01364	22	1.01159	22	(1)4221.9	2.1	40	
30	1.31387	21	9.99795	1	1.01386	22	1.01181	22	(1)4219.8	2.1	30	
40	1.31408	22	9.99796	0	1.01408	21	1.01203	22	(1)4217.7	2.2	20	
50	1.31430	22	9.99796	0	1.01429	22	1.01225	22	(1)4215.5	2.1	10	
<b>27'</b>	1.31452	22	9.99796	0	1.01451	22	1.01247	22	(1)4213.4	2.1	<b>33'</b>	
10	1.31474	22	9.99796	0	1.01473	21	1.01269	22	(1)4211.3	2.1	50	
20	1.31496	21	9.99796	1	1.01494	22	1.01291	22	(1)4209.2	2.1	40	
30	1.31517	22	9.99797	0	1.01516	22	1.01313	21	(1)4207.1	2.1	30	
40	1.31539	22	9.99797	0	1.01538	21	1.01334	22	(1)4205.0	2.2	20	
50	1.31561	22	9.99797	0	1.01559	22	1.01356	22	(1)4202.8	2.1	10	
<b>28'</b>	1.31583	22	9.99797	0	1.01581	22	1.01378	22	(1)4200.7	2.1	<b>32'</b>	
10	1.31605	22	9.99797	1	1.01603	22	1.01400	22	(1)4198.6	2.1	50	
20	1.31627	21	9.99798	0	1.01625	21	1.01422	22	(1)4196.5	2.1	40	
30	1.31648	22	9.99798	0	1.01646	22	1.01444	22	(1)4194.4	2.1	30	
40	1.31670	22	9.99798	0	1.01668	22	1.01466	22	(1)4192.3	2.1	20	
50	1.31692	22	9.99798	0	1.01690	22	1.01488	22	(1)4190.2	2.2	10	
<b>29'</b>	1.31714	22	9.99798	1	1.01712	22	1.01510	22	(1)4188.0	2.1	<b>31'</b>	
10	1.31736	22	9.99799	0	1.01734	21	1.01532	22	(1)4185.9	2.1	50	
20	1.31758	22	9.99799	0	1.01755	22	1.01554	22	(1)4183.8	2.1	40	
30	1.31780	22	9.99799	0	1.01777	22	1.01576	22	(1)4181.7	2.1	30	
40	1.31802	22	9.99799	0	1.01799	22	1.01598	22	(1)4179.6	2.1	20	
50	1.31824	22	9.99799	0	1.01821	22	1.01620	22	(1)4177.5	2.1	10	
<b>30'</b>	1.31846	22	9.99800	1	1.01843	22	1.01642	22	(1)4175.3	2.2	<b>30'</b>	
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ l. Cotg z	Diff.	log cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega'$	

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>30'</b>	1.31846	22	9.99800	0	1.01843	22	1.01642	22	(1)4175.3	2.1	<b>30'</b>	
10	1.31868	22	9.99800	0	1.01865	21	1.01664	22	(1)4173.2	2.1	50	
20	1.31890	22	9.99800	0	1.01886	22	1.01686	23	(1)4171.1	2.1	40	
30	1.31912	22	9.99800	0	1.01908	22	1.01709	22	(1)4169.0	2.1	30	
40	1.31934	22	9.99800	1	1.01930	22	1.01731	22	(1)4166.9	2.1	20	
50	1.31956	22	9.99801	1	1.01952	22	1.01753	22	(1)4164.8	2.1	10	
<b>31'</b>	1.31978	22	9.99801	0	1.01974	22	1.01775	22	(1)4162.7	2.2	<b>29'</b>	
10	1.32000	22	9.99801	0	1.01996	22	1.01797	22	(1)4160.5	2.1	50	
20	1.32022	22	9.99801	0	1.02018	22	1.01819	22	(1)4158.4	2.1	40	
30	1.32044	22	9.99801	1	1.02040	22	1.01841	23	(1)4156.3	2.1	30	
40	1.32066	22	9.99802	0	1.02062	22	1.01864	22	(1)4154.2	2.1	20	
50	1.32088	22	9.99802	0	1.02084	22	1.01886	22	(1)4152.1	2.1	10	
<b>32'</b>	1.32110	22	9.99802	0	1.02106	22	1.01908	22	(1)4150.0	2.2	<b>28'</b>	
10	1.32132	22	9.99802	0	1.02128	22	1.01930	22	(1)4147.8	2.1	50	
20	1.32154	22	9.99802	0	1.02150	22	1.01952	23	(1)4145.7	2.1	40	
30	1.32176	23	9.99803	0	1.02172	22	1.01975	22	(1)4143.6	2.1	30	
40	1.32199	22	9.99803	0	1.02194	22	1.01997	22	(1)4141.5	2.1	20	
50	1.32221	22	9.99803	0	1.02216	22	1.02019	22	(1)4139.4	2.1	10	
<b>33'</b>	1.32243	22	9.99803	0	1.02238	22	1.02041	23	(1)4137.3	2.1	<b>27'</b>	
10	1.32265	22	9.99803	0	1.02260	22	1.02064	22	(1)4135.2	2.2	50	
20	1.32287	22	9.99804	1	1.02282	22	1.02086	22	(1)4133.0	2.1	40	
30	1.32309	23	9.99804	0	1.02304	22	1.02108	23	(1)4130.9	2.1	30	
40	1.32332	22	9.99804	0	1.02326	23	1.02131	22	(1)4128.8	2.1	20	
50	1.32354	22	9.99804	0	1.02349	22	1.02153	22	(1)4126.7	2.1	10	
<b>34'</b>	1.32376	22	9.99804	1	1.02371	22	1.02175	23	(1)4124.6	2.1	<b>26'</b>	
10	1.32398	23	9.99805	0	1.02393	22	1.02198	22	(1)4122.5	2.1	50	
20	1.32421	22	9.99805	0	1.02415	22	1.02220	22	(1)4120.4	2.2	40	
30	1.32443	22	9.99805	0	1.02437	22	1.02242	23	(1)4118.2	2.1	30	
40	1.32465	22	9.99805	0	1.02459	23	1.02265	22	(1)4116.1	2.1	20	
50	1.32487	23	9.99805	1	1.02482	22	1.02287	22	(1)4114.0	2.1	10	
<b>35'</b>	1.32510	22	9.99806	0	1.02504	22	1.02309	23	(1)4111.9	2.1	<b>25'</b>	
10	1.32532	22	9.99806	0	1.02526	22	1.02332	22	(1)4109.8	2.1	50	
20	1.32554	23	9.99806	0	1.02548	22	1.02354	23	(1)4107.7	2.2	40	
30	1.32577	22	9.99806	0	1.02570	23	1.02377	22	(1)4105.5	2.1	30	
40	1.32599	23	9.99806	0	1.02593	22	1.02399	23	(1)4103.4	2.1	20	
50	1.32621	22	9.99807	1	1.02615	22	1.02422	22	(1)4101.3	2.1	10	
<b>36'</b>	1.32644	22	9.99807	0	1.02637	22	1.02444	23	(1)4099.2	2.1	<b>24'</b>	
10	1.32666	22	9.99807	0	1.02659	23	1.02467	22	(1)4097.1	2.1	50	
20	1.32688	22	9.99807	0	1.02682	22	1.02489	23	(1)4095.0	2.1	40	
30	1.32711	23	9.99807	1	1.02704	22	1.02512	22	(1)4092.9	2.2	30	
40	1.32733	23	9.99808	0	1.02726	23	1.02534	23	(1)4090.7	2.1	20	
50	1.32756	22	9.99808	0	1.02749	22	1.02557	22	(1)4088.6	2.1	10	
<b>37'</b>	1.32778	23	9.99808	0	1.02771	22	1.02579	23	(1)4086.5	2.1	<b>23'</b>	
10	1.32801	22	9.99808	0	1.02793	23	1.02602	22	(1)4084.4	2.1	50	
20	1.32823	23	9.99808	0	1.02816	22	1.02624	23	(1)4082.3	2.1	40	
30	1.32846	22	9.99809	0	1.02838	23	1.02647	22	(1)4080.2	2.1	30	
40	1.32868	23	9.99809	0	1.02861	22	1.02669	23	(1)4078.1	2.2	20	
50	1.32891	22	9.99809	0	1.02883	22	1.02692	23	(1)4075.9	2.1	10	
<b>38'</b>	1.32913	23	9.99809	0	1.02905	23	1.02715	22	(1)4073.8	2.1	<b>22'</b>	
10	1.32936	22	9.99809	0	1.02928	22	1.02737	23	(1)4071.7	2.1	50	
20	1.32958	23	9.99810	1	1.02950	23	1.02760	22	(1)4069.6	2.1	40	
30	1.32981	22	9.99810	0	1.02973	22	1.02782	23	(1)4067.5	2.1	30	
40	1.33003	23	9.99810	0	1.02995	23	1.02805	23	(1)4065.4	2.1	20	
50	1.33026	22	9.99810	0	1.03018	22	1.02828	22	(1)4063.3	2.2	10	
<b>39'</b>	1.33048	23	9.99810	1	1.03040	23	1.02850	23	(1)4061.1	2.1	<b>21'</b>	
10	1.33071	23	9.99811	0	1.03063	22	1.02873	23	(1)4059.0	2.1	50	
20	1.33094	23	9.99811	0	1.03085	23	1.02896	23	(1)4056.9	2.1	40	
30	1.33116	22	9.99811	0	1.03108	22	1.02919	22	(1)4054.8	2.1	30	
40	1.33139	22	9.99811	0	1.03130	23	1.02941	23	(1)4052.7	2.1	20	
50	1.33161	23	9.99811	0	1.03153	22	1.02964	23	(1)4050.6	2.2	10	
<b>40'</b>	1.33184	23	9.99812	1	1.03175	22	1.02987	23	(1)4048.4	2.2	<b>20'</b>	
			log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ l. Cotg z	Diff.	l. cotg $\omega$ l. Cosec z	Diff.	$z'$	Diff.	$\omega$	



$\omega'$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>40'</b>	1.33184	23	9.99812	0	1.03175	23	1.02987	22	(1)4048.4		<b>20'</b>
10	1.33207	22	9.99812	0	1.03198	22	1.03009	23	(1)4046.3	2.1	50
20	1.33229	23	9.99812	0	1.03220	22	1.03032	23	(1)4044.2	2.1	40
30	1.33252	23	9.99812	0	1.03243	22	1.03055	23	(1)4042.1	2.1	30
40	1.33275	22	9.99812	1	1.03265	23	1.03078	23	(1)4040.0	2.1	20
50	1.33297	23	9.99813	0	1.03288	23	1.03101	22	(1)4037.9	2.1	10
<b>41'</b>	1.33320	23	9.99813	0	1.03311	22	1.03123	23	(1)4035.8	2.2	<b>19'</b>
10	1.33343	23	9.99813	0	1.03333	23	1.03146	23	(1)4033.6	2.1	50
20	1.33366	22	9.99813	0	1.03356	23	1.03169	23	(1)4031.5	2.1	40
30	1.33388	23	9.99813	1	1.03379	22	1.03192	23	(1)4029.4	2.1	30
40	1.33411	23	9.99814	0	1.03401	23	1.03215	23	(1)4027.3	2.1	20
50	1.33434	23	9.99814	0	1.03424	24	1.03238	23	(1)4025.2	2.1	10
<b>42'</b>	1.33457	22	9.99814	0	1.03447	22	1.03261	22	(1)4023.1	2.1	<b>18'</b>
10	1.33479	23	9.99814	0	1.03469	23	1.03283	23	(1)4021.0	2.2	50
20	1.33502	23	9.99814	1	1.03492	23	1.03306	23	(1)4018.8	2.1	40
30	1.33525	23	9.99815	0	1.03515	23	1.03329	23	(1)4016.7	2.1	30
40	1.33548	23	9.99815	0	1.03538	22	1.03352	23	(1)4014.6	2.1	20
50	1.33571	23	9.99815	0	1.03560	23	1.03375	23	(1)4012.5	2.1	10
<b>43'</b>	1.33594	23	9.99815	0	1.03583	23	1.03398	23	(1)4010.4	2.1	<b>17'</b>
10	1.33617	22	9.99815	0	1.03606	23	1.03421	23	(1)4008.3	2.1	50
20	1.33639	23	9.99815	1	1.03629	22	1.03444	23	(1)4006.2	2.2	40
30	1.33662	23	9.99816	0	1.03651	23	1.03467	23	(1)4004.0	2.1	30
40	1.33685	23	9.99816	0	1.03674	23	1.03490	23	(1)4001.9	2.1	20
50	1.33708	23	9.99816	0	1.03697	23	1.03513	23	(1)3999.8	2.1	10
<b>44'</b>	1.33731	23	9.99816	0	1.03720	23	1.03536	23	(1)3997.7	2.1	<b>16'</b>
10	1.33754	23	9.99816	1	1.03743	23	1.03559	23	(1)3995.6	2.1	50
20	1.33777	23	9.99817	0	1.03766	22	1.03582	23	(1)3993.5	2.1	40
30	1.33800	23	9.99817	0	1.03788	23	1.03605	23	(1)3991.4	2.2	30
40	1.33823	23	9.99817	0	1.03811	23	1.03628	23	(1)3989.2	2.1	20
50	1.33846	23	9.99817	0	1.03834	23	1.03651	24	(1)3987.1	2.1	10
<b>45'</b>	1.33869	23	9.99817	1	1.03857	23	1.03675	23	(1)3985.0	2.1	<b>15'</b>
10	1.33892	23	9.99818	0	1.03880	23	1.03698	23	(1)3982.9	2.1	50
20	1.33915	23	9.99818	0	1.03903	23	1.03721	23	(1)3980.8	2.1	40
30	1.33938	23	9.99818	0	1.03926	23	1.03744	23	(1)3978.7	2.1	30
40	1.33961	23	9.99818	0	1.03949	23	1.03767	23	(1)3976.6	2.2	20
50	1.33984	23	9.99818	1	1.03972	23	1.03790	23	(1)3974.4	2.1	10
<b>46'</b>	1.34007	23	9.99819	0	1.03995	23	1.03813	24	(1)3972.3	2.1	<b>14'</b>
10	1.34030	23	9.99819	0	1.04018	23	1.03837	23	(1)3970.2	2.1	50
20	1.34053	24	9.99819	0	1.04041	23	1.03860	23	(1)3968.1	2.1	40
30	1.34077	23	9.99819	0	1.04064	23	1.03883	23	(1)3966.0	2.1	30
40	1.34100	23	9.99819	1	1.04087	23	1.03906	23	(1)3963.9	2.1	20
50	1.34123	23	9.99820	0	1.04110	23	1.03929	24	(1)3961.8	2.2	10
<b>47'</b>	1.34146	23	9.99820	0	1.04133	23	1.03953	23	(1)3959.6	2.1	<b>13'</b>
10	1.34169	23	9.99820	0	1.04156	23	1.03976	23	(1)3957.5	2.1	50
20	1.34192	23	9.99820	0	1.04179	23	1.03999	24	(1)3955.4	2.1	40
30	1.34215	24	9.99820	1	1.04202	23	1.04023	23	(1)3953.3	2.1	30
40	1.34239	23	9.99821	0	1.04225	23	1.04046	23	(1)3951.2	2.1	20
50	1.34262	23	9.99821	0	1.04248	24	1.04069	23	(1)3949.1	2.1	10
<b>48'</b>	1.34285	23	9.99821	0	1.04272	23	1.04092	24	(1)3947.0	2.2	<b>12'</b>
10	1.34308	24	9.99821	0	1.04295	23	1.04116	23	(1)3944.8	2.1	50
20	1.34332	23	9.99821	0	1.04318	23	1.04139	23	(1)3942.7	2.1	40
30	1.34355	23	9.99821	1	1.04341	23	1.04162	24	(1)3940.6	2.1	30
40	1.34378	23	9.99822	0	1.04364	23	1.04186	23	(1)3938.5	2.1	20
50	1.34401	24	9.99822	0	1.04387	24	1.04209	24	(1)3936.4	2.1	10
<b>49'</b>	1.34425	23	9.99822	0	1.04411	23	1.04233	23	(1)3934.3	2.1	<b>11'</b>
10	1.34448	23	9.99822	0	1.04434	23	1.04256	23	(1)3932.2	2.2	50
20	1.34471	24	9.99822	1	1.04457	23	1.04279	24	(1)3930.0	2.1	40
30	1.34495	23	9.99823	0	1.04480	24	1.04303	23	(1)3927.9	2.1	30
40	1.34518	23	9.99823	0	1.04504	23	1.04326	24	(1)3925.8	2.1	20
50	1.34541	24	9.99823	0	1.04527	23	1.04350	23	(1)3923.7	2.1	10
<b>50'</b>	1.34565	24	9.99823	0	1.04550	23	1.04373	23	(1)3921.6	2.1	<b>10'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

l. cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega'$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>50'</b>	1.34565		9.99823		1.04550		1.04373		(1)3921.6		<b>10'</b>
10	1.34588	23	9.99823	0	1.04573	23	1.04397	24	(1)3919.5	2.1	50
20	1.34612	24	9.99824	1	1.04597	24	1.04420	23	(1)3917.4	2.1	40
30	1.34635	23	9.99824	0	1.04620	23	1.04444	24	(1)3915.2	2.2	30
40	1.34658	23	9.99824	0	1.04643	23	1.04467	23	(1)3913.1	2.1	20
50	1.34682	24	9.99824	0	1.04667	24	1.04491	24	(1)3911.0	2.1	10
		23		0		23		23		2.1	
<b>51'</b>	1.34705		9.99824		1.04690		1.04514		(1)3908.9		<b>9'</b>
10	1.34729	24	9.99825	1	1.04713	23	1.04538	24	(1)3906.8	2.1	50
20	1.34752	23	9.99825	0	1.04737	24	1.04561	23	(1)3904.7	2.1	40
30	1.34776	24	9.99825	0	1.04760	23	1.04585	24	(1)3902.6	2.2	30
40	1.34799	23	9.99825	0	1.04784	24	1.04609	23	(1)3900.4	2.1	20
50	1.34823	24	9.99825	0	1.04807	23	1.04632	24	(1)3898.3	2.1	10
		23		0		23		24		2.1	
<b>52'</b>	1.34846		9.99825		1.04830		1.04656		(1)3896.2		<b>8'</b>
10	1.34870	24	9.99826	1	1.04854	24	1.04680	24	(1)3894.1	2.1	50
20	1.34893	23	9.99826	0	1.04877	24	1.04703	23	(1)3892.0	2.1	40
30	1.34917	24	9.99826	0	1.04901	24	1.04727	24	(1)3889.9	2.1	30
40	1.34940	23	9.99826	0	1.04924	23	1.04751	24	(1)3887.8	2.1	20
50	1.34964	24	9.99826	0	1.04948	24	1.04774	23	(1)3885.6	2.2	10
		24		1		23		24		2.1	
<b>53'</b>	1.34988		9.99827		1.04971		1.04798		(1)3883.5		<b>7'</b>
10	1.35011	23	9.99827	0	1.04995	24	1.04822	24	(1)3881.4	2.1	50
20	1.35035	24	9.99827	0	1.05018	23	1.04845	23	(1)3879.3	2.1	40
30	1.35059	24	9.99827	0	1.05042	24	1.04869	24	(1)3877.2	2.1	30
40	1.35082	23	9.99827	0	1.05065	23	1.04893	24	(1)3875.1	2.1	20
50	1.35106	24	9.99828	1	1.05089	24	1.04917	24	(1)3873.0	2.1	10
		24		0		24		23		2.2	
<b>54'</b>	1.35130		9.99828		1.05113		1.04940		(1)3870.8		<b>6'</b>
10	1.35153	23	9.99828	0	1.05136	23	1.04964	24	(1)3868.7	2.1	50
20	1.35177	24	9.99828	0	1.05160	24	1.04988	24	(1)3866.6	2.1	40
30	1.35201	24	9.99828	0	1.05183	23	1.05012	24	(1)3864.5	2.1	30
40	1.35224	23	9.99828	0	1.05207	24	1.05036	24	(1)3862.4	2.1	20
50	1.35248	24	9.99829	1	1.05231	24	1.05059	23	(1)3860.3	2.1	10
		24		0		23		24		2.1	
<b>55'</b>	1.35272		9.99829		1.05254		1.05083		(1)3858.2		<b>5'</b>
10	1.35296	24	9.99829	0	1.05278	24	1.05107	24	(1)3856.0	2.2	50
20	1.35319	23	9.99829	0	1.05302	24	1.05131	24	(1)3853.9	2.1	40
30	1.35343	24	9.99829	0	1.05325	23	1.05155	24	(1)3851.8	2.1	30
40	1.35367	24	9.99830	1	1.05349	24	1.05179	24	(1)3849.7	2.1	20
50	1.35391	24	9.99830	0	1.05373	24	1.05203	24	(1)3847.6	2.1	10
		24		0		24		24		2.1	
<b>56'</b>	1.35415		9.99830		1.05397		1.05227		(1)3845.5		<b>4'</b>
10	1.35439	24	9.99830	0	1.05420	23	1.05251	24	(1)3843.4	2.1	50
20	1.35462	23	9.99830	0	1.05444	24	1.05275	24	(1)3841.3	2.1	40
30	1.35486	24	9.99831	1	1.05468	24	1.05298	23	(1)3839.1	2.2	30
40	1.35510	24	9.99831	0	1.05492	24	1.05322	24	(1)3837.0	2.1	20
50	1.35534	24	9.99831	0	1.05516	24	1.05346	24	(1)3834.9	2.1	10
		24		0		23		24		2.1	
<b>57'</b>	1.35558		9.99831		1.05539		1.05370		(1)3832.8		<b>3'</b>
10	1.35582	24	9.99831	0	1.05563	24	1.05394	24	(1)3830.7	2.1	50
20	1.35606	24	9.99831	0	1.05587	24	1.05419	25	(1)3828.6	2.1	40
30	1.35630	24	9.99832	1	1.05611	24	1.05443	24	(1)3826.5	2.1	30
40	1.35654	24	9.99832	0	1.05635	24	1.05467	24	(1)3824.3	2.2	20
50	1.35678	24	9.99832	0	1.05659	24	1.05491	24	(1)3822.2	2.1	10
		24		0		24		24		2.1	
<b>58'</b>	1.35702		9.99832		1.05683		1.05515		(1)3820.1		<b>2'</b>
10	1.35726	24	9.99832	0	1.05706	23	1.05539	24	(1)3818.0	2.1	50
20	1.35750	24	9.99833	1	1.05730	24	1.05563	24	(1)3815.9	2.1	40
30	1.35774	24	9.99833	0	1.05754	24	1.05587	24	(1)3813.8	2.1	30
40	1.35798	24	9.99833	0	1.05778	24	1.05611	24	(1)3811.7	2.1	20
50	1.35822	24	9.99833	0	1.05802	24	1.05635	24	(1)3809.5	2.2	10
		24		0		24		25		2.1	
<b>59'</b>	1.35846		9.99833		1.05826		1.05660		(1)3807.4		<b>1'</b>
10	1.35870	24	9.99834	1	1.05850	24	1.05684	24	(1)3805.3	2.1	50
20	1.35894	24	9.99834	0	1.05874	24	1.05708	24	(1)3803.2	2.1	40
30	1.35918	24	9.99834	0	1.05898	24	1.05732	24	(1)3801.1	2.1	30
40	1.35942	24	9.99834	0	1.05922	24	1.05756	24	(1)3799.0	2.1	20
50	1.35967	25	9.99834	0	1.05946	24	1.05781	25	(1)3796.9	2.1	10
		24		0		24		24		2.1	
<b>60'</b>	1.35991		9.99834		1.05970		1.05805		(1)3794.8		<b>0'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega$



$\omega$	$z'$	Diff.	$\log T_g z$ $\log \sin \omega$	Diff.	$\log \cos z$ $\log \sec \omega$	Diff.	$\log \sin z$ $\log \tan \omega$	Diff.				
<b>0'</b>	1.35991		9.99834	1	1.05970	24	1.05805	24	(1)3794.8			<b>60'</b>
10	1.36015	24	9.99835	0	1.05994	25	1.05829	24	(1)3792.6	2.2	50	
20	1.36039	24	9.99835	0	1.06019	24	1.05853	25	(1)3790.5	2.1	40	
30	1.36063	24	9.99835	0	1.06043	24	1.05878	24	(1)3788.4	2.1	30	
40	1.36087	25	9.99835	0	1.06067	24	1.05902	24	(1)3786.3	2.1	20	
50	1.36112	24	9.99835	1	1.06091	24	1.05926	25	(1)3784.2	2.1	10	
<b>1'</b>	1.36136	24	9.99836	0	1.06115	24	1.05951	24	(1)3782.1	2.1		<b>59'</b>
10	1.36160	24	9.99836	0	1.06139	24	1.05975	24	(1)3780.0	2.2	50	
20	1.36184	25	9.99836	0	1.06163	25	1.05999	25	(1)3777.8	2.1	40	
30	1.36209	24	9.99836	0	1.06188	24	1.06024	24	(1)3775.7	2.1	30	
40	1.36233	24	9.99836	0	1.06212	24	1.06048	24	(1)3773.6	2.1	20	
50	1.36257	25	9.99836	1	1.06236	24	1.06072	25	(1)3771.5	2.1	10	
<b>2'</b>	1.36282	24	9.99837	0	1.06260	24	1.06097	24	(1)3769.4	2.1		<b>58'</b>
10	1.36306	24	9.99837	0	1.06284	25	1.06121	25	(1)3767.3	2.1	50	
20	1.36330	25	9.99837	0	1.06309	24	1.06146	24	(1)3765.2	2.1	40	
30	1.36355	24	9.99837	0	1.06333	24	1.06170	25	(1)3763.1	2.2	30	
40	1.36379	24	9.99837	1	1.06357	24	1.06195	24	(1)3760.9	2.1	20	
50	1.36403	25	9.99838	0	1.06381	25	1.06219	25	(1)3758.8	2.1	10	
<b>3'</b>	1.36428	24	9.99838	0	1.06406	24	1.06244	24	(1)3756.7	2.1		<b>57'</b>
10	1.36452	25	9.99838	0	1.06430	24	1.06268	25	(1)3754.6	2.1	50	
20	1.36477	24	9.99838	0	1.06454	25	1.06293	24	(1)3752.5	2.1	40	
30	1.36501	24	9.99838	0	1.06479	24	1.06317	25	(1)3750.4	2.1	30	
40	1.36525	25	9.99838	1	1.06503	25	1.06342	24	(1)3748.3	2.2	20	
50	1.36550	24	9.99839	0	1.06528	24	1.06366	25	(1)3746.1	2.1	10	
<b>4'</b>	1.36574	25	9.99839	0	1.06552	24	1.06391	24	(1)3744.0	2.1		<b>56'</b>
10	1.36599	24	9.99839	0	1.06576	25	1.06415	25	(1)3741.9	2.1	50	
20	1.36623	25	9.99839	0	1.06601	24	1.06440	24	(1)3739.8	2.1	40	
30	1.36648	24	9.99839	1	1.06625	25	1.06464	25	(1)3737.7	2.1	30	
40	1.36672	25	9.99840	0	1.06650	24	1.06489	25	(1)3735.6	2.1	20	
50	1.36697	25	9.99840	0	1.06674	25	1.06514	24	(1)3733.5	2.1	10	
<b>5'</b>	1.36722	24	9.99840	0	1.06699	24	1.06538	25	(1)3731.4	2.2		<b>55'</b>
10	1.36746	25	9.99840	0	1.06723	24	1.06563	25	(1)3729.2	2.1	50	
20	1.36771	24	9.99840	0	1.06747	25	1.06588	24	(1)3727.1	2.1	40	
30	1.36795	25	9.99840	1	1.06772	25	1.06612	25	(1)3725.0	2.1	30	
40	1.36820	25	9.99841	0	1.06797	24	1.06637	25	(1)3722.9	2.1	20	
50	1.36845	24	9.99841	0	1.06821	25	1.06662	25	(1)3720.8	2.1	10	
<b>6'</b>	1.36869	25	9.99841	0	1.06846	24	1.06687	24	(1)3718.7	2.1		<b>54'</b>
10	1.36894	25	9.99841	0	1.06870	25	1.06711	25	(1)3716.6	2.2	50	
20	1.36919	24	9.99841	1	1.06895	24	1.06736	25	(1)3714.4	2.1	40	
30	1.36943	25	9.99842	0	1.06919	25	1.06761	25	(1)3712.3	2.1	30	
40	1.36968	25	9.99842	0	1.06944	25	1.06786	24	(1)3710.2	2.1	20	
50	1.36993	24	9.99842	0	1.06969	24	1.06810	25	(1)3708.1	2.1	10	
<b>7'</b>	1.37017	25	9.99842	0	1.06993	25	1.06835	25	(1)3706.0	2.1		<b>53'</b>
10	1.37042	25	9.99842	0	1.07018	25	1.06860	25	(1)3703.9	2.1	50	
20	1.37067	25	9.99842	1	1.07043	24	1.06885	25	(1)3701.8	2.1	40	
30	1.37092	24	9.99843	0	1.07067	25	1.06910	25	(1)3699.7	2.2	30	
40	1.37116	25	9.99843	0	1.07092	25	1.06935	25	(1)3697.5	2.1	20	
50	1.37141	25	9.99843	0	1.07117	24	1.06960	24	(1)3695.4	2.1	10	
<b>8'</b>	1.37166	25	9.99843	0	1.07141	25	1.06984	25	(1)3693.3	2.1		<b>52'</b>
10	1.37191	25	9.99843	0	1.07166	25	1.07009	25	(1)3691.2	2.1	50	
20	1.37216	24	9.99844	1	1.07191	25	1.07034	25	(1)3689.1	2.1	40	
30	1.37240	25	9.99844	0	1.07216	24	1.07059	25	(1)3687.0	2.1	30	
40	1.37265	25	9.99844	0	1.07240	25	1.07084	25	(1)3684.9	2.2	20	
50	1.37290	25	9.99844	0	1.07265	25	1.07109	25	(1)3682.7	2.1	10	
<b>9'</b>	1.37315	25	9.99844	0	1.07290	25	1.07134	25	(1)3680.6	2.1		<b>51'</b>
10	1.37340	25	9.99844	1	1.07315	25	1.07159	25	(1)3678.5	2.1	50	
20	1.37365	25	9.99845	0	1.07340	24	1.07184	25	(1)3676.4	2.1	40	
30	1.37390	25	9.99845	0	1.07364	25	1.07209	25	(1)3674.3	2.1	30	
40	1.37415	25	9.99845	0	1.07389	25	1.07234	25	(1)3672.2	2.1	20	
50	1.37440	25	9.99845	0	1.07414	25	1.07259	25	(1)3670.1	2.1	10	
<b>10'</b>	1.37465	25	9.99845	0	1.07439	25	1.07284	25	(1)3668.0	2.1		<b>50'</b>

$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
10'	1.37465	25	9.99845	0	1.07439	25	1.07281	25	(13668.0)	2.2	50'	
10	1.37490	25	9.99845	1	1.07464	25	1.07309	25	(13665.8)	2.1	50	
20	1.37515	25	9.99846	0	1.07489	25	1.07335	25	(13663.7)	2.1	40	
30	1.37540	25	9.99846	0	1.07514	25	1.07360	25	(13661.6)	2.1	30	
40	1.37565	25	9.99846	0	1.07539	25	1.07385	25	(13659.5)	2.1	20	
50	1.37590	25	9.99846	0	1.07564	25	1.07410	25	(13657.4)	2.1	10	
11'	1.37615	25	9.99846	1	1.07589	25	1.07435	25	(13655.3)	2.1	49'	
10	1.37640	25	9.99847	0	1.07614	25	1.07460	25	(13653.2)	2.1	50	
20	1.37665	25	9.99847	0	1.07639	25	1.07485	25	(13651.1)	2.2	40	
30	1.37690	25	9.99847	0	1.07664	25	1.07511	25	(13648.9)	2.1	30	
40	1.37715	25	9.99847	0	1.07689	25	1.07536	25	(13646.8)	2.1	20	
50	1.37741	25	9.99847	0	1.07714	25	1.07561	25	(13644.7)	2.1	10	
12'	1.37766	25	9.99847	1	1.07739	25	1.07586	25	(13642.6)	2.1	48'	
10	1.37791	25	9.99848	0	1.07764	25	1.07612	25	(13640.5)	2.1	50	
20	1.37816	25	9.99848	0	1.07789	25	1.07637	25	(13638.4)	2.1	40	
30	1.37841	25	9.99848	0	1.07814	25	1.07662	25	(13636.3)	2.2	30	
40	1.37866	25	9.99848	0	1.07839	25	1.07687	25	(13634.1)	2.1	20	
50	1.37892	25	9.99848	0	1.07865	25	1.07713	25	(13632.0)	2.1	10	
13'	1.37917	25	9.99848	1	1.07890	25	1.07738	25	(13629.9)	2.1	47'	
10	1.37942	25	9.99849	0	1.07915	25	1.07763	25	(13627.8)	2.1	50	
20	1.37967	25	9.99849	0	1.07940	25	1.07789	25	(13625.7)	2.1	40	
30	1.37993	25	9.99849	0	1.07965	25	1.07814	25	(13623.6)	2.1	30	
40	1.38018	25	9.99849	0	1.07990	25	1.07840	25	(13621.5)	2.1	20	
50	1.38043	25	9.99849	1	1.08016	25	1.07865	25	(13619.4)	2.2	10	
14'	1.38069	25	9.99850	0	1.08041	25	1.07890	25	(13617.2)	2.1	46'	
10	1.38094	25	9.99850	0	1.08066	25	1.07916	25	(13615.1)	2.1	50	
20	1.38119	25	9.99850	0	1.08091	25	1.07941	25	(13613.0)	2.1	40	
30	1.38145	25	9.99850	0	1.08117	25	1.07967	25	(13610.9)	2.1	30	
40	1.38170	25	9.99850	0	1.08142	25	1.07992	25	(13608.8)	2.1	20	
50	1.38196	25	9.99850	1	1.08167	25	1.08018	25	(13606.7)	2.1	10	
15'	1.38221	25	9.99851	0	1.08193	25	1.08043	25	(13604.6)	2.1	45'	
10	1.38246	25	9.99851	0	1.08218	25	1.08069	25	(13602.5)	2.2	50	
20	1.38272	25	9.99851	0	1.08243	25	1.08094	25	(13600.3)	2.1	40	
30	1.38297	25	9.99851	0	1.08269	25	1.08120	25	(13598.2)	2.1	30	
40	1.38323	25	9.99851	0	1.08294	25	1.08145	25	(13596.1)	2.1	20	
50	1.38348	25	9.99851	1	1.08320	25	1.08171	25	(13594.0)	2.1	10	
16'	1.38374	25	9.99852	0	1.08345	25	1.08197	25	(13591.9)	2.1	44'	
10	1.38399	25	9.99852	0	1.08370	25	1.08222	25	(13589.8)	2.1	50	
20	1.38425	25	9.99852	0	1.08396	25	1.08248	25	(13587.7)	2.1	40	
30	1.38450	25	9.99852	0	1.08421	25	1.08273	25	(13585.6)	2.2	30	
40	1.38476	25	9.99852	1	1.08447	25	1.08299	25	(13583.4)	2.1	20	
50	1.38502	25	9.99853	0	1.08472	25	1.08325	25	(13581.3)	2.1	10	
17'	1.38527	25	9.99853	0	1.08498	25	1.08350	25	(13579.2)	2.1	43'	
10	1.38553	25	9.99853	0	1.08523	25	1.08376	25	(13577.1)	2.1	50	
20	1.38578	25	9.99853	0	1.08549	25	1.08402	25	(13575.0)	2.1	40	
30	1.38604	25	9.99853	0	1.08574	25	1.08428	25	(13572.9)	2.1	30	
40	1.38630	25	9.99853	1	1.08600	25	1.08453	25	(13570.8)	2.1	20	
50	1.38655	25	9.99854	0	1.08626	25	1.08479	25	(13568.7)	2.2	10	
18'	1.38681	25	9.99854	0	1.08651	25	1.08505	25	(13566.5)	2.1	42'	
10	1.38707	25	9.99854	0	1.08677	25	1.08531	25	(13564.4)	2.1	50	
20	1.38733	25	9.99854	0	1.08702	25	1.08557	25	(13562.3)	2.1	40	
30	1.38758	25	9.99854	0	1.08728	25	1.08582	25	(13560.2)	2.1	30	
40	1.38784	25	9.99854	1	1.08754	25	1.08608	25	(13558.1)	2.1	20	
50	1.38810	25	9.99855	0	1.08779	25	1.08634	25	(13556.0)	2.1	10	
19'	1.38836	25	9.99855	0	1.08805	25	1.08660	25	(13553.9)	2.1	41'	
10	1.38861	25	9.99855	0	1.08831	25	1.08686	25	(13551.8)	2.2	50	
20	1.38887	25	9.99855	0	1.08857	25	1.08712	25	(13549.6)	2.1	40	
30	1.38913	25	9.99855	0	1.08882	25	1.08738	25	(13547.5)	2.1	30	
40	1.38939	25	9.99855	1	1.08908	25	1.08764	25	(13545.4)	2.1	20	
50	1.38965	25	9.99856	0	1.08934	25	1.08789	25	(13543.3)	2.1	10	
20'	1.38991	25	9.99856	0	1.08960	25	1.08815	25	(13541.2)	2.1	40'	



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>20'</b>	1.38991		9.99856		1.08944		1.08815		(1)3541.2		<b>40'</b>
10	1.39016	25	9.99856	0	1.08985	25	1.08841	26	(1)3539.1	2.1	50
20	1.39042	26	9.99856	0	1.09011	26	1.08867	26	(1)3537.0	2.1	40
30	1.39068	26	9.99856	0	1.09037	26	1.08893	26	(1)3534.9	2.2	30
40	1.39094	26	9.99856	1	1.09063	26	1.08919	26	(1)3532.7	2.1	20
50	1.39120	26	9.99857	0	1.09089	26	1.08945	26	(1)3530.6	2.1	10
<b>21'</b>	1.39146		9.99857		1.09115		1.08971		(1)3528.5		<b>39'</b>
10	1.39172	26	9.99857	0	1.09141	26	1.08998	27	(1)3526.4	2.1	50
20	1.39198	26	9.99857	0	1.09166	25	1.09024	26	(1)3524.3	2.1	40
30	1.39224	26	9.99857	1	1.09192	26	1.09050	26	(1)3522.2	2.1	30
40	1.39250	26	9.99858	0	1.09218	26	1.09076	26	(1)3520.1	2.1	20
50	1.39276	26	9.99858	0	1.09244	26	1.09102	26	(1)3518.0	2.2	10
<b>22'</b>	1.39302		9.99858		1.09270		1.09128		(1)3515.8		<b>38'</b>
10	1.39328	26	9.99858	0	1.09296	26	1.09154	26	(1)3513.7	2.1	50
20	1.39354	26	9.99858	0	1.09322	26	1.09180	26	(1)3511.6	2.1	40
30	1.39380	27	9.99858	1	1.09348	26	1.09207	27	(1)3509.5	2.1	30
40	1.39407	26	9.99859	0	1.09374	26	1.09233	26	(1)3507.4	2.1	20
50	1.39433	26	9.99859	0	1.09400	26	1.09259	26	(1)3505.3	2.1	10
<b>23'</b>	1.39459		9.99859		1.09426		1.09285		(1)3503.2		<b>37'</b>
10	1.39485	26	9.99859	0	1.09452	26	1.09312	27	(1)3501.1	2.1	50
20	1.39511	26	9.99859	0	1.09479	27	1.09338	26	(1)3498.9	2.2	40
30	1.39537	27	9.99859	1	1.09505	26	1.09364	26	(1)3496.8	2.1	30
40	1.39564	26	9.99860	0	1.09531	26	1.09390	26	(1)3494.7	2.1	20
50	1.39590	26	9.99860	0	1.09557	26	1.09417	26	(1)3492.6	2.1	10
<b>24'</b>	1.39616		9.99860		1.09583		1.09443		(1)3490.5		<b>36'</b>
10	1.39642	27	9.99860	0	1.09609	26	1.09469	27	(1)3488.4	2.1	50
20	1.39669	26	9.99860	0	1.09636	26	1.09496	26	(1)3486.3	2.1	40
30	1.39695	26	9.99860	1	1.09662	26	1.09522	26	(1)3484.2	2.1	30
40	1.39721	27	9.99861	0	1.09688	26	1.09549	26	(1)3482.0	2.2	20
50	1.39748	26	9.99861	0	1.09714	26	1.09575	26	(1)3479.9	2.1	10
<b>25'</b>	1.39774		9.99861		1.09740		1.09601		(1)3477.8		<b>35'</b>
10	1.39800	26	9.99861	0	1.09767	27	1.09628	27	(1)3475.7	2.1	50
20	1.39827	26	9.99861	0	1.09793	26	1.09654	26	(1)3473.6	2.1	40
30	1.39853	26	9.99861	1	1.09819	26	1.09681	27	(1)3471.5	2.1	30
40	1.39879	26	9.99862	0	1.09846	26	1.09707	26	(1)3469.4	2.1	20
50	1.39906	26	9.99862	0	1.09872	26	1.09734	26	(1)3467.3	2.1	10
<b>26'</b>	1.39932		9.99862		1.09898		1.09760		(1)3465.1		<b>34'</b>
10	1.39959	27	9.99862	0	1.09925	27	1.09787	27	(1)3463.0	2.1	50
20	1.39985	26	9.99862	0	1.09951	26	1.09813	26	(1)3460.9	2.1	40
30	1.40012	26	9.99862	1	1.09977	26	1.09840	27	(1)3458.8	2.1	30
40	1.40038	27	9.99863	0	1.10004	26	1.09866	26	(1)3456.7	2.1	20
50	1.40065	26	9.99863	0	1.10030	27	1.09893	27	(1)3454.6	2.1	10
<b>27'</b>	1.40091		9.99863		1.10057		1.09920		(1)3452.5		<b>33'</b>
10	1.40118	26	9.99863	0	1.10083	26	1.09946	26	(1)3450.4	2.1	50
20	1.40144	27	9.99863	0	1.10110	27	1.09973	27	(1)3448.2	2.2	40
30	1.40171	27	9.99863	1	1.10136	27	1.10000	26	(1)3446.1	2.1	30
40	1.40198	26	9.99864	0	1.10163	26	1.10026	27	(1)3444.0	2.1	20
50	1.40224	27	9.99864	0	1.10189	27	1.10053	27	(1)3441.9	2.1	10
<b>28'</b>	1.40251		9.99864		1.10216		1.10080		(1)3439.8		<b>32'</b>
10	1.40277	26	9.99864	0	1.10242	26	1.10106	26	(1)3437.7	2.1	50
20	1.40304	27	9.99864	0	1.10269	27	1.10133	27	(1)3435.6	2.1	40
30	1.40331	27	9.99864	1	1.10296	26	1.10160	27	(1)3433.5	2.1	30
40	1.40358	26	9.99865	0	1.10322	26	1.10187	27	(1)3431.3	2.2	20
50	1.40384	27	9.99865	0	1.10349	26	1.10214	26	(1)3429.2	2.1	10
<b>29'</b>	1.40411		9.99865		1.10375		1.10240		(1)3427.1		<b>31'</b>
10	1.40438	26	9.99865	0	1.10402	27	1.10267	27	(1)3425.0	2.1	50
20	1.40464	27	9.99865	0	1.10429	26	1.10294	27	(1)3422.9	2.1	40
30	1.40491	27	9.99865	1	1.10455	26	1.10321	27	(1)3420.8	2.1	30
40	1.40518	27	9.99866	0	1.10482	27	1.10348	27	(1)3418.7	2.1	20
50	1.40545	27	9.99866	0	1.10509	27	1.10375	27	(1)3416.6	2.1	10
<b>30'</b>	1.40572		9.99866		1.10536		1.10402		(1)3414.5		<b>30'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

log cotg  $\omega$   
l. Cossec z

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
<b>30'</b>	1.40572		9.99866	0	1.10536	26	1.10402	27	(13414.5	2.2	<b>30'</b>	
10	1.40599	27	9.99866	0	1.10562	27	1.10429	27	(13412.3	2.1	50	
20	1.40625	26	9.99866	0	1.10589	27	1.10455	26	(13410.2	2.1	40	
30	1.40652	27	9.99866	1	1.10616	27	1.10482	27	(13408.1	2.1	30	
40	1.40679	27	9.99867	0	1.10643	27	1.10509	27	(13406.0	2.1	20	
50	1.40706	27	9.99867	0	1.10670	27	1.10536	27	(13403.9	2.1	10	
<b>31'</b>	1.40733	27	9.99867	0	1.10696	27	1.10563	27	(13401.8	2.1	<b>29'</b>	
10	1.40760	27	9.99867	0	1.10723	27	1.10590	27	(13399.7	2.1	50	
20	1.40787	27	9.99867	0	1.10750	27	1.10617	27	(13397.6	2.2	40	
30	1.40814	27	9.99867	1	1.10777	27	1.10645	28	(13395.4	2.1	30	
40	1.40841	27	9.99868	0	1.10804	27	1.10672	27	(13393.3	2.1	20	
50	1.40868	27	9.99868	0	1.10831	27	1.10699	27	(13391.2	2.1	10	
<b>32'</b>	1.40895	27	9.99868	0	1.10858	27	1.10726	27	(13389.1	2.1	<b>28'</b>	
10	1.40922	27	9.99868	0	1.10885	27	1.10753	27	(13387.0	2.1	50	
20	1.40949	27	9.99868	0	1.10912	27	1.10780	27	(13384.9	2.1	40	
30	1.40976	27	9.99868	1	1.10939	27	1.10807	27	(13382.8	2.1	30	
40	1.41003	27	9.99869	0	1.10966	27	1.10834	28	(13380.7	2.2	20	
50	1.41030	27	9.99869	0	1.10993	27	1.10862	27	(13378.5	2.1	10	
<b>33'</b>	1.41057	28	9.99869	0	1.11020	27	1.10889	27	(13376.4	2.1	<b>27'</b>	
10	1.41085	27	9.99869	0	1.11047	27	1.10916	27	(13374.3	2.1	50	
20	1.41112	27	9.99869	0	1.11074	27	1.10943	27	(13372.2	2.1	40	
30	1.41139	27	9.99869	1	1.11101	27	1.10971	27	(13370.1	2.1	30	
40	1.41166	27	9.99870	0	1.11128	27	1.10998	27	(13368.0	2.1	20	
50	1.41193	28	9.99870	0	1.11155	28	1.11025	27	(13365.9	2.1	10	
<b>34'</b>	1.41221	27	9.99870	0	1.11183	27	1.11052	28	(13363.8	2.1	<b>26'</b>	
10	1.41248	27	9.99870	0	1.11210	27	1.11080	27	(13361.7	2.2	50	
20	1.41275	27	9.99870	0	1.11237	27	1.11107	27	(13359.5	2.1	40	
30	1.41302	28	9.99870	1	1.11264	27	1.11134	28	(13357.4	2.1	30	
40	1.41330	28	9.99871	0	1.11291	28	1.11162	28	(13355.3	2.1	20	
50	1.41357	27	9.99871	0	1.11319	27	1.11189	28	(13353.2	2.1	10	
<b>35'</b>	1.41384	28	9.99871	0	1.11346	27	1.11217	27	(13351.1	2.1	<b>25'</b>	
10	1.41412	27	9.99871	0	1.11373	27	1.11244	27	(13349.0	2.1	50	
20	1.41439	27	9.99871	0	1.11400	28	1.11272	27	(13346.9	2.1	40	
30	1.41466	28	9.99871	0	1.11428	27	1.11299	27	(13344.8	2.2	30	
40	1.41494	27	9.99871	1	1.11455	27	1.11326	28	(13342.6	2.1	20	
50	1.41521	28	9.99872	0	1.11482	28	1.11354	28	(13340.5	2.1	10	
<b>36'</b>	1.41549	27	9.99872	0	1.11510	27	1.11382	27	(13338.4	2.1	<b>24'</b>	
10	1.41576	28	9.99872	0	1.11537	27	1.11409	28	(13336.3	2.1	50	
20	1.41604	28	9.99872	0	1.11564	28	1.11437	28	(13334.2	2.1	40	
30	1.41631	28	9.99872	0	1.11592	27	1.11464	27	(13332.1	2.1	30	
40	1.41659	27	9.99872	1	1.11619	28	1.11492	27	(13330.0	2.1	20	
50	1.41686	28	9.99873	0	1.11647	27	1.11519	28	(13327.9	2.1	10	
<b>37'</b>	1.41714	27	9.99873	0	1.11674	28	1.11547	28	(13325.8	2.2	<b>23'</b>	
10	1.41741	28	9.99873	0	1.11702	27	1.11575	28	(13323.6	2.1	50	
20	1.41769	27	9.99873	0	1.11729	28	1.11602	27	(13321.5	2.1	40	
30	1.41796	28	9.99873	1	1.11757	27	1.11630	28	(13319.4	2.1	30	
40	1.41824	28	9.99873	0	1.11784	28	1.11658	28	(13317.3	2.1	20	
50	1.41852	27	9.99874	0	1.11812	27	1.11685	28	(13315.2	2.1	10	
<b>38'</b>	1.41879	28	9.99874	0	1.11839	28	1.11713	28	(13313.1	2.1	<b>22'</b>	
10	1.41907	27	9.99874	0	1.11867	27	1.11741	28	(13311.0	2.1	50	
20	1.41935	28	9.99874	0	1.11894	28	1.11769	27	(13308.9	2.2	40	
30	1.41962	28	9.99874	0	1.11922	28	1.11796	28	(13306.7	2.1	30	
40	1.41990	27	9.99874	1	1.11950	27	1.11824	28	(13304.6	2.1	20	
50	1.42018	28	9.99875	0	1.11977	28	1.11852	28	(13302.5	2.1	10	
<b>39'</b>	1.42045	28	9.99875	0	1.12005	28	1.11880	28	(13300.4	2.1	<b>21'</b>	
10	1.42073	28	9.99875	0	1.12033	27	1.11908	27	(13298.3	2.1	50	
20	1.42101	28	9.99875	0	1.12060	28	1.11935	28	(13296.2	2.1	40	
30	1.42129	28	9.99875	0	1.12088	28	1.11963	28	(13294.1	2.1	30	
40	1.42157	28	9.99875	1	1.12116	28	1.11991	28	(13292.0	2.1	20	
50	1.42184	27	9.99876	0	1.12144	28	1.12019	28	(13289.9	2.1	10	
<b>40'</b>	1.42212	28	9.99876	0	1.12171	27	1.12047	28	(13287.7	2.2	<b>20'</b>	

$\log \cos \omega$  Diff.  $\log \sec \omega$  Diff.  $\log \sin \omega$  Diff.  $\log \text{ tg } \omega$  Diff.  $z'$  Diff.  $\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>40'</b>	1.42212	28	9.99876	0	1.12171	28	1.12047	28	(13287.7)			<b>20'</b>
10	1.42240	28	9.99876	0	1.12199	28	1.12075	28	(13285.6)	2.1	50	
20	1.42268	28	9.99876	0	1.12227	28	1.12103	28	(13283.5)	2.1	40	
30	1.42296	28	9.99876	0	1.12255	28	1.12131	28	(13281.4)	2.1	30	
40	1.42324	28	9.99876	0	1.12283	28	1.12159	28	(13279.3)	2.1	20	
50	1.42352	28	9.99876	1	1.12311	28	1.12187	28	(13277.2)	2.1	10	
<b>41'</b>	1.42380	28	9.99877	0	1.12339	27	1.12215	28	(13275.1)	2.1	<b>19'</b>	
10	1.42408	28	9.99877	0	1.12366	28	1.12243	28	(13273.0)	2.1	50	
20	1.42436	28	9.99877	0	1.12394	28	1.12271	28	(13270.9)	2.2	40	
30	1.42464	28	9.99877	0	1.12422	28	1.12299	28	(13268.7)	2.1	30	
40	1.42492	28	9.99877	0	1.12450	28	1.12327	29	(13266.6)	2.1	20	
50	1.42520	28	9.99877	1	1.12478	28	1.12356	28	(13264.5)	2.1	10	
<b>42'</b>	1.42548	28	9.99878	0	1.12506	28	1.12384	28	(13262.4)	2.1	<b>15'</b>	
10	1.42576	28	9.99878	0	1.12534	28	1.12412	28	(13260.3)	2.1	50	
20	1.42604	28	9.99878	0	1.12562	28	1.12440	28	(13258.2)	2.1	40	
30	1.42632	28	9.99878	0	1.12590	28	1.12468	29	(13256.1)	2.1	30	
40	1.42660	29	9.99878	0	1.12618	28	1.12497	28	(13254.0)	2.1	20	
50	1.42689	28	9.99878	1	1.12646	29	1.12525	28	(13251.9)	2.2	10	
<b>43'</b>	1.42717	28	9.99879	0	1.12675	28	1.12553	28	(13249.7)	2.1	<b>17'</b>	
10	1.42745	28	9.99879	0	1.12703	28	1.12581	29	(13247.6)	2.1	50	
20	1.42773	28	9.99879	0	1.12731	28	1.12610	28	(13245.5)	2.1	40	
30	1.42801	29	9.99879	0	1.12759	28	1.12638	28	(13243.4)	2.1	30	
40	1.42830	28	9.99879	0	1.12787	28	1.12666	29	(13241.3)	2.1	20	
50	1.42858	28	9.99879	0	1.12815	29	1.12695	28	(13239.2)	2.1	10	
<b>44'</b>	1.42886	29	9.99879	1	1.12844	28	1.12723	28	(13237.1)	2.1	<b>16'</b>	
10	1.42915	28	9.99880	0	1.12872	28	1.12751	29	(13235.0)	2.2	50	
20	1.42943	28	9.99880	0	1.12900	28	1.12780	28	(13232.8)	2.1	40	
30	1.42971	29	9.99880	0	1.12928	29	1.12808	29	(13230.7)	2.1	30	
40	1.43000	28	9.99880	0	1.12957	28	1.12837	28	(13228.6)	2.1	20	
50	1.43028	28	9.99880	0	1.12985	28	1.12865	29	(13226.5)	2.1	10	
<b>45'</b>	1.43056	29	9.99880	1	1.13013	29	1.12894	28	(13224.4)	2.1	<b>15'</b>	
10	1.43085	28	9.99881	0	1.13042	28	1.12922	29	(13222.3)	2.1	50	
20	1.43113	29	9.99881	0	1.13070	28	1.12951	28	(13220.2)	2.1	40	
30	1.43142	28	9.99881	0	1.13098	29	1.12979	29	(13218.1)	2.1	30	
40	1.43170	29	9.99881	0	1.13127	28	1.13008	28	(13216.0)	2.2	20	
50	1.43199	28	9.99881	0	1.13155	29	1.13036	29	(13213.8)	2.1	10	
<b>46'</b>	1.43227	29	9.99881	1	1.13184	28	1.13065	28	(13211.7)	2.1	<b>14'</b>	
10	1.43256	28	9.99882	0	1.13212	28	1.13093	29	(13209.6)	2.1	50	
20	1.43284	29	9.99882	0	1.13240	29	1.13122	29	(13207.5)	2.1	40	
30	1.43313	28	9.99882	0	1.13269	28	1.13151	28	(13205.4)	2.1	30	
40	1.43341	29	9.99882	0	1.13297	29	1.13179	29	(13203.3)	2.1	20	
50	1.43370	29	9.99882	0	1.13326	29	1.13208	29	(13201.2)	2.1	10	
<b>47'</b>	1.43399	28	9.99882	0	1.13355	28	1.13237	29	(13199.1)	2.1	<b>13'</b>	
10	1.43427	29	9.99882	1	1.13383	29	1.13266	28	(13197.0)	2.2	50	
20	1.43456	29	9.99883	0	1.13412	28	1.13294	29	(13194.8)	2.1	40	
30	1.43485	28	9.99883	0	1.13440	29	1.13323	29	(13192.7)	2.1	30	
40	1.43513	29	9.99883	0	1.13469	29	1.13352	29	(13190.6)	2.1	20	
50	1.43542	29	9.99883	0	1.13498	28	1.13381	28	(13188.5)	2.1	10	
<b>48'</b>	1.43571	29	9.99883	0	1.13526	29	1.13409	29	(13186.4)	2.1	<b>12'</b>	
10	1.43600	28	9.99883	1	1.13555	29	1.13438	29	(13184.3)	2.1	50	
20	1.43628	29	9.99884	0	1.13584	28	1.13467	29	(13182.2)	2.1	40	
30	1.43657	29	9.99884	0	1.13612	29	1.13496	29	(13180.1)	2.1	30	
40	1.43686	29	9.99884	0	1.13641	29	1.13525	29	(13178.0)	2.2	20	
50	1.43715	29	9.99884	0	1.13670	29	1.13554	29	(13175.8)	2.1	10	
<b>49'</b>	1.43744	29	9.99884	0	1.13699	28	1.13583	29	(13173.7)	2.1	<b>11'</b>	
10	1.43773	28	9.99884	0	1.13727	29	1.13612	29	(13171.6)	2.1	50	
20	1.43801	29	9.99884	1	1.13756	29	1.13641	29	(13169.5)	2.1	40	
30	1.43830	29	9.99885	0	1.13785	29	1.13670	29	(13167.4)	2.1	30	
40	1.43859	29	9.99885	0	1.13814	29	1.13699	29	(13165.3)	2.1	20	
50	1.43888	29	9.99885	0	1.13843	29	1.13728	29	(13163.2)	2.1	10	
<b>50'</b>	1.43917	29	9.99885	0	1.13872	29	1.13757	29	(13161.1)	2.1	<b>10'</b>	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. l. cotg  $\omega$  Diff. z' Diff.  $\omega$   
log Sec z l. Cotg z l. Cosec z

$\omega$	$z'$	Diff.	$\log T_g z$ $\log \sin \omega$	Diff.	$\log \cos z$ $\log \sec \omega$	Diff.	$\log \sin z$ $\log \tg \omega$	Diff.			
<b>50'</b>	1.43917		9.99885		1.13872		1.13757		(1)3161.1		<b>10'</b>
10	1.43916	29	9.99885	0	1.13901	29	1.13786	29	(1)3159.0	2.1	50
20	1.43975	29	9.99885	0	1.13930	29	1.13815	29	(1)3156.8	2.2	40
30	1.44004	29	9.99886	1	1.13958	28	1.13841	29	(1)3154.7	2.1	30
40	1.44033	29	9.99886	0	1.13987	29	1.13873	29	(1)3152.6	2.1	20
50	1.44062	29	9.99886	0	1.14016	29	1.13902	29	(1)3150.5	2.1	10
<b>51'</b>	1.44109		9.99886		1.14045		1.13931		(1)3148.1		<b>9'</b>
10	1.44121	30	9.99886	0	1.14074	29	1.13961	30	(1)3146.3	2.1	50
20	1.44150	29	9.99886	0	1.14101	30	1.13990	29	(1)3144.2	2.1	40
30	1.44179	29	9.99886	0	1.14133	29	1.14019	29	(1)3142.1	2.1	30
40	1.44208	29	9.99887	1	1.14162	29	1.14048	29	(1)3140.0	2.1	20
50	1.44237	29	9.99887	0	1.14191	29	1.14078	30	(1)3137.8	2.2	10
<b>52'</b>	1.44266		9.99887		1.14220		1.14107		(1)3135.7		<b>8'</b>
10	1.44296	30	9.99887	0	1.14249	29	1.14136	29	(1)3133.6	2.1	50
20	1.44325	29	9.99887	0	1.14278	29	1.14165	29	(1)3131.5	2.1	40
30	1.44354	29	9.99887	0	1.14307	29	1.14195	30	(1)3129.4	2.1	30
40	1.44383	29	9.99888	1	1.14337	30	1.14224	29	(1)3127.3	2.1	20
50	1.44413	30	9.99888	0	1.14366	29	1.14253	29	(1)3125.2	2.1	10
<b>53'</b>	1.44442		9.99888		1.14395		1.14283		(1)3123.1		<b>7'</b>
10	1.44471	29	9.99888	0	1.14424	29	1.14312	29	(1)3121.0	2.1	50
20	1.44501	30	9.99888	0	1.14454	30	1.14342	30	(1)3118.8	2.2	40
30	1.44530	29	9.99888	0	1.14483	29	1.14371	29	(1)3116.7	2.1	30
40	1.44559	29	9.99888	0	1.14512	29	1.14401	30	(1)3114.6	2.1	20
50	1.44589	30	9.99889	1	1.14542	30	1.14430	29	(1)3112.5	2.1	10
<b>54'</b>	1.44618		9.99889		1.14571		1.14460		(1)3110.4		<b>6'</b>
10	1.44648	30	9.99889	0	1.14600	29	1.14489	29	(1)3108.3	2.1	50
20	1.44677	29	9.99889	0	1.14630	30	1.14519	30	(1)3106.2	2.1	40
30	1.44707	30	9.99889	0	1.14659	29	1.14548	29	(1)3104.1	2.1	30
40	1.44736	29	9.99889	0	1.14689	30	1.14578	30	(1)3102.0	2.1	20
50	1.44766	30	9.99889	0	1.14718	29	1.14608	30	(1)3099.8	2.2	10
<b>55'</b>	1.44795		9.99890		1.14748		1.14637		(1)3097.7		<b>5'</b>
10	1.44825	30	9.99890	0	1.14777	29	1.14667	30	(1)3095.6	2.1	50
20	1.44855	30	9.99890	0	1.14807	30	1.14696	29	(1)3093.5	2.1	40
30	1.44884	29	9.99890	0	1.14836	29	1.14726	30	(1)3091.4	2.1	30
40	1.44914	30	9.99890	0	1.14866	30	1.14756	30	(1)3089.3	2.1	20
50	1.44943	29	9.99890	0	1.14895	29	1.14785	30	(1)3087.2	2.1	10
<b>56'</b>	1.44973		9.99891		1.14925		1.14815		(1)3085.1		<b>4'</b>
10	1.45003	30	9.99891	0	1.14955	30	1.14845	30	(1)3083.0	2.1	50
20	1.45033	30	9.99891	0	1.14984	29	1.14875	30	(1)3080.8	2.2	40
30	1.45062	29	9.99891	0	1.15014	30	1.14905	30	(1)3078.7	2.1	30
40	1.45092	30	9.99891	0	1.15043	29	1.14935	30	(1)3076.6	2.1	20
50	1.45122	30	9.99891	0	1.15073	30	1.14964	29	(1)3074.5	2.1	10
<b>57'</b>	1.45152		9.99891		1.15103		1.14994		(1)3072.4		<b>3'</b>
10	1.45181	29	9.99892	1	1.15133	30	1.15024	30	(1)3070.3	2.1	50
20	1.45211	30	9.99892	0	1.15162	29	1.15054	30	(1)3068.2	2.1	40
30	1.45241	30	9.99892	0	1.15192	30	1.15084	30	(1)3066.1	2.1	30
40	1.45271	30	9.99892	0	1.15222	30	1.15114	30	(1)3064.0	2.1	20
50	1.45301	30	9.99892	0	1.15252	30	1.15144	30	(1)3061.9	2.1	10
<b>58'</b>	1.45331		9.99892		1.15282		1.15174		(1)3059.7		<b>2'</b>
10	1.45361	30	9.99892	0	1.15312	30	1.15204	30	(1)3057.6	2.1	50
20	1.45391	30	9.99893	1	1.15341	29	1.15234	30	(1)3055.5	2.1	40
30	1.45421	30	9.99893	0	1.15371	30	1.15264	30	(1)3053.4	2.1	30
40	1.45451	30	9.99893	0	1.15401	30	1.15294	30	(1)3051.3	2.1	20
50	1.45481	30	9.99893	0	1.15431	30	1.15324	30	(1)3049.2	2.1	10
<b>59'</b>	1.45511		9.99893		1.15461		1.15354		(1)3047.1		<b>1'</b>
10	1.45541	30	9.99893	0	1.15491	30	1.15385	31	(1)3045.0	2.1	50
20	1.45571	30	9.99893	0	1.15521	30	1.15415	30	(1)3042.9	2.1	40
30	1.45601	30	9.99894	1	1.15551	30	1.15445	30	(1)3040.7	2.2	30
40	1.45631	30	9.99894	0	1.15581	30	1.15475	30	(1)3038.6	2.1	20
50	1.45661	30	9.99894	0	1.15611	30	1.15505	30	(1)3036.5	2.1	10
<b>60'</b>	1.45692	31	9.99894	0	1.15642	31	1.15536	31	(1)3034.4	2.1	<b>0'</b>

$\log \cos \omega$   
 $\log \sec z$

Diff.

$\log \cos \omega$   
 $\log \cotg z$

Diff.

$\log \cotg \omega$   
 $\log \csc z$

Diff.

$z'$

Diff.

$\omega$



$\omega$	$z'$	Diff.	$\log \text{Tg } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.			
<b>0'</b>	1.45692	30	9.99894	0	1.15642	30	1.15536	30	(1)303.4	2.1	<b>60'</b>
10	1.45722	30	9.99894	0	1.15672	30	1.15566	30	(1)303.2	2.1	46
20	1.45752	30	9.99894	1	1.15702	30	1.15596	30	(1)303.0	2.1	50
30	1.45782	31	9.99895	0	1.15732	30	1.15626	31	(1)302.8	2.1	30
40	1.45813	30	9.99895	0	1.15762	30	1.15657	30	(1)302.6	2.1	20
50	1.45843	30	9.99895	0	1.15792	30	1.15687	31	(1)302.3.9	2.2	10
<b>1'</b>	1.45873	30	9.99895	0	1.15823	30	1.15718	30	(1)302.1	2.1	<b>59'</b>
10	1.45903	31	9.99895	0	1.15853	30	1.15748	30	(1)301.9	2.1	50
20	1.45934	30	9.99895	0	1.15883	30	1.15778	31	(1)301.7.5	2.1	40
30	1.45964	31	9.99895	1	1.15913	31	1.15809	30	(1)301.5.4	2.1	30
40	1.45995	30	9.99896	0	1.15944	30	1.15839	31	(1)301.3.3	2.1	20
50	1.46025	30	9.99896	0	1.15974	30	1.15870	30	(1)301.1.2	2.1	10
<b>2'</b>	1.46055	31	9.99896	0	1.16004	31	1.15900	31	(1)300.9	2.1	<b>58'</b>
10	1.46086	30	9.99896	0	1.16035	30	1.15931	30	(1)300.7	2.1	50
20	1.46116	31	9.99896	0	1.16065	31	1.15961	31	(1)300.4.9	2.1	40
30	1.46147	30	9.99896	0	1.16096	30	1.15992	30	(1)300.2.8	2.2	30
40	1.46177	31	9.99896	1	1.16126	30	1.16022	31	(1)300.0.6	2.1	20
50	1.46208	30	9.99897	0	1.16156	31	1.16053	31	(1)299.8.5	2.1	10
<b>3'</b>	1.46238	31	9.99897	0	1.16187	30	1.16084	30	(1)299.6.4	2.1	<b>57'</b>
10	1.46269	31	9.99897	0	1.16217	31	1.16114	31	(1)299.4.3	2.1	50
20	1.46300	30	9.99897	0	1.16248	31	1.16145	31	(1)299.2.2	2.1	40
30	1.46330	31	9.99897	0	1.16279	30	1.16176	30	(1)299.0.1	2.1	30
40	1.46361	30	9.99897	0	1.16309	31	1.16206	31	(1)298.8.0	2.1	20
50	1.46391	31	9.99897	1	1.16340	30	1.16237	31	(1)298.5.9	2.1	10
<b>4'</b>	1.46422	31	9.99898	0	1.16370	31	1.16268	31	(1)298.3.8	2.2	<b>56'</b>
10	1.46453	30	9.99898	0	1.16401	31	1.16299	30	(1)298.1.6	2.1	50
20	1.46484	30	9.99898	0	1.16432	30	1.16329	31	(1)297.9.5	2.1	40
30	1.46514	31	9.99898	0	1.16462	31	1.16360	31	(1)297.7.4	2.1	30
40	1.46545	31	9.99898	0	1.16493	31	1.16391	31	(1)297.5.3	2.1	20
50	1.46576	31	9.99898	0	1.16524	30	1.16422	31	(1)297.3.2	2.1	10
<b>5'</b>	1.46607	31	9.99898	1	1.16554	31	1.16453	31	(1)297.1.1	2.1	<b>55'</b>
10	1.46638	30	9.99899	0	1.16585	31	1.16484	31	(1)296.9.0	2.1	50
20	1.46668	31	9.99899	0	1.16616	31	1.16515	31	(1)296.6.9	2.1	40
30	1.46699	31	9.99899	0	1.16647	31	1.16546	31	(1)296.4.8	2.1	30
40	1.46730	31	9.99899	0	1.16678	31	1.16577	31	(1)296.2.7	2.2	20
50	1.46761	31	9.99899	0	1.16708	31	1.16608	31	(1)296.0.5	2.1	10
<b>6'</b>	1.46792	31	9.99899	0	1.16739	31	1.16639	31	(1)295.8.4	2.1	<b>54'</b>
10	1.46823	31	9.99899	1	1.16770	31	1.16670	31	(1)295.6.3	2.1	50
20	1.46854	31	9.99900	0	1.16801	31	1.16701	31	(1)295.4.2	2.1	40
30	1.46885	31	9.99900	0	1.16832	31	1.16732	31	(1)295.2.1	2.1	30
40	1.46916	31	9.99900	0	1.16863	31	1.16763	31	(1)295.0.0	2.1	20
50	1.46947	31	9.99900	0	1.16894	31	1.16794	31	(1)294.7.9	2.1	10
<b>7'</b>	1.46978	31	9.99900	0	1.16925	31	1.16825	31	(1)294.5.8	2.1	<b>53'</b>
10	1.47009	31	9.99900	0	1.16956	31	1.16856	32	(1)294.3.7	2.1	50
20	1.47040	32	9.99900	1	1.16987	31	1.16888	31	(1)294.1.6	2.2	40
30	1.47072	31	9.99901	0	1.17018	31	1.16919	31	(1)293.9.4	2.1	30
40	1.47103	31	9.99901	0	1.17049	31	1.16950	31	(1)293.7.3	2.1	20
50	1.47134	31	9.99901	0	1.17080	32	1.16981	32	(1)293.5.2	2.1	10
<b>8'</b>	1.47165	31	9.99901	0	1.17112	31	1.17013	31	(1)293.3.1	2.1	<b>52'</b>
10	1.47196	32	9.99901	0	1.17143	31	1.17044	31	(1)293.1.0	2.1	50
20	1.47228	31	9.99901	0	1.17174	31	1.17075	32	(1)292.8.9	2.1	40
30	1.47259	31	9.99901	1	1.17205	31	1.17107	31	(1)292.6.8	2.1	30
40	1.47290	31	9.99902	0	1.17236	32	1.17138	31	(1)292.4.7	2.1	20
50	1.47321	32	9.99902	0	1.17268	31	1.17169	32	(1)292.2.6	2.2	10
<b>9'</b>	1.47353	31	9.99902	0	1.17299	31	1.17201	31	(1)292.0.4	2.1	<b>51'</b>
10	1.47384	32	9.99902	0	1.17330	31	1.17232	32	(1)291.8.3	2.1	50
20	1.47416	31	9.99902	0	1.17361	32	1.17264	31	(1)291.6.2	2.1	40
30	1.47447	31	9.99902	0	1.17393	31	1.17295	32	(1)291.4.1	2.1	30
40	1.47478	32	9.99902	1	1.17424	32	1.17327	31	(1)291.2.0	2.1	20
50	1.47510	31	9.99903	0	1.17456	31	1.17358	32	(1)290.9.9	2.1	10
<b>10'</b>	1.47541	31	9.99903	0	1.17487	31	1.17390	32	(1)290.7.8	2.1	<b>50'</b>

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
10'	1.47541	32	9.99903	0	1.17487	31	1.17390	31	(1)2907.8			50'
10	1.47573	31	9.99903	0	1.17518	32	1.17421	32	(1)2905.7	2.1	50	
20	1.47604	32	9.99903	0	1.17550	31	1.17453	32	(1)2903.6	2.1	40	
30	1.47636	32	9.99903	0	1.17581	32	1.17485	31	(1)2901.5	2.2	30	
40	1.47668	31	9.99903	0	1.17613	31	1.17516	32	(1)2899.3	2.1	20	
50	1.47699	32	9.99903	1	1.17644	32	1.17548	32	(1)2897.2	2.1	10	
11'	1.47731	31	9.99904	0	1.17676	32	1.17580	31	(1)2895.1	2.1	49'	
10	1.47762	32	9.99904	0	1.17708	31	1.17611	32	(1)2893.0	2.1	50	
20	1.47794	32	9.99904	0	1.17739	32	1.17643	32	(1)2890.9	2.1	40	
30	1.47826	31	9.99904	0	1.17771	31	1.17675	32	(1)2888.8	2.1	30	
40	1.47857	32	9.99904	0	1.17802	32	1.17707	31	(1)2886.7	2.1	20	
50	1.47889	32	9.99904	0	1.17834	32	1.17738	32	(1)2884.6	2.1	10	
12'	1.47921	32	9.99904	1	1.17866	31	1.17770	32	(1)2882.5	2.1	48'	
10	1.47953	32	9.99905	0	1.17897	32	1.17802	32	(1)2880.4	2.2	50	
20	1.47985	31	9.99905	0	1.17929	32	1.17834	32	(1)2878.2	2.1	40	
30	1.48016	32	9.99905	0	1.17961	32	1.17866	32	(1)2876.1	2.1	30	
40	1.48048	32	9.99905	0	1.17993	32	1.17898	32	(1)2874.0	2.1	20	
50	1.48080	32	9.99905	0	1.18025	31	1.17930	32	(1)2871.9	2.1	10	
13'	1.48112	32	9.99905	0	1.18056	32	1.17962	32	(1)2869.8	2.1	47'	
10	1.48144	32	9.99905	0	1.18088	32	1.17994	32	(1)2867.7	2.1	50	
20	1.48176	32	9.99906	1	1.18120	32	1.18026	32	(1)2865.6	2.1	40	
30	1.48208	32	9.99906	0	1.18152	32	1.18058	32	(1)2863.5	2.1	30	
40	1.48240	32	9.99906	0	1.18184	32	1.18090	32	(1)2861.4	2.1	20	
50	1.48272	32	9.99906	0	1.18216	32	1.18122	32	(1)2859.3	2.2	10	
14'	1.48304	32	9.99906	0	1.18248	32	1.18154	32	(1)2857.1	2.1	46'	
10	1.48336	32	9.99906	0	1.18280	32	1.18186	32	(1)2855.0	2.1	50	
20	1.48368	32	9.99906	1	1.18312	32	1.18218	32	(1)2852.9	2.1	40	
30	1.48400	32	9.99907	0	1.18344	32	1.18250	32	(1)2850.8	2.1	30	
40	1.48432	32	9.99907	0	1.18376	32	1.18283	33	(1)2848.7	2.1	20	
50	1.48464	33	9.99907	0	1.18408	32	1.18315	32	(1)2846.6	2.1	10	
15'	1.48497	32	9.99907	0	1.18440	32	1.18347	32	(1)2844.5	2.1	45'	
10	1.48529	32	9.99907	0	1.18472	32	1.18379	33	(1)2842.4	2.1	50	
20	1.48561	32	9.99907	0	1.18504	33	1.18412	32	(1)2840.3	2.1	40	
30	1.48593	33	9.99907	0	1.18537	32	1.18444	32	(1)2838.2	2.2	30	
40	1.48626	32	9.99907	0	1.18569	32	1.18476	33	(1)2836.0	2.1	20	
50	1.48658	32	9.99908	1	1.18601	32	1.18509	32	(1)2833.9	2.1	10	
16'	1.48690	33	9.99908	0	1.18633	33	1.18541	32	(1)2831.8	2.1	44'	
10	1.48723	32	9.99908	0	1.18666	32	1.18573	33	(1)2829.7	2.1	50	
20	1.48755	32	9.99908	0	1.18698	32	1.18606	32	(1)2827.6	2.1	40	
30	1.48787	32	9.99908	0	1.18730	33	1.18638	32	(1)2825.5	2.1	30	
40	1.48820	32	9.99908	0	1.18763	32	1.18671	32	(1)2823.4	2.1	20	
50	1.48852	33	9.99908	1	1.18795	32	1.18703	33	(1)2821.3	2.1	10	
17'	1.48885	32	9.99909	0	1.18827	33	1.18736	32	(1)2819.2	2.1	43'	
10	1.48917	33	9.99909	0	1.18860	32	1.18768	33	(1)2817.1	2.2	50	
20	1.48950	32	9.99909	0	1.18892	33	1.18801	33	(1)2814.9	2.1	40	
30	1.48982	33	9.99909	0	1.18925	32	1.18834	32	(1)2812.8	2.1	30	
40	1.49015	32	9.99909	0	1.18957	32	1.18866	32	(1)2810.7	2.1	20	
50	1.49047	32	9.99909	0	1.18990	33	1.18899	33	(1)2808.6	2.1	10	
18'	1.49080	33	9.99909	1	1.19022	33	1.18932	32	(1)2806.5	2.1	42'	
10	1.49113	32	9.99910	0	1.19055	32	1.18964	33	(1)2804.4	2.1	50	
20	1.49145	33	9.99910	0	1.19087	32	1.18997	33	(1)2802.3	2.1	40	
30	1.49178	33	9.99910	0	1.19120	33	1.19030	33	(1)2800.2	2.1	30	
40	1.49211	32	9.99910	0	1.19153	32	1.19063	32	(1)2798.1	2.1	20	
50	1.49243	33	9.99910	0	1.19185	33	1.19095	33	(1)2796.0	2.2	10	
19'	1.49276	33	9.99910	0	1.19218	33	1.19128	33	(1)2793.8	2.1	41'	
10	1.49309	33	9.99910	0	1.19251	33	1.19161	33	(1)2791.7	2.1	50	
20	1.49342	32	9.99910	0	1.19284	32	1.19194	33	(1)2789.6	2.1	40	
30	1.49375	32	9.99911	1	1.19316	32	1.19227	33	(1)2787.5	2.1	30	
40	1.49407	33	9.99911	0	1.19349	33	1.19260	33	(1)2785.4	2.1	20	
50	1.49440	33	9.99911	0	1.19382	33	1.19293	33	(1)2783.3	2.1	10	
20'	1.49472	33	9.99911	0	1.19415	33	1.19326	33	(1)2781.2	2.1	40'	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff. l. Cotg z Diff. z' Diff.  $\omega$   
log sec z l. Cotg z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>20'</b>	1.49473	33	9.99911	0	1.19415	33	1.19326	33	(1)2781.2			<b>40'</b>
10	1.49506	33	9.99911	0	1.19448	33	1.19359	33	(1)2779.1	2.1	50	
20	1.49539	33	9.99911	0	1.19481	32	1.19392	33	(1)2777.0	2.1	40	
30	1.49572	33	9.99911	1	1.19513	33	1.19425	33	(1)2774.9	2.2	30	
40	1.49605	33	9.99912	0	1.19546	33	1.19458	33	(1)2772.7	2.1	20	
50	1.49638	33	9.99912	0	1.19579	33	1.19491	33	(1)2770.6	2.1	10	
<b>21'</b>	1.49671	33	9.99912	0	1.19612	33	1.19524	33	(1)2768.5	2.1		<b>39'</b>
10	1.49704	33	9.99912	0	1.19645	33	1.19557	34	(1)2766.4	2.1	50	
20	1.49737	34	9.99912	0	1.19678	33	1.19591	33	(1)2764.3	2.1	40	
30	1.49771	33	9.99912	0	1.19711	34	1.19624	33	(1)2762.2	2.1	30	
40	1.49804	33	9.99912	0	1.19745	33	1.19657	33	(1)2760.1	2.1	20	
50	1.49837	33	9.99912	1	1.19778	33	1.19690	33	(1)2758.0	2.1	10	
<b>22'</b>	1.49870	33	9.99913	0	1.19811	33	1.19723	34	(1)2755.9	2.1		<b>38'</b>
10	1.49903	34	9.99913	0	1.19844	33	1.19757	33	(1)2753.8	2.2	50	
20	1.49937	33	9.99913	0	1.19877	33	1.19790	33	(1)2751.6	2.1	40	
30	1.49970	33	9.99913	0	1.19910	34	1.19823	34	(1)2749.5	2.1	30	
40	1.50003	34	9.99913	0	1.19944	33	1.19857	33	(1)2747.4	2.1	20	
50	1.50037	33	9.99913	0	1.19977	33	1.19890	34	(1)2745.3	2.1	10	
<b>23'</b>	1.50070	33	9.99913	1	1.20010	34	1.19924	33	(1)2743.2	2.1		<b>37'</b>
10	1.50103	34	9.99914	0	1.20044	33	1.19957	34	(1)2741.1	2.1	50	
20	1.50137	33	9.99914	0	1.20077	33	1.19991	33	(1)2739.0	2.1	40	
30	1.50170	34	9.99914	0	1.20110	34	1.20024	34	(1)2736.9	2.1	30	
40	1.50204	33	9.99914	0	1.20144	33	1.20058	33	(1)2734.8	2.1	20	
50	1.50237	34	9.99914	0	1.20177	34	1.20091	34	(1)2732.7	2.2	10	
<b>24'</b>	1.50271	33	9.99914	0	1.20211	33	1.20125	33	(1)2730.5	2.1		<b>36'</b>
10	1.50304	34	9.99914	0	1.20244	34	1.20158	34	(1)2728.4	2.1	50	
20	1.50338	33	9.99914	1	1.20278	33	1.20192	34	(1)2726.3	2.1	40	
30	1.50371	34	9.99915	0	1.20311	34	1.20226	33	(1)2724.2	2.1	30	
40	1.50405	34	9.99915	0	1.20345	33	1.20259	34	(1)2722.1	2.1	20	
50	1.50439	33	9.99915	0	1.20378	34	1.20293	34	(1)2720.0	2.1	10	
<b>25'</b>	1.50472	34	9.99915	0	1.20412	33	1.20327	34	(1)2717.9	2.1		<b>35'</b>
10	1.50506	34	9.99915	0	1.20445	34	1.20361	33	(1)2715.8	2.1	50	
20	1.50540	34	9.99915	0	1.20479	34	1.20394	34	(1)2713.7	2.1	40	
30	1.50574	33	9.99915	1	1.20513	34	1.20428	34	(1)2711.6	2.1	30	
40	1.50607	34	9.99916	0	1.20547	33	1.20462	34	(1)2709.5	2.1	20	
50	1.50641	34	9.99916	0	1.20580	34	1.20496	34	(1)2707.3	2.2	10	
<b>26'</b>	1.50675	34	9.99916	0	1.20614	34	1.20530	34	(1)2705.2	2.1		<b>34'</b>
10	1.50709	34	9.99916	0	1.20648	34	1.20564	34	(1)2703.1	2.1	50	
20	1.50743	34	9.99916	0	1.20682	34	1.20598	34	(1)2701.0	2.1	40	
30	1.50777	34	9.99916	0	1.20716	33	1.20632	34	(1)2698.9	2.1	30	
40	1.50811	34	9.99916	0	1.20749	34	1.20666	34	(1)2696.8	2.1	20	
50	1.50845	34	9.99916	1	1.20783	34	1.20700	34	(1)2694.7	2.1	10	
<b>27'</b>	1.50879	34	9.99917	0	1.20817	34	1.20734	34	(1)2692.6	2.1		<b>33'</b>
10	1.50913	34	9.99917	0	1.20851	34	1.20768	34	(1)2690.5	2.1	50	
20	1.50947	34	9.99917	0	1.20885	34	1.20802	34	(1)2688.4	2.2	40	
30	1.50981	34	9.99917	0	1.20919	34	1.20836	34	(1)2686.2	2.1	30	
40	1.51015	34	9.99917	0	1.20953	34	1.20870	34	(1)2684.1	2.1	20	
50	1.51049	34	9.99917	0	1.20987	34	1.20904	35	(1)2682.0	2.1	10	
<b>28'</b>	1.51083	34	9.99917	0	1.21021	34	1.20939	34	(1)2679.9	2.1		<b>32'</b>
10	1.51117	34	9.99917	1	1.21055	35	1.20973	34	(1)2677.8	2.1	50	
20	1.51151	35	9.99918	0	1.21090	34	1.21007	35	(1)2675.7	2.1	40	
30	1.51186	34	9.99918	0	1.21124	34	1.21042	34	(1)2673.6	2.1	30	
40	1.51220	34	9.99918	0	1.21158	34	1.21076	34	(1)2671.5	2.1	20	
50	1.51254	35	9.99918	0	1.21192	34	1.21110	35	(1)2669.4	2.1	10	
<b>29'</b>	1.51289	34	9.99918	0	1.21226	35	1.21145	34	(1)2667.3	2.1		<b>31'</b>
10	1.51323	34	9.99918	0	1.21261	34	1.21179	34	(1)2665.2	2.1	50	
20	1.51357	35	9.99918	0	1.21295	34	1.21213	35	(1)2663.0	2.2	40	
30	1.51392	34	9.99919	1	1.21329	34	1.21248	35	(1)2660.9	2.1	30	
40	1.51426	34	9.99919	0	1.21364	35	1.21282	34	(1)2658.8	2.1	20	
50	1.51460	34	9.99919	0	1.21398	34	1.21317	35	(1)2656.7	2.1	10	
<b>30'</b>	1.51495	35	9.99919	0	1.21432	34	1.21351	34	(1)2654.6	2.1		<b>30'</b>

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>30'</b>	1.51495		9.99919		1.21432		1.21351		(1)2651.6	2.1	<b>30'</b>
10	1.51529	34	9.99919	0	1.21467	35	1.21386	35	(1)2652.5	2.1	50
20	1.51564	35	9.99919	0	1.21501	34	1.21421	35	(1)2650.4	2.1	40
30	1.51599	34	9.99919	0	1.21536	34	1.21455	35	(1)2648.3	2.1	30
40	1.51633	35	9.99919	1	1.21570	35	1.21490	35	(1)2646.2	2.1	20
50	1.51668	34	9.99920	0	1.21605	35	1.21525	34	(1)2644.1	2.2	10
<b>31'</b>	1.51702	35	9.99920	0	1.21640	34	1.21559	35	(1)2641.9	2.1	<b>29'</b>
10	1.51737	35	9.99920	0	1.21674	35	1.21594	35	(1)2639.8	2.1	50
20	1.51772	34	9.99920	0	1.21709	35	1.21629	35	(1)2637.7	2.1	40
30	1.51806	35	9.99920	0	1.21743	34	1.21663	34	(1)2635.6	2.1	30
40	1.51841	35	9.99920	0	1.21778	35	1.21698	35	(1)2633.5	2.1	20
50	1.51876	35	9.99920	0	1.21813	35	1.21733	35	(1)2631.4	2.1	10
<b>32'</b>	1.51911	35	9.99920	1	1.21848	34	1.21768	35	(1)2629.3	2.1	<b>28'</b>
10	1.51946	34	9.99921	0	1.21882	35	1.21803	35	(1)2627.2	2.1	50
20	1.51980	35	9.99921	0	1.21917	35	1.21838	35	(1)2625.1	2.1	40
30	1.52015	35	9.99921	0	1.21952	35	1.21873	35	(1)2623.0	2.1	30
40	1.52050	35	9.99921	0	1.21987	35	1.21908	35	(1)2620.9	2.2	20
50	1.52085	35	9.99921	0	1.22022	35	1.21943	35	(1)2618.7	2.1	10
<b>33'</b>	1.52120	35	9.99921	0	1.22057	35	1.21978	35	(1)2616.6	2.1	<b>27'</b>
10	1.52155	35	9.99921	0	1.22092	35	1.22013	35	(1)2614.5	2.1	50
20	1.52190	35	9.99921	1	1.22127	35	1.22048	35	(1)2612.4	2.1	40
30	1.52225	35	9.99922	0	1.22162	35	1.22083	35	(1)2610.3	2.1	30
40	1.52260	36	9.99922	0	1.22197	35	1.22118	35	(1)2608.2	2.1	20
50	1.52296	35	9.99922	0	1.22232	35	1.22153	35	(1)2606.1	2.1	10
<b>34'</b>	1.52331	35	9.99922	0	1.22267	35	1.22189	36	(1)2604.0	2.1	<b>26'</b>
10	1.52366	35	9.99922	0	1.22302	35	1.22224	35	(1)2601.9	2.1	50
20	1.52401	35	9.99922	0	1.22337	35	1.22259	35	(1)2599.8	2.1	40
30	1.52436	36	9.99922	0	1.22372	35	1.22294	36	(1)2597.7	2.2	30
40	1.52472	35	9.99922	1	1.22407	35	1.22330	35	(1)2595.5	2.1	20
50	1.52507	35	9.99923	0	1.22442	36	1.22365	35	(1)2593.4	2.1	10
<b>35'</b>	1.52542	35	9.99923	0	1.22478	35	1.22400	36	(1)2591.3	2.1	<b>25'</b>
10	1.52577	36	9.99923	0	1.22513	35	1.22436	35	(1)2589.2	2.1	50
20	1.52613	35	9.99923	0	1.22548	36	1.22471	36	(1)2587.1	2.1	40
30	1.52648	36	9.99923	0	1.22584	35	1.22507	35	(1)2585.0	2.1	30
40	1.52684	35	9.99923	0	1.22619	35	1.22542	36	(1)2582.9	2.1	20
50	1.52719	36	9.99923	0	1.22654	36	1.22578	35	(1)2580.8	2.1	10
<b>36'</b>	1.52755	35	9.99923	1	1.22690	35	1.22613	36	(1)2578.7	2.1	<b>24'</b>
10	1.52790	36	9.99924	0	1.22725	36	1.22649	36	(1)2576.6	2.1	50
20	1.52826	35	9.99924	0	1.22761	35	1.22685	35	(1)2574.5	2.2	40
30	1.52861	36	9.99924	0	1.22796	36	1.22720	36	(1)2572.3	2.1	30
40	1.52897	35	9.99924	0	1.22832	35	1.22756	36	(1)2570.2	2.1	20
50	1.52932	36	9.99924	0	1.22867	36	1.22792	35	(1)2568.1	2.1	10
<b>37'</b>	1.52968	36	9.99924	0	1.22903	36	1.22827	36	(1)2566.0	2.1	<b>23'</b>
10	1.53004	36	9.99924	0	1.22939	35	1.22863	36	(1)2563.9	2.1	50
20	1.53040	35	9.99924	1	1.22974	36	1.22899	36	(1)2561.8	2.1	40
30	1.53075	36	9.99925	0	1.23010	36	1.22935	35	(1)2559.7	2.1	30
40	1.53111	36	9.99925	0	1.23046	35	1.22970	36	(1)2557.6	2.1	20
50	1.53147	36	9.99925	0	1.23081	36	1.23006	36	(1)2555.5	2.1	10
<b>38'</b>	1.53183	36	9.99925	0	1.23117	36	1.23042	36	(1)2553.4	2.2	<b>22'</b>
10	1.53219	36	9.99925	0	1.23153	36	1.23078	36	(1)2551.2	2.1	50
20	1.53255	35	9.99925	0	1.23189	36	1.23114	36	(1)2549.1	2.1	40
30	1.53290	36	9.99925	0	1.23225	36	1.23150	36	(1)2547.0	2.1	30
40	1.53326	36	9.99925	1	1.23261	36	1.23186	36	(1)2544.9	2.1	20
50	1.53362	36	9.99926	0	1.23297	36	1.23222	36	(1)2542.8	2.1	10
<b>39'</b>	1.53398	36	9.99926	0	1.23333	36	1.23258	36	(1)2540.7	2.1	<b>21'</b>
10	1.53434	37	9.99926	0	1.23369	36	1.23294	37	(1)2538.6	2.1	50
20	1.53471	36	9.99926	0	1.23405	36	1.23331	36	(1)2536.5	2.1	40
30	1.53507	36	9.99926	0	1.23441	36	1.23367	36	(1)2534.4	2.1	30
40	1.53543	36	9.99926	0	1.23477	36	1.23403	36	(1)2532.3	2.1	20
50	1.53579	36	9.99926	0	1.23513	36	1.23439	36	(1)2530.2	2.2	10
<b>40'</b>	1.53615	36	9.99926	0	1.23549	36	1.23475	36	(1)2528.0	2.2	<b>20'</b>

log eos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      l. cotg  $\omega$   
 log Sec z           l. Cotg z           l. Cosec z



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin $\omega$ log tg z	Diff.			
<b>40'</b>	1.53615	36	9.99926	1	1.23549	36	1.23475	37	(1)2528.0		<b>20'</b>
10	1.53651	37	9.99927	0	1.23585	36	1.23512	36	(1)2525.9	2.1	50
20	1.53688	36	9.99927	0	1.23621	36	1.23548	36	(1)2523.8	2.1	40
30	1.53724	36	9.99927	0	1.23657	37	1.23584	37	(1)2521.7	2.1	30
40	1.53760	37	9.99927	0	1.23694	36	1.23621	35	(1)2519.6	2.1	20
50	1.53797	36	9.99927	0	1.23730	36	1.23657	37	(1)2517.5	2.1	10
<b>41'</b>	1.53833	36	9.99927	0	1.23766	37	1.23694	36	(1)2515.4	2.1	<b>19'</b>
10	1.53869	37	9.99927	0	1.23803	36	1.23730	37	(1)2513.3	2.1	50
20	1.53906	36	9.99927	1	1.23839	36	1.23767	36	(1)2511.2	2.1	40
30	1.53942	37	9.99928	0	1.23875	37	1.23803	37	(1)2509.1	2.1	30
40	1.53979	36	9.99928	0	1.23912	36	1.23840	36	(1)2507.0	2.2	20
50	1.54015	37	9.99928	0	1.23948	37	1.23876	37	(1)2504.8	2.1	10
<b>42'</b>	1.54052	36	9.99928	0	1.23985	36	1.23913	36	(1)2502.7	2.1	<b>18'</b>
10	1.54088	37	9.99928	0	1.24021	37	1.23949	37	(1)2500.6	2.1	50
20	1.54125	37	9.99928	0	1.24058	37	1.23986	37	(1)2498.5	2.1	40
30	1.54162	36	9.99928	1	1.24095	36	1.24023	37	(1)2496.4	2.1	30
40	1.54198	37	9.99928	1	1.24131	37	1.24060	36	(1)2494.3	2.1	20
50	1.54235	37	9.99929	0	1.24168	37	1.24096	37	(1)2492.2	2.1	10
<b>43'</b>	1.54272	37	9.99929	0	1.24205	36	1.24133	37	(1)2490.1	2.1	<b>17'</b>
10	1.54309	36	9.99929	0	1.24241	37	1.24170	37	(1)2488.0	2.1	50
20	1.54345	37	9.99929	0	1.24278	37	1.24207	37	(1)2485.9	2.1	40
30	1.54382	37	9.99929	0	1.24315	37	1.24244	37	(1)2483.8	2.1	30
40	1.54419	37	9.99929	0	1.24352	36	1.24281	37	(1)2481.7	2.2	20
50	1.54456	37	9.99929	0	1.24388	37	1.24318	37	(1)2479.5	2.1	10
<b>44'</b>	1.54493	37	9.99929	0	1.24425	37	1.24355	37	(1)2477.4	2.1	<b>16'</b>
10	1.54530	37	9.99929	1	1.24462	37	1.24392	37	(1)2475.3	2.1	50
20	1.54567	37	9.99930	0	1.24499	37	1.24429	37	(1)2473.2	2.1	40
30	1.54604	37	9.99930	0	1.24536	37	1.24466	37	(1)2471.1	2.1	30
40	1.54641	37	9.99930	0	1.24573	37	1.24503	37	(1)2469.0	2.1	20
50	1.54678	37	9.99930	0	1.24610	37	1.24540	37	(1)2466.9	2.1	10
<b>45'</b>	1.54715	37	9.99930	0	1.24647	37	1.24577	38	(1)2464.8	2.1	<b>15'</b>
10	1.54752	38	9.99930	0	1.24684	37	1.24615	37	(1)2462.7	2.1	50
20	1.54790	37	9.99930	0	1.24721	38	1.24652	37	(1)2460.6	2.1	40
30	1.54827	37	9.99930	1	1.24759	37	1.24689	37	(1)2458.5	2.2	30
40	1.54864	37	9.99931	0	1.24796	37	1.24726	38	(1)2456.3	2.1	20
50	1.54901	38	9.99931	0	1.24833	37	1.24764	37	(1)2454.2	2.1	10
<b>46'</b>	1.54939	37	9.99931	0	1.24870	38	1.24801	37	(1)2452.1	2.1	<b>14'</b>
10	1.54976	37	9.99931	0	1.24908	37	1.24838	38	(1)2450.0	2.1	50
20	1.55013	38	9.99931	0	1.24945	37	1.24876	37	(1)2447.9	2.1	40
30	1.55051	37	9.99931	0	1.24982	38	1.24913	38	(1)2445.8	2.1	30
40	1.55088	38	9.99931	0	1.25020	37	1.24951	37	(1)2443.7	2.1	20
50	1.55126	37	9.99931	1	1.25057	37	1.24988	38	(1)2441.6	2.1	10
<b>47'</b>	1.55163	38	9.99932	0	1.25094	38	1.25026	38	(1)2439.5	2.1	<b>13'</b>
10	1.55201	37	9.99932	0	1.25132	37	1.25064	37	(1)2437.4	2.1	50
20	1.55238	38	9.99932	0	1.25169	38	1.25101	38	(1)2435.3	2.2	40
30	1.55276	38	9.99932	0	1.25207	38	1.25139	38	(1)2433.1	2.1	30
40	1.55314	37	9.99932	0	1.25245	37	1.25177	38	(1)2431.0	2.1	20
50	1.55351	38	9.99932	0	1.25282	38	1.25214	38	(1)2428.9	2.1	10
<b>48'</b>	1.55389	38	9.99932	0	1.25320	38	1.25252	38	(1)2426.8	2.1	<b>12'</b>
10	1.55427	37	9.99932	0	1.25358	37	1.25290	38	(1)2424.7	2.1	50
20	1.55464	38	9.99932	1	1.25395	38	1.25328	38	(1)2422.6	2.1	40
30	1.55502	38	9.99933	0	1.25433	38	1.25366	37	(1)2420.5	2.1	30
40	1.55540	38	9.99933	0	1.25471	38	1.25404	38	(1)2418.4	2.1	20
50	1.55578	38	9.99933	0	1.25509	37	1.25441	38	(1)2416.3	2.1	10
<b>49'</b>	1.55616	38	9.99933	0	1.25546	38	1.25479	38	(1)2414.2	2.1	<b>11'</b>
10	1.55654	38	9.99933	0	1.25584	38	1.25517	38	(1)2412.1	2.2	50
20	1.55692	38	9.99933	0	1.25622	38	1.25555	38	(1)2409.9	2.1	40
30	1.55730	38	9.99933	0	1.25660	38	1.25593	38	(1)2407.8	2.1	30
40	1.55768	38	9.99933	1	1.25698	38	1.25631	39	(1)2405.7	2.1	20
50	1.55806	38	9.99934	0	1.25736	38	1.25669	38	(1)2403.6	2.1	10
<b>50'</b>	1.55844	38	9.99934	0	1.25774	38	1.25708	38	(1)2401.5	2.1	<b>10'</b>

log cos  $\omega$   
log Sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

l. cotg  $\omega$   
l. Cosec z

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
50'	1.55844	38	9.99934	0	1.25771	38	1.25708	38	(1)2101.5	2.1	10'	
10	1.55882	38	9.99934	0	1.25812	38	1.25746	38	(1)2399.4	2.1	50	
20	1.55920	38	9.99934	0	1.25850	38	1.25784	38	(1)2397.3	2.1	40	
30	1.55958	38	9.99934	0	1.25888	39	1.25822	39	(1)2395.2	2.1	30	
40	1.55997	38	9.99934	0	1.25927	38	1.25861	38	(1)2393.1	2.1	20	
50	1.56035	38	9.99934	0	1.25965	38	1.25899	38	(1)2391.0	2.1	10	
51'	1.56073	39	9.99934	0	1.26003	38	1.25937	39	(1)2388.9	2.1	9'	
10	1.56112	38	9.99934	1	1.26041	39	1.25976	38	(1)2386.8	2.2	50	
20	1.56150	38	9.99935	0	1.26080	39	1.26014	38	(1)2384.6	2.1	40	
30	1.56188	38	9.99935	0	1.26118	38	1.26053	39	(1)2382.5	2.1	30	
40	1.56227	39	9.99935	0	1.26156	38	1.26091	38	(1)2380.4	2.1	20	
50	1.56265	38	9.99935	0	1.26195	39	1.26130	39	(1)2378.3	2.1	10	
52'	1.56304	39	9.99935	0	1.26233	38	1.26168	38	(1)2376.2	2.1	8'	
10	1.56342	38	9.99935	0	1.26272	39	1.26207	39	(1)2374.1	2.1	50	
20	1.56381	39	9.99935	0	1.26310	38	1.26246	38	(1)2372.0	2.1	40	
30	1.56419	38	9.99935	0	1.26349	39	1.26284	39	(1)2369.9	2.1	30	
40	1.56458	39	9.99935	0	1.26387	38	1.26323	39	(1)2367.8	2.1	20	
50	1.56497	39	9.99936	1	1.26426	39	1.26362	39	(1)2365.7	2.1	10	
53'	1.56536	39	9.99936	0	1.26465	38	1.26400	39	(1)2363.6	2.2	7'	
10	1.56574	39	9.99936	0	1.26503	39	1.26439	39	(1)2361.4	2.1	50	
20	1.56613	39	9.99936	0	1.26542	39	1.26478	39	(1)2359.3	2.1	40	
30	1.56652	39	9.99936	0	1.26581	39	1.26517	39	(1)2357.2	2.1	30	
40	1.56691	39	9.99936	0	1.26620	38	1.26556	39	(1)2355.1	2.1	20	
50	1.56730	38	9.99936	0	1.26658	39	1.26595	39	(1)2353.0	2.1	10	
54'	1.56768	39	9.99936	1	1.26697	39	1.26634	39	(1)2350.9	2.1	6'	
10	1.56807	39	9.99937	0	1.26736	39	1.26673	39	(1)2348.8	2.1	50	
20	1.56846	39	9.99937	0	1.26775	39	1.26712	39	(1)2346.7	2.1	40	
30	1.56885	40	9.99937	0	1.26814	39	1.26751	39	(1)2344.6	2.1	30	
40	1.56925	40	9.99937	0	1.26853	39	1.26790	39	(1)2342.5	2.1	20	
50	1.56964	39	9.99937	0	1.26892	39	1.26829	39	(1)2340.4	2.1	10	
55'	1.57003	39	9.99937	0	1.26931	39	1.26868	39	(1)2338.3	2.2	5'	
10	1.57042	39	9.99937	0	1.26970	39	1.26907	39	(1)2336.1	2.1	50	
20	1.57081	39	9.99937	0	1.27009	39	1.26947	40	(1)2334.0	2.1	40	
30	1.57120	40	9.99937	1	1.27049	39	1.26986	39	(1)2331.9	2.1	30	
40	1.57160	39	9.99938	0	1.27088	39	1.27025	40	(1)2329.8	2.1	20	
50	1.57199	39	9.99938	0	1.27127	39	1.27065	39	(1)2327.7	2.1	10	
56'	1.57238	40	9.99938	0	1.27166	40	1.27104	40	(1)2325.6	2.1	4'	
10	1.57278	39	9.99938	0	1.27206	39	1.27143	39	(1)2323.5	2.1	50	
20	1.57317	39	9.99938	0	1.27245	39	1.27183	40	(1)2321.4	2.1	40	
30	1.57356	40	9.99938	0	1.27284	40	1.27223	39	(1)2319.3	2.1	30	
40	1.57396	40	9.99938	0	1.27324	39	1.27262	40	(1)2317.2	2.1	20	
50	1.57435	40	9.99938	0	1.27363	40	1.27302	39	(1)2315.1	2.1	10	
57'	1.57475	40	9.99938	1	1.27403	39	1.27341	40	(1)2313.0	2.2	3'	
10	1.57515	39	9.99939	0	1.27442	40	1.27381	40	(1)2310.8	2.1	50	
20	1.57554	40	9.99939	0	1.27482	40	1.27421	39	(1)2308.7	2.1	40	
30	1.57594	40	9.99939	0	1.27522	39	1.27460	40	(1)2306.6	2.1	30	
40	1.57634	39	9.99939	0	1.27561	40	1.27500	40	(1)2304.5	2.1	20	
50	1.57673	40	9.99939	0	1.27601	40	1.27540	40	(1)2302.4	2.1	10	
58'	1.57713	40	9.99939	0	1.27641	39	1.27580	40	(1)2300.3	2.1	2'	
10	1.57753	40	9.99939	0	1.27680	40	1.27620	39	(1)2298.2	2.1	50	
20	1.57793	40	9.99939	0	1.27720	40	1.27659	40	(1)2296.1	2.1	40	
30	1.57833	40	9.99939	1	1.27760	40	1.27699	40	(1)2294.0	2.1	30	
40	1.57873	40	9.99940	0	1.27800	40	1.27739	40	(1)2291.9	2.1	20	
50	1.57913	39	9.99940	0	1.27840	40	1.27779	40	(1)2289.8	2.1	10	
59'	1.57952	41	9.99940	0	1.27880	40	1.27819	40	(1)2287.7	2.2	1'	
10	1.57993	40	9.99940	0	1.27920	40	1.27859	41	(1)2285.5	2.1	50	
20	1.58033	40	9.99940	0	1.27960	40	1.27900	40	(1)2283.4	2.1	40	
30	1.58073	40	9.99940	0	1.28000	40	1.27940	40	(1)2281.3	2.1	30	
40	1.58113	40	9.99940	0	1.28040	40	1.27980	40	(1)2279.2	2.1	20	
50	1.58153	40	9.99940	0	1.28080	40	1.28020	40	(1)2277.1	2.1	10	
60'	1.58193	40	9.99940	0	1.28120	40	1.28060	40	(1)2275.0	2.1	0'	

log cos  $\omega$   
log sec  $z$

Diff.

l. cosec  $\omega$   
l. Cotg  $z$

Diff.

log cotg  $\omega$   
l. Cosec  $z$

Diff.

$z'$

Diff.

$\omega$



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>0'</b>	1.58193	40	9.99940	1	1.28130	40	1.28060	41	(1)2275.0	2.1	<b>60'</b>	
10	1.58233	41	9.99941	0	1.28160	40	1.28100	40	(1)2272.9	2.1	50	
20	1.58274	40	9.99941	0	1.28200	41	1.28141	40	(1)2270.8	2.1	46	
30	1.58314	40	9.99941	0	1.28241	40	1.28181	41	(1)2268.7	2.1	30	
40	1.58354	41	9.99941	0	1.28281	40	1.28222	40	(1)2266.6	2.1	20	
50	1.58395	40	9.99941	0	1.28321	41	1.28262	41	(1)2264.5	2.2	10	
<b>1'</b>	1.58435	41	9.99941	0	1.28362	40	1.28303	40	(1)2262.3	2.1	<b>59'</b>	
10	1.58476	40	9.99941	0	1.28402	41	1.28343	40	(1)2260.2	2.1	50	
20	1.58516	41	9.99941	0	1.28443	40	1.28384	41	(1)2258.1	2.1	40	
30	1.58557	40	9.99941	1	1.28483	41	1.28425	41	(1)2256.0	2.1	30	
40	1.58597	41	9.99942	0	1.28524	40	1.28465	40	(1)2253.9	2.1	20	
50	1.58638	41	9.99942	0	1.28564	41	1.28506	41	(1)2251.8	2.1	10	
<b>2'</b>	1.58679	40	9.99942	0	1.28605	40	1.28547	40	(1)2249.7	2.1	<b>58'</b>	
10	1.58719	41	9.99942	0	1.28645	41	1.28587	41	(1)2247.6	2.1	50	
20	1.58760	41	9.99942	0	1.28686	41	1.28628	41	(1)2245.5	2.1	40	
30	1.58801	41	9.99942	0	1.28727	41	1.28669	41	(1)2243.4	2.1	30	
40	1.58842	41	9.99942	0	1.28768	40	1.28710	41	(1)2241.3	2.1	20	
50	1.58883	40	9.99942	0	1.28808	41	1.28751	41	(1)2239.2	2.2	10	
<b>3'</b>	1.58923	41	9.99942	1	1.28849	41	1.28792	41	(1)2237.0	2.1	<b>57'</b>	
10	1.58964	41	9.99943	0	1.28890	41	1.28833	41	(1)2234.9	2.1	50	
20	1.59005	41	9.99943	0	1.28931	41	1.28874	41	(1)2232.8	2.1	40	
30	1.59046	41	9.99943	0	1.28972	41	1.28915	41	(1)2230.7	2.1	30	
40	1.59087	42	9.99943	0	1.29013	41	1.28956	41	(1)2228.6	2.1	20	
50	1.59129	41	9.99943	0	1.29054	41	1.28997	41	(1)2226.5	2.1	10	
<b>4'</b>	1.59170	41	9.99943	0	1.29095	41	1.29038	41	(1)2224.4	2.1	<b>56'</b>	
10	1.59211	41	9.99943	0	1.29136	41	1.29079	42	(1)2222.3	2.1	50	
20	1.59252	41	9.99943	0	1.29177	42	1.29121	41	(1)2220.2	2.1	40	
30	1.59293	42	9.99943	0	1.29219	41	1.29162	41	(1)2218.1	2.1	30	
40	1.59335	41	9.99943	1	1.29260	41	1.29203	42	(1)2216.0	2.1	20	
50	1.59376	41	9.99944	0	1.29301	41	1.29245	41	(1)2213.9	2.1	10	
<b>5'</b>	1.59417	42	9.99944	0	1.29342	42	1.29286	41	(1)2211.8	2.2	<b>55'</b>	
10	1.59459	41	9.99944	0	1.29384	41	1.29327	42	(1)2209.6	2.1	50	
20	1.59500	42	9.99944	0	1.29425	41	1.29369	42	(1)2207.5	2.1	40	
30	1.59542	41	9.99944	0	1.29466	42	1.29411	41	(1)2205.4	2.1	30	
40	1.59583	42	9.99944	0	1.29508	41	1.29452	42	(1)2203.3	2.1	20	
50	1.59625	41	9.99944	0	1.29549	42	1.29494	41	(1)2201.2	2.1	10	
<b>6'</b>	1.59666	42	9.99944	0	1.29591	42	1.29535	42	(1)2199.1	2.1	<b>54'</b>	
10	1.59708	42	9.99944	1	1.29633	41	1.29577	42	(1)2197.0	2.1	50	
20	1.59750	41	9.99945	0	1.29674	42	1.29619	42	(1)2194.9	2.1	40	
30	1.59791	42	9.99945	0	1.29716	42	1.29661	41	(1)2192.8	2.1	30	
40	1.59833	42	9.99945	0	1.29758	41	1.29702	42	(1)2190.7	2.1	20	
50	1.59875	42	9.99945	0	1.29799	42	1.29744	42	(1)2188.6	2.1	10	
<b>7'</b>	1.59917	41	9.99945	0	1.29841	42	1.29786	42	(1)2186.5	2.2	<b>53'</b>	
10	1.59958	42	9.99945	0	1.29883	42	1.29828	42	(1)2184.3	2.1	50	
20	1.60000	42	9.99945	0	1.29925	42	1.29870	42	(1)2182.2	2.1	40	
30	1.60042	42	9.99945	0	1.29967	42	1.29912	42	(1)2180.1	2.1	30	
40	1.60084	42	9.99945	1	1.30009	42	1.29954	42	(1)2178.0	2.1	20	
50	1.60126	42	9.99946	0	1.30051	42	1.29996	42	(1)2175.9	2.1	10	
<b>8'</b>	1.60168	43	9.99946	0	1.30093	42	1.30038	42	(1)2173.8	2.1	<b>52'</b>	
10	1.60211	42	9.99946	0	1.30135	42	1.30080	43	(1)2171.7	2.1	50	
20	1.60253	42	9.99946	0	1.30177	42	1.30123	42	(1)2169.6	2.1	40	
30	1.60295	42	9.99946	0	1.30219	42	1.30165	42	(1)2167.5	2.1	30	
40	1.60337	42	9.99946	0	1.30261	42	1.30207	43	(1)2165.4	2.1	20	
50	1.60379	43	9.99946	0	1.30303	43	1.30250	42	(1)2163.3	2.1	10	
<b>9'</b>	1.60422	42	9.99946	0	1.30346	42	1.30292	42	(1)2161.2	2.2	<b>51'</b>	
10	1.60464	43	9.99946	0	1.30388	42	1.30334	43	(1)2159.0	2.1	50	
20	1.60507	42	9.99946	1	1.30430	43	1.30377	42	(1)2156.9	2.1	40	
30	1.60549	43	9.99947	0	1.30473	42	1.30419	43	(1)2154.8	2.1	30	
40	1.60592	42	9.99947	0	1.30515	43	1.30462	42	(1)2152.7	2.1	20	
50	1.60634	43	9.99947	0	1.30558	42	1.30504	43	(1)2150.6	2.1	10	
<b>10'</b>	1.60677	43	9.99947	0	1.30600	42	1.30547	43	(1)2148.5	2.1	<b>50'</b>	

log cos  $\omega$   
log sec z

Diff. l. cosec  $\omega$   
log cotg z

Diff. log cotg  $\omega$   
l. Cosecz

Diff.

z'

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>10'</b>	1.60677		9.99947	0	1.30600		1.30547		(1)2148.5			<b>50'</b>
10	1.60719	42	9.99947	0	1.30643	43	1.30590	43	(1)2146.4	2.1	50	
20	1.60762	43	9.99947	0	1.30685	42	1.30632	42	(1)2144.3	2.1	40	
30	1.60805	43	9.99947	0	1.30728	43	1.30675	43	(1)2142.2	2.1	30	
40	1.60847	42	9.99947	0	1.30771	43	1.30718	43	(1)2140.1	2.1	20	
50	1.60890	43	9.99947	0	1.30813	42	1.30761	43	(1)2138.0	2.1	10	
<b>11'</b>	1.60933	43	9.99948	1	1.30856	43	1.30804	43	(1)2135.9	2.1		<b>49'</b>
10	1.60976	43	9.99948	0	1.30899	43	1.30847	43	(1)2133.7	2.2	50	
20	1.61019	43	9.99948	0	1.30942	43	1.30890	43	(1)2131.6	2.1	40	
30	1.61062	43	9.99948	0	1.30985	43	1.30933	43	(1)2129.5	2.1	30	
40	1.61105	43	9.99948	0	1.31028	43	1.30976	43	(1)2127.4	2.1	20	
50	1.61148	43	9.99948	0	1.31071	43	1.31019	43	(1)2125.3	2.1	10	
<b>12'</b>	1.61191	43	9.99948	0	1.31114	43	1.31062	43	(1)2123.2	2.1		<b>48'</b>
10	1.61234	43	9.99948	0	1.31157	43	1.31105	43	(1)2121.1	2.1	50	
20	1.61277	43	9.99948	0	1.31200	43	1.31148	44	(1)2119.0	2.1	40	
30	1.61320	44	9.99948	1	1.31243	43	1.31192	43	(1)2116.9	2.1	30	
40	1.61364	43	9.99949	0	1.31286	43	1.31235	43	(1)2114.8	2.1	20	
50	1.61407	43	9.99949	0	1.31330	44	1.31278	43	(1)2112.7	2.1	10	
<b>13'</b>	1.61450	44	9.99949	0	1.31373	43	1.31322	44	(1)2110.6	2.1		<b>47'</b>
10	1.61494	43	9.99949	0	1.31416	43	1.31365	43	(1)2108.5	2.1	50	
20	1.61537	43	9.99949	0	1.31460	44	1.31408	43	(1)2106.3	2.2	40	
30	1.61580	43	9.99949	0	1.31503	43	1.31452	44	(1)2104.2	2.1	30	
40	1.61624	44	9.99949	0	1.31546	43	1.31496	43	(1)2102.1	2.1	20	
50	1.61668	44	9.99949	0	1.31590	44	1.31539	43	(1)2100.0	2.1	10	
<b>14'</b>	1.61711	44	9.99949	0	1.31633	43	1.31583	44	(1)2097.9	2.1		<b>46'</b>
10	1.61755	43	9.99949	1	1.31677	44	1.31627	44	(1)2095.8	2.1	50	
20	1.61798	44	9.99950	0	1.31721	44	1.31670	43	(1)2093.7	2.1	40	
30	1.61842	44	9.99950	0	1.31764	43	1.31714	44	(1)2091.6	2.1	30	
40	1.61886	44	9.99950	0	1.31808	41	1.31758	44	(1)2089.5	2.1	20	
50	1.61930	44	9.99950	0	1.31852	44	1.31802	44	(1)2087.4	2.1	10	
<b>15'</b>	1.61974	44	9.99950	0	1.31896	44	1.31846	44	(1)2085.3	2.1		<b>45'</b>
10	1.62018	44	9.99950	0	1.31940	44	1.31890	44	(1)2083.2	2.1	50	
20	1.62062	44	9.99950	0	1.31983	43	1.31934	41	(1)2081.0	2.2	40	
30	1.62106	44	9.99950	0	1.32027	44	1.31978	44	(1)2078.9	2.1	30	
40	1.62150	44	9.99950	0	1.32071	44	1.32022	41	(1)2076.8	2.1	20	
50	1.62194	44	9.99950	1	1.32115	44	1.32066	44	(1)2074.7	2.1	10	
<b>16'</b>	1.62238	44	9.99951	0	1.32159	44	1.32110	44	(1)2072.6	2.1		<b>44'</b>
10	1.62282	44	9.99951	0	1.32204	45	1.32154	44	(1)2070.5	2.1	50	
20	1.62326	44	9.99951	0	1.32248	44	1.32199	45	(1)2068.4	2.1	40	
30	1.62370	44	9.99951	0	1.32292	44	1.32243	44	(1)2066.3	2.1	30	
40	1.62415	45	9.99951	0	1.32336	44	1.32287	44	(1)2064.2	2.1	20	
50	1.62459	44	9.99951	0	1.32381	45	1.32332	45	(1)2062.1	2.1	10	
<b>17'</b>	1.62503	44	9.99951	0	1.32425	41	1.32376	44	(1)2060.0	2.1		<b>43'</b>
10	1.62548	45	9.99951	0	1.32469	44	1.32421	45	(1)2057.9	2.1	50	
20	1.62592	44	9.99951	0	1.32514	45	1.32465	41	(1)2055.8	2.1	40	
30	1.62637	45	9.99951	0	1.32558	44	1.32510	45	(1)2053.6	2.2	30	
40	1.62682	45	9.99952	1	1.32603	45	1.32554	44	(1)2051.5	2.1	20	
50	1.62726	44	9.99952	0	1.32647	44	1.32599	45	(1)2049.4	2.1	10	
<b>18'</b>	1.62771	45	9.99952	0	1.32692	45	1.32644	45	(1)2047.3	2.1		<b>42'</b>
10	1.62816	45	9.99952	0	1.32737	45	1.32688	41	(1)2045.2	2.1	50	
20	1.62860	44	9.99952	0	1.32781	44	1.32733	45	(1)2043.1	2.1	40	
30	1.62905	45	9.99952	0	1.32826	45	1.32778	45	(1)2041.0	2.1	30	
40	1.62950	45	9.99952	0	1.32871	45	1.32823	45	(1)2038.9	2.1	20	
50	1.62995	45	9.99952	0	1.32916	45	1.32868	45	(1)2036.8	2.1	10	
<b>19'</b>	1.63040	45	9.99952	0	1.32961	45	1.32913	45	(1)2034.7	2.1		<b>41'</b>
10	1.63085	45	9.99952	0	1.33006	45	1.32958	45	(1)2032.6	2.1	50	
20	1.63130	45	9.99953	1	1.33051	45	1.33003	45	(1)2030.5	2.1	40	
30	1.63175	45	9.99953	0	1.33096	45	1.33048	45	(1)2028.4	2.1	30	
40	1.63220	45	9.99953	0	1.33141	45	1.33094	46	(1)2026.2	2.2	20	
50	1.63265	45	9.99953	0	1.33186	45	1.33139	45	(1)2024.1	2.1	10	
<b>20'</b>	1.63311	46	9.99953	0	1.33231	45	1.33184	45	(1)2022.0	2.1		<b>40'</b>

log cos  $\omega$     Diff.    l. cosec  $\omega$     Diff.    log cotg  $\omega$     Diff.    z'    Diff.     $\omega$   
 log Sec z    l. Cotg z    l. Cosec  $\omega$     l. Cosec z



$\omega$	$z'$	Diff.	$\log \text{Tg. } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.			
<b>20'</b>	1.63311	45	9.99953	0	1.33231	45	1.33184	45	(1)2022.0		<b>10'</b>
10	1.63356	45	9.99953	0	1.33276	46	1.33229	46	(1)2019.9	2.1	50
20	1.63401	46	9.99953	0	1.33322	45	1.33275	45	(1)2017.8	2.1	40
30	1.63447	45	9.99953	0	1.33367	45	1.33320	46	(1)2015.7	2.1	30
40	1.63492	45	9.99953	0	1.33412	46	1.33366	45	(1)2013.6	2.1	20
50	1.63537	46	9.99953	1	1.33458	45	1.33411	46	(1)2011.5	2.1	10
<b>21'</b>	1.63583	45	9.99954	0	1.33503	46	1.33457	45	(1)2009.4	2.1	<b>39'</b>
10	1.63628	46	9.99954	0	1.33549	45	1.33502	46	(1)2007.3	2.1	50
20	1.63674	46	9.99954	0	1.33594	46	1.33548	46	(1)2005.2	2.1	40
30	1.63720	45	9.99954	0	1.33640	46	1.33594	45	(1)2003.1	2.1	30
40	1.63765	46	9.99954	0	1.33686	45	1.33639	46	(1)2001.0	2.2	20
50	1.63811	46	9.99954	0	1.33731	46	1.33685	46	(1)1998.8	2.1	10
<b>22'</b>	1.63857	46	9.99954	0	1.33777	46	1.33731	46	(1)1996.7	2.1	<b>38'</b>
10	1.63903	46	9.99954	0	1.33823	46	1.33777	46	(1)1994.6	2.1	50
20	1.63949	46	9.99954	0	1.33869	46	1.33823	46	(1)1992.5	2.1	40
30	1.63995	46	9.99954	1	1.33915	45	1.33869	46	(1)1990.4	2.1	30
40	1.64041	46	9.99955	0	1.33960	46	1.33915	46	(1)1988.3	2.1	20
50	1.64087	46	9.99955	0	1.34006	47	1.33961	46	(1)1986.2	2.1	10
<b>23'</b>	1.64133	46	9.99955	0	1.34053	46	1.34007	46	(1)1984.1	2.1	<b>37'</b>
10	1.64179	46	9.99955	0	1.34099	46	1.34053	47	(1)1982.0	2.1	50
20	1.64225	46	9.99955	0	1.34145	46	1.34100	46	(1)1979.9	2.1	40
30	1.64271	47	9.99955	0	1.34191	46	1.34146	46	(1)1977.8	2.1	30
40	1.64318	46	9.99955	0	1.34237	46	1.34192	47	(1)1975.7	2.1	20
50	1.64364	46	9.99955	0	1.34283	47	1.34239	46	(1)1973.6	2.2	10
<b>24'</b>	1.64410	47	9.99955	0	1.34330	46	1.34285	47	(1)1971.4	2.1	<b>36'</b>
10	1.64457	46	9.99955	0	1.34376	47	1.34332	46	(1)1969.3	2.1	50
20	1.64503	47	9.99955	1	1.34423	46	1.34378	47	(1)1967.2	2.1	40
30	1.64550	47	9.99956	0	1.34469	47	1.34425	46	(1)1965.1	2.1	30
40	1.64597	46	9.99956	0	1.34516	46	1.34471	47	(1)1963.0	2.1	20
50	1.64643	47	9.99956	0	1.34562	47	1.34518	47	(1)1960.9	2.1	10
<b>25'</b>	1.64690	47	9.99956	0	1.34609	47	1.34565	47	(1)1958.8	2.1	<b>35'</b>
10	1.64737	46	9.99956	0	1.34656	46	1.34612	46	(1)1956.7	2.1	50
20	1.64783	47	9.99956	0	1.34702	47	1.34658	47	(1)1954.6	2.1	40
30	1.64830	47	9.99956	0	1.34749	47	1.34705	47	(1)1952.5	2.1	30
40	1.64877	47	9.99956	0	1.34796	47	1.34752	47	(1)1950.4	2.1	20
50	1.64924	47	9.99956	0	1.34843	47	1.34799	47	(1)1948.3	2.1	10
<b>26'</b>	1.64971	47	9.99956	1	1.34890	47	1.34846	47	(1)1946.2	2.2	<b>34'</b>
10	1.65018	47	9.99957	0	1.34937	47	1.34893	47	(1)1944.0	2.1	50
20	1.65065	47	9.99957	0	1.34984	47	1.34940	48	(1)1941.9	2.1	40
30	1.65112	48	9.99957	0	1.35031	47	1.34988	47	(1)1939.8	2.2	30
40	1.65160	47	9.99957	0	1.35078	47	1.35035	47	(1)1937.7	2.1	20
50	1.65207	47	9.99957	0	1.35125	48	1.35082	48	(1)1935.6	2.1	10
<b>27'</b>	1.65254	47	9.99957	0	1.35173	47	1.35130	47	(1)1933.5	2.1	<b>33'</b>
10	1.65301	48	9.99957	0	1.35220	47	1.35177	47	(1)1931.4	2.1	50
20	1.65349	47	9.99957	0	1.35267	48	1.35224	48	(1)1929.3	2.1	40
30	1.65396	48	9.99957	0	1.35315	47	1.35272	47	(1)1927.2	2.1	30
40	1.65444	47	9.99957	0	1.35362	48	1.35319	48	(1)1925.1	2.1	20
50	1.65491	48	9.99957	1	1.35410	47	1.35367	48	(1)1923.0	2.1	10
<b>28'</b>	1.65539	48	9.99958	0	1.35457	48	1.35415	47	(1)1920.9	2.1	<b>32'</b>
10	1.65587	47	9.99958	0	1.35505	47	1.35462	48	(1)1918.8	2.2	50
20	1.65634	48	9.99958	0	1.35552	48	1.35510	48	(1)1916.6	2.1	40
30	1.65682	48	9.99958	0	1.35600	48	1.35558	48	(1)1914.5	2.1	30
40	1.65730	48	9.99958	0	1.35648	48	1.35606	48	(1)1912.4	2.1	20
50	1.65778	48	9.99958	0	1.35696	48	1.35654	48	(1)1910.3	2.1	10
<b>29'</b>	1.65826	48	9.99958	0	1.35744	48	1.35702	48	(1)1908.2	2.1	<b>31'</b>
10	1.65874	48	9.99958	0	1.35792	48	1.35750	48	(1)1906.1	2.1	50
20	1.65922	48	9.99958	0	1.35840	48	1.35798	48	(1)1904.0	2.1	40
30	1.65970	48	9.99958	0	1.35888	48	1.35846	48	(1)1901.9	2.1	30
40	1.66018	48	9.99958	0	1.35936	48	1.35894	48	(1)1899.8	2.1	20
50	1.66066	48	9.99959	1	1.35984	48	1.35942	49	(1)1897.7	2.1	10
<b>30'</b>	1.66114	48	9.99959	0	1.36032	48	1.35991	48	(1)1895.6	2.1	<b>30'</b>

$\log \cos \omega$   
 $\log \sin z$

Diff.

l. cosec  $\omega$   
l. Cotg  $z$

Diff.

l. cotg  $\omega$   
l. Cosc  $z$

Diff.

$z'$

Diff.

$\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>30'</b>	1.66114		9.99959	0	1.36032	48	1.35991	48	(1)1895.6			<b>30'</b>
10	1.66163	49	9.99959	0	1.36080	49	1.36039	49	(1)1893.5	2.1	50	
20	1.66211	48	9.99959	0	1.36129	48	1.36087	48	(1)1891.4	2.1	40	
		48								2.2		
30	1.66259	49	9.99959	0	1.36177	48	1.36136	48	(1)1889.2	2.1	30	
40	1.66308	49	9.99959	0	1.36225	49	1.36184	49	(1)1887.1	2.1	20	
50	1.66356	48	9.99959	0	1.36274	49	1.36233	49	(1)1885.0	2.1	10	
		49								2.1		
<b>31'</b>	1.66405	49	9.99959	0	1.36322	49	1.36282	48	(1)1882.9	2.1	50	<b>29'</b>
10	1.66454	48	9.99959	0	1.36371	49	1.36330	49	(1)1880.8	2.1	40	
20	1.66502	49	9.99959	0	1.36420	48	1.36379	49	(1)1878.7	2.1	30	
		49								2.1		
30	1.66551	49	9.99959	1	1.36468	49	1.36428	49	(1)1876.6	2.1	20	
40	1.66600	49	9.99960	0	1.36517	49	1.36477	48	(1)1874.5	2.1	10	
50	1.66649	49	9.99960	0	1.36566	49	1.36525	49	(1)1872.4	2.1		
		49								2.1		
<b>32'</b>	1.66698	48	9.99960	0	1.36615	49	1.36574	49	(1)1870.3	2.1	50	<b>28'</b>
10	1.66746	49	9.99960	0	1.36664	48	1.36623	49	(1)1868.2	2.1	40	
20	1.66795	50	9.99960	0	1.36712	50	1.36672	50	(1)1866.1	2.1	30	
		50								2.1		
30	1.66845	49	9.99960	0	1.36762	49	1.36722	49	(1)1864.0	2.2	20	
40	1.66894	49	9.99960	0	1.36811	49	1.36771	49	(1)1861.8	2.1	10	
50	1.66943	49	9.99960	0	1.36860	49	1.36820	49	(1)1859.7	2.1		
		49								2.1		
<b>33'</b>	1.66992	49	9.99960	0	1.36909	49	1.36869	50	(1)1857.6	2.1	50	<b>27'</b>
10	1.67041	50	9.99960	0	1.36958	49	1.36919	49	(1)1855.5	2.1	40	
20	1.67091	49	9.99960	1	1.37007	50	1.36968	49	(1)1853.4	2.1	30	
		49								2.1		
30	1.67140	50	9.99961	0	1.37057	49	1.37017	50	(1)1851.3	2.1	20	
40	1.67190	49	9.99961	0	1.37106	50	1.37067	49	(1)1849.2	2.1	10	
50	1.67239	50	9.99961	0	1.37156	49	1.37116	50	(1)1847.1	2.1		
		50								2.1		
<b>34'</b>	1.67289	49	9.99961	0	1.37205	50	1.37166	50	(1)1845.0	2.1	50	<b>26'</b>
10	1.67338	50	9.99961	0	1.37255	49	1.37216	49	(1)1842.9	2.1	40	
20	1.67388	50	9.99961	0	1.37304	50	1.37265	50	(1)1840.8	2.1	30	
		50								2.1		
30	1.67438	49	9.99961	0	1.37354	50	1.37315	50	(1)1838.7	2.1	20	
40	1.67487	50	9.99961	0	1.37404	50	1.37065	50	(1)1836.6	2.1	10	
50	1.67537	50	9.99961	0	1.37454	49	1.37415	50	(1)1834.5	2.2		
		50								2.2		
<b>35'</b>	1.67587	50	9.99961	0	1.37503	50	1.37465	50	(1)1832.3	2.1	50	<b>25'</b>
10	1.67637	50	9.99961	0	1.37553	50	1.37515	50	(1)1830.2	2.1	40	
20	1.67687	50	9.99962	1	1.37603	50	1.37565	50	(1)1828.1	2.1	30	
		50								2.1		
30	1.67737	50	9.99962	0	1.37653	50	1.37615	50	(1)1826.0	2.1	20	
40	1.67787	51	9.99962	0	1.37703	51	1.37665	50	(1)1823.9	2.1	10	
50	1.67838	50	9.99962	0	1.37754	50	1.37715	51	(1)1821.8	2.1		
		50								2.1		
<b>36'</b>	1.67888	50	9.99962	0	1.37804	50	1.37766	50	(1)1819.7	2.1	50	<b>24'</b>
10	1.67938	50	9.99962	0	1.37854	50	1.37816	50	(1)1817.6	2.1	40	
20	1.67988	51	9.99962	0	1.37904	51	1.37866	51	(1)1815.5	2.1	30	
		51								2.1		
30	1.68039	50	9.99962	0	1.37955	50	1.37917	50	(1)1813.4	2.1	20	
40	1.68089	51	9.99962	0	1.38005	51	1.37967	51	(1)1811.3	2.1	10	
50	1.68140	51	9.99962	0	1.38056	50	1.38018	51	(1)1809.2	2.1		
		51								2.1		
<b>37'</b>	1.68191	50	9.99962	1	1.38106	51	1.38069	50	(1)1807.1	2.2	50	<b>23'</b>
10	1.68241	51	9.99963	0	1.38157	51	1.38119	51	(1)1804.9	2.1	40	
20	1.68292	51	9.99963	0	1.38208	50	1.38170	51	(1)1802.8	2.1	30	
		51								2.1		
30	1.68343	51	9.99963	0	1.38258	51	1.38221	51	(1)1800.7	2.1	20	
40	1.68394	50	9.99963	0	1.38309	51	1.38272	51	(1)1798.6	2.1	10	
50	1.68444	51	9.99963	0	1.38360	51	1.38323	51	(1)1796.5	2.1		
		51								2.1		
<b>38'</b>	1.68495	51	9.99963	0	1.38411	51	1.38374	51	(1)1794.4	2.1	50	<b>22'</b>
10	1.68546	51	9.99963	0	1.38462	51	1.38425	51	(1)1792.3	2.1	40	
20	1.68597	52	9.99963	0	1.38513	51	1.38476	51	(1)1790.2	2.1	30	
		52								2.1		
30	1.68649	51	9.99963	0	1.38564	51	1.38527	51	(1)1788.1	2.1	20	
40	1.68700	51	9.99963	0	1.38615	51	1.38578	52	(1)1786.0	2.1	10	
50	1.68751	51	9.99963	0	1.38666	52	1.38630	51	(1)1783.9	2.1		
		51								2.1		
<b>39'</b>	1.68802	52	9.99963	1	1.38718	51	1.38681	52	(1)1781.8	2.1	50	<b>21'</b>
10	1.68854	51	9.99964	0	1.38769	51	1.38733	51	(1)1779.7	2.1	40	
20	1.68905	52	9.99964	0	1.38820	52	1.38784	52	(1)1777.6	2.2	30	
		52								2.2		
30	1.68957	51	9.99964	0	1.38872	51	1.38836	51	(1)1775.4	2.1	20	
40	1.69008	52	9.99964	0	1.38923	52	1.38887	52	(1)1773.3	2.1	10	
50	1.69060	52	9.99964	0	1.38975	52	1.38939	52	(1)1771.2	2.1		
		52								2.1		
<b>40'</b>	1.69112	52	9.99964	0	1.39027	52	1.38991	52	(1)1769.1	2.1	50	<b>20'</b>



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.			
<b>40'</b>	1.69112		9.99964		1.39027		1.38991		(1)1769.1		<b>20'</b>
10	1.69163	51	9.99964	0	1.39078	51	1.39042	51	(1)1767.0	2.1	50
20	1.69215	52	9.99964	0	1.39130	52	1.39094	52	(1)1764.9	2.1	40
30	1.69267	52	9.99964	0	1.39182	52	1.39146	52	(1)1762.8	2.1	30
40	1.69319	52	9.99964	0	1.39234	52	1.39198	52	(1)1760.7	2.1	20
50	1.69371	52	9.99964	0	1.39286	52	1.39250	52	(1)1758.6	2.1	10
<b>41'</b>	1.69423		9.99964	1	1.39338		1.39302		(1)1756.5		<b>19'</b>
10	1.69475	52	9.99965	0	1.39390	52	1.39354	52	(1)1754.4	2.1	50
20	1.69527	52	9.99965	0	1.39442	52	1.39407	52	(1)1752.3	2.1	40
30	1.69580	52	9.99965	0	1.39494	52	1.39459	52	(1)1750.2	2.1	30
40	1.69632	52	9.99965	0	1.39546	52	1.39511	52	(1)1748.1	2.1	20
50	1.69684	53	9.99965	0	1.39599	53	1.39564	53	(1)1745.9	2.2	10
<b>42'</b>	1.69737		9.99965	0	1.39651		1.39616		(1)1743.8		<b>18'</b>
10	1.69789	52	9.99965	0	1.39704	52	1.39669	52	(1)1741.7	2.1	50
20	1.69842	52	9.99965	0	1.39756	52	1.39721	52	(1)1739.6	2.1	40
30	1.69894	53	9.99965	0	1.39809	53	1.39774	53	(1)1737.5	2.1	30
40	1.69947	53	9.99965	0	1.39861	53	1.39827	53	(1)1735.4	2.1	20
50	1.70000	53	9.99965	1	1.39914	53	1.39879	53	(1)1733.3	2.1	10
<b>43'</b>	1.70053		9.99966	0	1.39967		1.39932		(1)1731.2		<b>17'</b>
10	1.70105	52	9.99966	0	1.40020	52	1.39985	52	(1)1729.1	2.1	50
20	1.70158	53	9.99966	0	1.40073	53	1.40038	53	(1)1727.0	2.1	40
30	1.70211	53	9.99966	0	1.40126	53	1.40091	53	(1)1724.9	2.1	30
40	1.70264	54	9.99966	0	1.40179	54	1.40144	54	(1)1722.8	2.1	20
50	1.70318	53	9.99966	0	1.40232	53	1.40198	53	(1)1720.7	2.1	10
<b>44'</b>	1.70371		9.99966	0	1.40285		1.40251		(1)1718.6		<b>16'</b>
10	1.70424	53	9.99966	0	1.40338	53	1.40304	53	(1)1716.4	2.2	50
20	1.70477	54	9.99966	0	1.40391	54	1.40358	54	(1)1714.3	2.1	40
30	1.70531	53	9.99966	0	1.40445	53	1.40411	53	(1)1712.2	2.1	30
40	1.70584	54	9.99966	0	1.40498	54	1.40464	54	(1)1710.1	2.1	20
50	1.70638	53	9.99966	1	1.40552	53	1.40518	53	(1)1708.0	2.1	10
<b>45'</b>	1.70691		9.99967	0	1.40605		1.40572		(1)1705.9		<b>15'</b>
10	1.70745	54	9.99967	0	1.40659	54	1.40625	54	(1)1703.8	2.1	50
20	1.70799	54	9.99967	0	1.40712	54	1.40679	54	(1)1701.7	2.1	40
30	1.70853	53	9.99967	0	1.40766	53	1.40733	53	(1)1699.6	2.1	30
40	1.70906	54	9.99967	0	1.40820	54	1.40787	54	(1)1697.5	2.1	20
50	1.70960	51	9.99967	0	1.40874	51	1.40841	51	(1)1695.4	2.1	10
<b>46'</b>	1.71014		9.99967	0	1.40928		1.40895		(1)1693.3		<b>14'</b>
10	1.71068	54	9.99967	0	1.40982	54	1.40949	54	(1)1691.2	2.1	50
20	1.71123	55	9.99967	0	1.41036	55	1.41003	55	(1)1689.1	2.1	40
30	1.71177	54	9.99967	0	1.41090	54	1.41057	54	(1)1687.0	2.2	30
40	1.71231	54	9.99967	0	1.41144	54	1.41112	54	(1)1684.8	2.1	20
50	1.71285	55	9.99967	0	1.41199	55	1.41166	55	(1)1682.7	2.1	10
<b>47'</b>	1.71340		9.99967	1	1.41253		1.41221		(1)1680.6		<b>13'</b>
10	1.71394	55	9.99968	0	1.41307	55	1.41275	55	(1)1678.5	2.1	50
20	1.71449	54	9.99968	0	1.41362	54	1.41330	54	(1)1676.4	2.1	40
30	1.71503	55	9.99968	0	1.41417	55	1.41384	55	(1)1674.3	2.1	30
40	1.71558	55	9.99968	0	1.41471	55	1.41439	55	(1)1672.2	2.1	20
50	1.71613	55	9.99968	0	1.41526	55	1.41494	55	(1)1670.1	2.1	10
<b>48'</b>	1.71668		9.99968	0	1.41581		1.41549		(1)1668.0		<b>12'</b>
10	1.71723	55	9.99968	0	1.41636	55	1.41604	55	(1)1665.9	2.1	50
20	1.71777	54	9.99968	0	1.41690	54	1.41659	54	(1)1663.8	2.1	40
30	1.71833	55	9.99968	0	1.41745	55	1.41714	55	(1)1661.7	2.1	30
40	1.71888	55	9.99968	0	1.41800	55	1.41769	55	(1)1659.6	2.1	20
50	1.71943	55	9.99968	0	1.41856	55	1.41824	55	(1)1657.4	2.2	10
<b>49'</b>	1.71998		9.99968	1	1.41911		1.41879		(1)1655.3		<b>11'</b>
10	1.72053	55	9.99969	0	1.41966	55	1.41935	55	(1)1653.2	2.1	50
20	1.72109	56	9.99969	0	1.42021	56	1.41990	56	(1)1651.1	2.1	40
30	1.72164	55	9.99969	0	1.42077	55	1.42045	55	(1)1649.0	2.1	30
40	1.72220	56	9.99969	0	1.42132	56	1.42101	56	(1)1646.9	2.1	20
50	1.72275	55	9.99969	0	1.42188	55	1.42157	55	(1)1644.8	2.1	10
<b>50'</b>	1.72331	56	9.99969	0	1.42243	56	1.42212	56	(1)1642.7	2.1	<b>10'</b>

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>50'</b>	1.72331		9.99969	0	1.42423		1.42212		(1)1642.7	2.1	<b>10'</b>
10	1.72337	56	9.99969	0	1.42299	56	1.42268	56	(1)1640.6	2.1	50
20	1.72442	55	9.99969	0	1.42355	56	1.42324	56	(1)1638.5	2.1	40
30	1.72498	56	9.99969	0	1.42411	56	1.42380	56	(1)1636.4	2.1	30
40	1.72554	56	9.99969	0	1.42467	56	1.42436	56	(1)1634.3	2.1	20
50	1.72610	56	9.99969	0	1.42523	56	1.42492	56	(1)1632.2	2.1	10
<b>51'</b>	1.72666		9.99969	0	1.42579		1.42548		(1)1630.1	2.2	<b>9'</b>
10	1.72722	56	9.99969	1	1.42635	56	1.42604	56	(1)1627.9	2.1	50
20	1.72779	57	9.99970	0	1.42691	56	1.42660	57	(1)1625.8	2.1	40
30	1.72835	56	9.99970	0	1.42747	57	1.42717	56	(1)1623.7	2.1	30
40	1.72891	57	9.99970	0	1.42804	56	1.42773	57	(1)1621.6	2.1	20
50	1.72948	56	9.99970	0	1.42860	56	1.42830	56	(1)1619.5	2.1	10
<b>52'</b>	1.73004		9.99970	0	1.42916		1.42886		(1)1617.4	2.1	<b>8'</b>
10	1.73061	57	9.99970	0	1.42973	57	1.42943	57	(1)1615.3	2.1	50
20	1.73118	57	9.99970	0	1.43030	56	1.43000	56	(1)1613.2	2.1	40
30	1.73174	57	9.99970	0	1.43086	57	1.43056	57	(1)1611.1	2.1	30
40	1.73231	57	9.99970	0	1.43143	57	1.43113	57	(1)1609.0	2.1	20
50	1.73288	57	9.99970	0	1.43200	57	1.43170	57	(1)1606.9	2.1	10
<b>53'</b>	1.73345		9.99970	0	1.43257		1.43227		(1)1604.8	2.1	<b>7'</b>
10	1.73402	57	9.99970	1	1.43314	57	1.43284	57	(1)1602.7	2.1	50
20	1.73459	57	9.99971	0	1.43371	57	1.43341	58	(1)1600.6	2.2	40
30	1.73516	58	9.99971	0	1.43428	57	1.43399	57	(1)1598.4	2.1	30
40	1.73574	57	9.99971	0	1.43485	58	1.43456	57	(1)1596.3	2.1	20
50	1.73631	57	9.99971	0	1.43543	57	1.43513	58	(1)1594.2	2.1	10
<b>54'</b>	1.73688		9.99971	0	1.43600		1.43571		(1)1592.1	2.1	<b>6'</b>
10	1.73746	58	9.99971	0	1.43658	58	1.43628	57	(1)1590.0	2.1	50
20	1.73804	59	9.99971	0	1.43715	58	1.43686	58	(1)1587.9	2.1	40
30	1.73861	58	9.99971	0	1.43773	57	1.43744	57	(1)1585.8	2.1	30
40	1.73919	58	9.99971	0	1.43830	58	1.43801	58	(1)1583.7	2.1	20
50	1.73977	58	9.99971	0	1.43888	58	1.43859	58	(1)1581.6	2.1	10
<b>55'</b>	1.74035		9.99971	0	1.43946		1.43917		(1)1579.5	2.1	<b>5'</b>
10	1.74093	58	9.99971	0	1.44004	58	1.43975	58	(1)1577.4	2.1	50
20	1.74151	58	9.99971	1	1.44062	58	1.44033	58	(1)1575.3	2.1	40
30	1.74209	58	9.99972	0	1.44120	58	1.44091	58	(1)1573.2	2.1	30
40	1.74267	58	9.99972	0	1.44178	58	1.44150	59	(1)1571.1	2.1	20
50	1.74325	59	9.99972	0	1.44236	59	1.44208	58	(1)1569.0	2.2	10
<b>56'</b>	1.74384		9.99972	0	1.44295		1.44266		(1)1566.8	2.1	<b>4'</b>
10	1.74442	58	9.99972	0	1.44353	58	1.44325	59	(1)1564.7	2.1	50
20	1.74500	59	9.99972	0	1.44411	58	1.44383	59	(1)1562.6	2.1	40
30	1.74559	59	9.99972	0	1.44470	59	1.44442	59	(1)1560.5	2.1	30
40	1.74618	58	9.99972	0	1.44529	58	1.44501	58	(1)1558.4	2.1	20
50	1.74676	59	9.99972	0	1.44587	59	1.44559	59	(1)1556.3	2.1	10
<b>57'</b>	1.74735		9.99972	0	1.44646		1.44618		(1)1554.2	2.1	<b>3'</b>
10	1.74794	59	9.99972	0	1.44705	59	1.44677	59	(1)1552.1	2.1	50
20	1.74853	59	9.99972	0	1.44764	59	1.44736	59	(1)1550.0	2.1	40
30	1.74912	59	9.99972	0	1.44823	59	1.44795	60	(1)1547.9	2.1	30
40	1.74971	60	9.99972	0	1.44882	59	1.44855	59	(1)1545.8	2.1	20
50	1.75031	59	9.99973	1	1.44941	60	1.44914	59	(1)1543.7	2.1	10
<b>58'</b>	1.75090		9.99973	0	1.45001		1.44973		(1)1541.6	2.1	<b>2'</b>
10	1.75149	60	9.99973	0	1.45060	59	1.45033	60	(1)1539.5	2.2	50
20	1.75209	59	9.99973	0	1.45119	60	1.45092	60	(1)1537.3	2.1	40
30	1.75268	60	9.99973	0	1.45179	59	1.45152	59	(1)1535.2	2.1	30
40	1.75328	60	9.99973	0	1.45238	60	1.45211	60	(1)1533.1	2.1	20
50	1.75388	59	9.99973	0	1.45298	60	1.45271	60	(1)1531.0	2.1	10
<b>59'</b>	1.75447		9.99973	0	1.45358		1.45331		(1)1528.9	2.1	<b>1'</b>
10	1.75507	60	9.99973	0	1.45418	60	1.45391	60	(1)1526.8	2.1	50
20	1.75567	60	9.99973	0	1.45478	60	1.45451	60	(1)1524.7	2.1	40
30	1.75627	60	9.99973	0	1.45538	60	1.45511	60	(1)1522.6	2.1	30
40	1.75687	61	9.99973	0	1.45598	60	1.45571	60	(1)1520.5	2.1	20
50	1.75748	60	9.99973	1	1.45658	60	1.45631	61	(1)1518.4	2.1	10
<b>60'</b>	1.75808		9.99974	1	1.45718		1.45692		(1)1516.3	2.1	<b>0'</b>

log cos  $\omega$   
log sec z

Diff.

l. cosec  $\omega$   
l. Cotg z

Diff.

log cotg  $\omega$   
l. Cosec z

Diff.

z'

Diff.

$\omega$



$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sin \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{tg } \omega$	Diff.			
0'	1.75808	60	9.99974	0	1.45718	60	1.45692	60	(1)1516.3	2.1	60'
10	1.75868	61	9.99974	0	1.45778	61	1.45752	61	(1)1514.2	2.1	50
20	1.75929	60	9.99974	0	1.45839	60	1.45813	60	(1)1512.1	2.1	46
30	1.75989	61	9.99974	0	1.45899	61	1.45873	61	(1)1510.0	2.1	30
40	1.76050	61	9.99974	0	1.45960	61	1.45934	61	(1)1507.9	2.2	20
50	1.76111	60	9.99974	0	1.46021	60	1.45995	60	(1)1505.7	2.1	10
1'	1.76171	61	9.99974	0	1.46081	61	1.46055	61	(1)1503.6	2.1	59'
10	1.76232	61	9.99974	0	1.46142	61	1.46116	61	(1)1501.5	2.1	50
20	1.76293	61	9.99974	0	1.46203	61	1.46177	61	(1)1499.4	2.1	40
30	1.76354	61	9.99974	0	1.46264	61	1.46238	62	(1)1497.3	2.1	30
40	1.76415	62	9.99974	0	1.46325	61	1.46300	61	(1)1495.2	2.1	20
50	1.76477	61	9.99974	0	1.46386	61	1.46361	61	(1)1493.1	2.1	10
2'	1.76538	61	9.99974	0	1.46448	61	1.46422	62	(1)1491.0	2.1	58'
10	1.76599	62	9.99974	1	1.46509	62	1.46484	61	(1)1488.9	2.1	50
20	1.76661	61	9.99975	0	1.46571	61	1.46545	62	(1)1486.8	2.1	40
30	1.76722	62	9.99975	0	1.46632	62	1.46607	61	(1)1484.7	2.1	30
40	1.76784	62	9.99975	0	1.46694	61	1.46668	62	(1)1482.6	2.1	20
50	1.76846	62	9.99975	0	1.46755	62	1.46730	62	(1)1480.5	2.1	10
3'	1.76908	62	9.99975	0	1.46817	62	1.46792	62	(1)1478.4	2.1	57'
10	1.76970	62	9.99975	0	1.46879	62	1.46854	62	(1)1476.3	2.2	50
20	1.77032	62	9.99975	0	1.46941	62	1.46916	62	(1)1474.1	2.1	40
30	1.77094	62	9.99975	0	1.47003	62	1.46978	62	(1)1472.0	2.1	30
40	1.77156	62	9.99975	0	1.47065	63	1.47040	63	(1)1469.9	2.1	20
50	1.77218	62	9.99975	0	1.47128	62	1.47103	62	(1)1467.8	2.1	10
4'	1.77280	63	9.99975	0	1.47190	62	1.47165	63	(1)1465.7	2.1	56'
10	1.77343	62	9.99975	0	1.47252	63	1.47228	62	(1)1463.6	2.1	50
20	1.77405	63	9.99975	0	1.47315	62	1.47290	63	(1)1461.5	2.1	40
30	1.77468	63	9.99975	1	1.47377	63	1.47353	63	(1)1459.4	2.1	30
40	1.77531	63	9.99976	0	1.47440	63	1.47416	62	(1)1457.3	2.1	20
50	1.77594	63	9.99976	0	1.47503	63	1.47478	63	(1)1455.2	2.1	10
5'	1.77657	63	9.99976	0	1.47566	63	1.47541	63	(1)1453.1	2.1	55'
10	1.77720	63	9.99976	0	1.47629	63	1.47604	64	(1)1451.0	2.1	50
20	1.77783	63	9.99976	0	1.47692	63	1.47668	63	(1)1448.9	2.1	40
30	1.77846	63	9.99976	0	1.47755	63	1.47731	63	(1)1446.8	2.1	30
40	1.77909	63	9.99976	0	1.47818	63	1.47794	63	(1)1444.7	2.2	20
50	1.77972	64	9.99976	0	1.47881	64	1.47857	64	(1)1442.5	2.1	10
6'	1.78036	63	9.99976	0	1.47945	63	1.47921	64	(1)1440.4	2.1	54'
10	1.78099	64	9.99976	0	1.48008	64	1.47985	63	(1)1438.3	2.1	50
20	1.78163	64	9.99976	0	1.48072	64	1.48048	64	(1)1436.2	2.1	40
30	1.78227	64	9.99976	0	1.48136	63	1.48112	64	(1)1434.1	2.1	30
40	1.78291	64	9.99976	0	1.48199	64	1.48176	64	(1)1432.0	2.1	20
50	1.78355	64	9.99976	1	1.48263	64	1.48240	64	(1)1429.9	2.1	10
7'	1.78419	64	9.99977	0	1.48327	64	1.48304	64	(1)1427.8	2.1	53'
10	1.78483	64	9.99977	0	1.48391	65	1.48368	64	(1)1425.7	2.1	50
20	1.78547	64	9.99977	0	1.48456	64	1.48432	65	(1)1423.6	2.1	40
30	1.78611	65	9.99977	0	1.48520	64	1.48497	64	(1)1421.5	2.1	30
40	1.78676	64	9.99977	0	1.48584	65	1.48561	65	(1)1419.4	2.1	20
50	1.78740	65	9.99977	0	1.48649	64	1.48626	64	(1)1417.3	2.1	10
8'	1.78805	64	9.99977	0	1.48713	65	1.48690	65	(1)1415.2	2.1	52'
10	1.78869	65	9.99977	0	1.48778	65	1.48755	65	(1)1413.1	2.2	50
20	1.78934	65	9.99977	0	1.48843	65	1.48820	65	(1)1410.9	2.1	40
30	1.78999	65	9.99977	0	1.48908	64	1.48885	65	(1)1408.8	2.1	30
40	1.79064	65	9.99977	0	1.48972	65	1.48950	65	(1)1406.7	2.1	20
50	1.79129	65	9.99977	0	1.49037	66	1.49015	65	(1)1404.6	2.1	10
9'	1.79194	66	9.99977	0	1.49103	65	1.49080	65	(1)1402.5	2.1	51'
10	1.79260	65	9.99977	0	1.49168	65	1.49145	65	(1)1400.4	2.1	50
20	1.79325	65	9.99977	1	1.49233	66	1.49211	66	(1)1398.3	2.1	40
30	1.79390	66	9.99978	0	1.49299	65	1.49276	66	(1)1396.2	2.1	30
40	1.79456	66	9.99978	0	1.49364	66	1.49342	66	(1)1394.1	2.1	20
50	1.79522	66	9.99978	0	1.49430	66	1.49407	65	(1)1392.0	2.1	10
10'	1.79587	65	9.99978	0	1.49496	66	1.49473	66	(1)1389.9	2.1	50'

$\log \cos \omega$  Diff.  $\log \text{ cosec } \omega$  Diff.  $\log \cot \omega$  Diff.  $\log \text{ csc } z$  Diff.  $z'$  Diff.  $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>10'</b>	1.79587		9.99978	0	1.49496	65	1.49473	66	(1)1389.9	2.1	<b>50'</b>	
10	1.79653	66	9.99978	0	1.49561	66	1.49539	66	(1)1387.8	2.1	50	
20	1.79719	66	9.99978	0	1.49627	66	1.49605	66	(1)1385.7	2.1	40	
30	1.79785	66	9.99978	0	1.49693	66	1.49671	66	(1)1383.6	2.1	30	
40	1.79851	66	9.99978	0	1.49759	67	1.49737	67	(1)1381.5	2.2	20	
50	1.79918	67	9.99978	0	1.49826	67	1.49804	67	(1)1379.3	2.1	10	
<b>11'</b>	1.79984	66	9.99978	0	1.49892	66	1.49870	66	(1)1377.2	2.1	<b>49'</b>	
10	1.80051	67	9.99978	0	1.49958	66	1.49937	67	(1)1375.1	2.1	50	
20	1.80117	66	9.99978	0	1.50025	67	1.50003	67	(1)1373.0	2.1	40	
30	1.80184	67	9.99978	0	1.50092	67	1.50070	67	(1)1370.9	2.1	30	
40	1.80251	67	9.99978	0	1.50158	66	1.50137	67	(1)1368.8	2.1	20	
50	1.80317	66	9.99978	0	1.50225	67	1.50204	67	(1)1366.7	2.1	10	
<b>12'</b>	1.80384	67	9.99979	1	1.50292	67	1.50271	67	(1)1364.6	2.1	<b>48'</b>	
10	1.80452	68	9.99979	0	1.50359	67	1.50338	67	(1)1362.5	2.1	50	
20	1.80519	67	9.99979	0	1.50426	67	1.50405	67	(1)1360.4	2.1	40	
30	1.80586	67	9.99979	0	1.50494	68	1.50472	67	(1)1358.3	2.1	30	
40	1.80653	67	9.99979	0	1.50561	67	1.50540	68	(1)1356.2	2.1	20	
50	1.80721	68	9.99979	0	1.50628	67	1.50607	67	(1)1354.1	2.1	10	
<b>13'</b>	1.80789	68	9.99979	0	1.50696	68	1.50675	68	(1)1352.0	2.1	<b>47'</b>	
10	1.80856	67	9.99979	0	1.50764	68	1.50743	68	(1)1349.9	2.2	50	
20	1.80924	68	9.99979	0	1.50831	67	1.50811	68	(1)1347.7	2.1	40	
30	1.80992	68	9.99979	0	1.50899	68	1.50879	68	(1)1345.6	2.1	30	
40	1.81060	68	9.99979	0	1.50967	68	1.50947	68	(1)1343.5	2.1	20	
50	1.81128	68	9.99979	0	1.51035	68	1.51015	68	(1)1341.4	2.1	10	
<b>14'</b>	1.81196	68	9.99979	0	1.51104	69	1.51083	68	(1)1339.3	2.1	<b>46'</b>	
10	1.81265	69	9.99979	0	1.51172	68	1.51151	68	(1)1337.2	2.1	50	
20	1.81333	68	9.99979	0	1.51240	68	1.51220	69	(1)1335.1	2.1	40	
30	1.81402	69	9.99980	1	1.51309	69	1.51289	69	(1)1333.0	2.1	30	
40	1.81470	68	9.99980	0	1.51378	69	1.51357	68	(1)1330.9	2.1	20	
50	1.81539	69	9.99980	0	1.51446	68	1.51426	69	(1)1328.8	2.1	10	
<b>15'</b>	1.81608	69	9.99980	0	1.51515	69	1.51495	69	(1)1326.7	2.1	<b>45'</b>	
10	1.81677	69	9.99980	0	1.51584	69	1.51564	69	(1)1324.6	2.1	50	
20	1.81746	69	9.99980	0	1.51653	69	1.51633	69	(1)1322.5	2.1	40	
30	1.81815	69	9.99980	0	1.51722	69	1.51702	69	(1)1320.4	2.1	30	
40	1.81885	70	9.99980	0	1.51792	70	1.51772	69	(1)1318.3	2.1	20	
50	1.81954	69	9.99980	0	1.51861	69	1.51841	70	(1)1316.2	2.2	10	
<b>16'</b>	1.82024	70	9.99980	0	1.51931	70	1.51911	70	(1)1314.0	2.1	<b>44'</b>	
10	1.82093	69	9.99980	0	1.52000	69	1.51980	69	(1)1311.9	2.1	50	
20	1.82163	70	9.99980	0	1.52070	70	1.52050	70	(1)1309.8	2.1	40	
30	1.82233	70	9.99980	0	1.52140	70	1.52120	70	(1)1307.7	2.1	30	
40	1.82303	70	9.99980	0	1.52210	70	1.52190	70	(1)1305.6	2.1	20	
50	1.82373	70	9.99980	0	1.52280	70	1.52260	70	(1)1303.5	2.1	10	
<b>17'</b>	1.82443	70	9.99981	1	1.52350	70	1.52331	71	(1)1301.4	2.1	<b>43'</b>	
10	1.82514	71	9.99981	0	1.52420	70	1.52401	70	(1)1299.3	2.1	50	
20	1.82584	70	9.99981	0	1.52491	71	1.52472	71	(1)1297.2	2.1	40	
30	1.82655	70	9.99981	0	1.52561	70	1.52542	70	(1)1295.1	2.1	30	
40	1.82725	70	9.99981	0	1.52632	71	1.52613	71	(1)1293.0	2.1	20	
50	1.82796	71	9.99981	0	1.52703	71	1.52684	71	(1)1290.9	2.1	10	
<b>18'</b>	1.82867	71	9.99981	0	1.52774	71	1.52755	71	(1)1288.8	2.1	<b>42'</b>	
10	1.82938	71	9.99981	0	1.52845	71	1.52826	71	(1)1286.7	2.1	50	
20	1.83009	71	9.99981	0	1.52916	71	1.52897	71	(1)1284.6	2.2	40	
30	1.83081	72	9.99981	0	1.52987	71	1.52968	71	(1)1282.4	2.1	30	
40	1.83152	71	9.99981	0	1.53058	71	1.53040	72	(1)1280.3	2.1	20	
50	1.83224	72	9.99981	0	1.53130	72	1.53111	71	(1)1278.2	2.1	10	
<b>19'</b>	1.83295	71	9.99981	0	1.53201	71	1.53183	72	(1)1276.1	2.1	<b>41'</b>	
10	1.83367	72	9.99981	0	1.53273	72	1.53255	72	(1)1274.0	2.1	50	
20	1.83439	72	9.99981	0	1.53345	72	1.53326	71	(1)1271.9	2.1	40	
30	1.83511	72	9.99981	0	1.53417	72	1.53398	72	(1)1269.8	2.1	30	
40	1.83583	72	9.99982	1	1.53489	72	1.53471	73	(1)1267.7	2.1	20	
50	1.83655	72	9.99982	0	1.53561	72	1.53543	72	(1)1265.6	2.1	10	
<b>20'</b>	1.83727	72	9.99982	0	1.53634	73	1.53615	72	(1)1263.5	2.1	<b>40'</b>	

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff.  $z'$  Diff.  $\omega$   
 log Sec  $\omega$  l. Cotg  $z$



$\omega$	$z'$	Diff.	$\log \text{Tg. } z$ $\log \sin \omega$	Diff.	$\log \text{Cos } z$ $\log \sec \omega$	Diff.	$\log \text{Sin } z$ $\log \text{tg } \omega$	Diff.				
<b>20'</b>	1.83727	73	9.99982	0	1.53634	72	1.53615	73	(1)1263.5	2.1	<b>40'</b>	
10	1.83800	72	9.99982	0	1.53706	72	1.53688	72	(1)1261.4	2.1	50	
20	1.83872	73	9.99982	0	1.53778	73	1.53760	73	(1)1259.3	2.1	40	
30	1.83945	73	9.99982	0	1.53851	73	1.53833	73	(1)1257.2	2.1	30	
40	1.84018	73	9.99982	0	1.53924	73	1.53906	73	(1)1255.1	2.1	20	
50	1.84091	73	9.99982	0	1.53997	73	1.53979	73	(1)1253.0	2.1	10	
<b>21'</b>	1.84164	73	9.99982	0	1.54070	73	1.54052	73	(1)1250.9	2.2	<b>39'</b>	
10	1.84237	73	9.99982	0	1.54143	73	1.54125	73	(1)1248.7	2.1	50	
20	1.84310	74	9.99982	0	1.54216	73	1.54198	73	(1)1246.6	2.1	40	
30	1.84384	73	9.99982	0	1.54290	73	1.54272	73	(1)1244.5	2.1	30	
40	1.84457	74	9.99982	0	1.54363	73	1.54345	73	(1)1242.4	2.1	20	
50	1.84531	74	9.99982	0	1.54437	74	1.54419	74	(1)1240.3	2.1	10	
<b>22'</b>	1.84605	74	9.99982	0	1.54511	74	1.54493	74	(1)1238.2	2.1	<b>38'</b>	
10	1.84679	74	9.99982	0	1.54585	74	1.54567	74	(1)1236.1	2.1	50	
20	1.84753	74	9.99982	1	1.54659	74	1.54641	74	(1)1234.0	2.1	40	
30	1.84827	74	9.99983	0	1.54733	74	1.54715	75	(1)1231.9	2.1	30	
40	1.84901	75	9.99983	0	1.54807	74	1.54790	74	(1)1229.8	2.1	20	
50	1.84976	74	9.99983	0	1.54881	74	1.54864	75	(1)1227.7	2.1	10	
<b>23'</b>	1.85050	75	9.99983	0	1.54956	75	1.54939	74	(1)1225.6	2.1	<b>37'</b>	
10	1.85125	75	9.99983	0	1.55031	74	1.55013	75	(1)1223.5	2.1	50	
20	1.85200	75	9.99983	0	1.55105	75	1.55088	75	(1)1221.4	2.1	40	
30	1.85275	75	9.99983	0	1.55180	75	1.55163	75	(1)1219.3	2.2	30	
40	1.85350	75	9.99983	0	1.55255	76	1.55238	76	(1)1217.1	2.1	20	
50	1.85425	75	9.99983	0	1.55331	75	1.55314	75	(1)1215.0	2.1	10	
<b>24'</b>	1.85500	76	9.99983	0	1.55406	75	1.55389	75	(1)1212.9	2.1	<b>36'</b>	
10	1.85576	76	9.99983	0	1.55481	76	1.55464	76	(1)1210.8	2.1	50	
20	1.85652	75	9.99983	0	1.55557	76	1.55540	76	(1)1208.7	2.1	40	
30	1.85727	76	9.99983	0	1.55633	76	1.55616	76	(1)1206.6	2.1	30	
40	1.85803	76	9.99983	0	1.55708	76	1.55692	76	(1)1204.5	2.1	20	
50	1.85879	76	9.99983	0	1.55784	77	1.55768	76	(1)1202.4	2.1	10	
<b>25'</b>	1.85955	77	9.99983	0	1.55861	76	1.55844	76	(1)1200.3	2.1	<b>35'</b>	
10	1.86032	76	9.99983	1	1.55937	76	1.55920	77	(1)1198.2	2.1	50	
20	1.86108	76	9.99984	0	1.56013	77	1.55997	76	(1)1196.1	2.1	40	
30	1.86184	77	9.99984	0	1.56090	77	1.56073	77	(1)1194.0	2.1	30	
40	1.86261	77	9.99984	0	1.56166	76	1.56150	77	(1)1191.9	2.1	20	
50	1.86338	77	9.99984	0	1.56243	77	1.56227	77	(1)1189.8	2.1	10	
<b>26'</b>	1.86415	77	9.99984	0	1.56320	77	1.56304	77	(1)1187.7	2.1	<b>34'</b>	
10	1.86492	77	9.99984	0	1.56397	77	1.56381	77	(1)1185.6	2.2	50	
20	1.86569	78	9.99984	0	1.56474	77	1.56458	78	(1)1183.4	2.1	40	
30	1.86647	77	9.99984	0	1.56552	77	1.56536	77	(1)1181.3	2.1	30	
40	1.86724	78	9.99984	0	1.56629	77	1.56613	78	(1)1179.2	2.1	20	
50	1.86802	77	9.99984	0	1.56707	78	1.56691	77	(1)1177.1	2.1	10	
<b>27'</b>	1.86879	78	9.99984	0	1.56784	78	1.56768	78	(1)1175.0	2.1	<b>33'</b>	
10	1.86957	78	9.99984	0	1.56862	78	1.56846	79	(1)1172.9	2.1	50	
20	1.87035	79	9.99984	0	1.56940	78	1.56925	78	(1)1170.8	2.1	40	
30	1.87114	78	9.99984	0	1.57018	79	1.57003	78	(1)1168.7	2.1	30	
40	1.87192	78	9.99984	0	1.57097	78	1.57081	79	(1)1166.6	2.1	20	
50	1.87270	79	9.99984	0	1.57175	79	1.57160	78	(1)1164.5	2.1	10	
<b>28'</b>	1.87349	79	9.99984	1	1.57254	79	1.57238	79	(1)1162.4	2.1	<b>32'</b>	
10	1.87428	79	9.99985	0	1.57333	79	1.57317	79	(1)1160.3	2.1	50	
20	1.87507	79	9.99985	0	1.57411	78	1.57396	79	(1)1158.2	2.1	40	
30	1.87586	79	9.99985	0	1.57490	79	1.57475	79	(1)1156.1	2.1	30	
40	1.87665	79	9.99985	0	1.57570	80	1.57554	79	(1)1154.0	2.1	20	
50	1.87744	80	9.99985	0	1.57649	79	1.57634	79	(1)1151.9	2.2	10	
<b>29'</b>	1.87824	79	9.99985	0	1.57728	80	1.57713	80	(1)1149.7	2.1	<b>31'</b>	
10	1.87903	80	9.99985	0	1.57808	80	1.57793	80	(1)1147.6	2.1	50	
20	1.87983	80	9.99985	0	1.57888	80	1.57873	79	(1)1145.5	2.1	40	
30	1.88063	80	9.99985	0	1.57968	80	1.57952	81	(1)1143.4	2.1	30	
40	1.88143	80	9.99985	0	1.58048	80	1.58033	80	(1)1141.3	2.1	20	
50	1.88223	81	9.99985	0	1.58128	80	1.58113	80	(1)1139.2	2.1	10	
<b>30'</b>	1.88304		9.99985	0	1.58208	80	1.58193	80	(1)1137.1	2.1	<b>30'</b>	

$\omega$	$z'$	Diff.	$\log \text{ Tg } z$ $\log \sec \omega$	Diff.	$\log \text{ Cos } z$ $\log \sec \omega$	Diff.	$\log \text{ Sin } z$ $\log \text{ tg } \omega$	Diff.				
<b>30'</b>	1.88304	80	9.99985	0	1.58208	81	1.58193	81	(1)1137.1	2.1	<b>30'</b>	
10	1.88384	81	9.99985	0	1.58289	80	1.58274	80	(1)1135.0	2.1	50	
20	1.88465	81	9.99985	0	1.58369	81	1.58354	81	(1)1132.9	2.1	40	
30	1.88546	81	9.99985	0	1.58450	81	1.58435	81	(1)1130.8	2.1	30	
40	1.88627	81	9.99985	0	1.58531	81	1.58516	81	(1)1128.7	2.1	20	
50	1.88708	81	9.99985	0	1.58612	81	1.58597	82	(1)1126.6	2.1	10	
<b>31'</b>	1.88789	81	9.99985	0	1.58693	82	1.58679	81	(1)1124.5	2.1	<b>29'</b>	
10	1.88870	82	9.99985	1	1.58775	81	1.58760	82	(1)1122.4	2.1	50	
20	1.88952	82	9.99986	0	1.58856	82	1.58842	81	(1)1120.3	2.1	40	
30	1.89034	82	9.99986	0	1.58938	82	1.58923	82	(1)1118.2	2.2	30	
40	1.89116	82	9.99986	0	1.59020	82	1.59005	82	(1)1116.0	2.1	20	
50	1.89198	82	9.99986	0	1.59102	82	1.59087	83	(1)1113.9	2.1	10	
<b>32'</b>	1.89280	82	9.99986	0	1.59184	82	1.59170	82	(1)1111.8	2.1	<b>28'</b>	
10	1.89362	83	9.99986	0	1.59266	83	1.59252	83	(1)1109.7	2.1	50	
20	1.89445	82	9.99986	0	1.59349	82	1.59335	82	(1)1107.6	2.1	40	
30	1.89527	83	9.99986	0	1.59431	83	1.59417	83	(1)1105.5	2.1	30	
40	1.89610	83	9.99986	0	1.59514	83	1.59500	83	(1)1103.4	2.1	20	
50	1.89693	83	9.99986	0	1.59597	83	1.59583	83	(1)1101.3	2.1	10	
<b>33'</b>	1.89776	83	9.99986	0	1.59680	83	1.59666	84	(1)1099.2	2.1	<b>27'</b>	
10	1.89859	84	9.99986	0	1.59763	84	1.59750	83	(1)1097.1	2.1	50	
20	1.89943	83	9.99986	0	1.59847	83	1.59833	84	(1)1095.0	2.1	40	
30	1.90026	84	9.99986	0	1.59930	84	1.59917	83	(1)1092.9	2.1	30	
40	1.90110	84	9.99986	0	1.60014	84	1.60000	84	(1)1090.8	2.1	20	
50	1.90194	84	9.99986	0	1.60098	84	1.60084	84	(1)1088.7	2.1	10	
<b>34'</b>	1.90278	85	9.99986	0	1.60182	84	1.60168	85	(1)1086.6	2.1	<b>26'</b>	
10	1.90363	84	9.99986	1	1.60266	85	1.60253	84	(1)1084.5	2.2	50	
20	1.90447	85	9.99987	0	1.60351	84	1.60337	85	(1)1082.3	2.1	40	
30	1.90532	84	9.99987	0	1.60435	85	1.60422	85	(1)1080.2	2.1	30	
40	1.90616	85	9.99987	0	1.60520	85	1.60507	85	(1)1078.1	2.1	20	
50	1.90701	85	9.99987	0	1.60605	85	1.60592	85	(1)1076.0	2.1	10	
<b>35'</b>	1.90786	86	9.99987	0	1.60690	85	1.60677	85	(1)1073.9	2.1	<b>25'</b>	
10	1.90872	85	9.99987	0	1.60775	86	1.60762	85	(1)1071.8	2.1	50	
20	1.90957	86	9.99987	0	1.60861	85	1.60847	86	(1)1069.7	2.1	40	
30	1.91043	85	9.99987	0	1.60946	86	1.60933	86	(1)1067.6	2.1	30	
40	1.91128	86	9.99987	0	1.61032	86	1.61019	86	(1)1065.5	2.1	20	
50	1.91214	86	9.99987	0	1.61118	86	1.61105	86	(1)1063.4	2.1	10	
<b>36'</b>	1.91300	87	9.99987	0	1.61204	86	1.61191	86	(1)1061.3	2.1	<b>24'</b>	
10	1.91387	86	9.99987	0	1.61290	87	1.61277	87	(1)1059.2	2.1	50	
20	1.91473	87	9.99987	0	1.61376	86	1.61364	86	(1)1057.1	2.1	40	
30	1.91560	86	9.99987	0	1.61463	87	1.61450	87	(1)1055.0	2.1	30	
40	1.91646	87	9.99987	0	1.61550	87	1.61537	87	(1)1052.9	2.1	20	
50	1.91733	87	9.99987	0	1.61637	87	1.61624	87	(1)1050.8	2.1	10	
<b>37'</b>	1.91820	88	9.99987	0	1.61724	87	1.61711	87	(1)1048.7	2.2	<b>23'</b>	
10	1.91908	87	9.99987	0	1.61811	88	1.61798	88	(1)1046.5	2.1	50	
20	1.91995	88	9.99987	0	1.61899	87	1.61886	88	(1)1044.4	2.1	40	
30	1.92083	88	9.99987	1	1.61986	88	1.61974	88	(1)1042.3	2.1	30	
40	1.92171	88	9.99988	0	1.62074	88	1.62062	88	(1)1040.2	2.1	20	
50	1.92259	88	9.99988	0	1.62162	88	1.62150	88	(1)1038.1	2.1	10	
<b>38'</b>	1.92347	88	9.99988	0	1.62250	88	1.62238	88	(1)1036.0	2.1	<b>22'</b>	
10	1.92435	89	9.99988	0	1.62338	89	1.62326	89	(1)1033.9	2.1	50	
20	1.92524	89	9.99988	0	1.62427	89	1.62415	88	(1)1031.8	2.1	40	
30	1.92613	89	9.99988	0	1.62516	89	1.62503	89	(1)1029.7	2.1	30	
40	1.92702	89	9.99988	0	1.62605	89	1.62592	90	(1)1027.6	2.1	20	
50	1.92791	89	9.99988	0	1.62694	89	1.62682	89	(1)1025.5	2.1	10	
<b>39'</b>	1.92880	89	9.99988	0	1.62783	89	1.62771	89	(1)1023.4	2.1	<b>21'</b>	
10	1.92969	90	9.99988	0	1.62872	90	1.62860	90	(1)1021.3	2.1	50	
20	1.93059	90	9.99988	0	1.62962	90	1.62950	90	(1)1019.2	2.1	40	
30	1.93149	90	9.99988	0	1.63052	90	1.63040	90	(1)1017.1	2.1	30	
40	1.93239	90	9.99988	0	1.63142	90	1.63130	90	(1)1015.0	2.2	20	
50	1.93329	90	9.99988	0	1.63232	90	1.63220	90	(1)1012.8	2.1	10	
<b>40'</b>	1.93419	90	9.99988	0	1.63322	90	1.63311	91	(1)1010.7	2.1	<b>20'</b>	

$\log \cos \omega$  Diff.  $\log \sec z$   $\log \cos \omega$  Diff.  $\log \text{ cotg } \omega$  Diff.  $\log \text{ cosec } z$   $z'$  Diff.  $\omega$



$\omega = 88$  Grad.

$\omega$	$z'$	Diff.	$\log Tg z$ $\log \sin \omega$	Diff.	$\log Cos z$ $\log \sec \omega$	Diff.	$\log Sin z$ $\log tg \omega$	Diff.					
<b>40'</b>	1.93419		9.99988	0	1.63322		1.63311		(1)1010.7				<b>20'</b>
10	1.93510	91	9.99988	0	1.63413	91	1.63401	90	(1)1008.6	2.1		50	
20	1.93601	91	9.99988	0	1.63504	91	1.63492	91	(1)1006.5	2.1		40	
30	1.93692	91	9.99988	0	1.63595	91	1.63583	91	(1)1004.4	2.1		30	
40	1.93783	91	9.99988	0	1.63686	91	1.63674	91	(1)1002.3	2.1		20	
50	1.93874	92	9.99988	1	1.63777	92	1.63765	91	(1)1000.2	2.1		10	
<b>41'</b>	1.93966		9.99989	0	1.63869		1.63857		(2)998.10				<b>19'</b>
10	1.94057	91	9.99989	0	1.63960	91	1.63949	92	(2)996.00	2.10		50	
20	1.94149	92	9.99989	0	1.64052	92	1.64041	92	(2)993.89	2.11		40	
30	1.94242	93	9.99989	0	1.64144	92	1.64133	92	(2)991.79	2.10		30	
40	1.94334	92	9.99989	0	1.64236	92	1.64225	92	(2)989.68	2.11		20	
50	1.94426	92	9.99989	0	1.64329	93	1.64318	93	(2)987.57	2.11		10	
<b>42'</b>	1.94519		9.99989	0	1.64422		1.64410		(2)985.47				<b>18'</b>
10	1.94612	93	9.99989	0	1.64515	93	1.64503	93	(2)983.36	2.11		50	
20	1.94705	93	9.99989	0	1.64608	93	1.64597	94	(2)981.26	2.10		40	
30	1.94798	93	9.99989	0	1.64701	93	1.64690	93	(2)979.15	2.11		30	
40	1.94892	94	9.99989	0	1.64794	94	1.64783	93	(2)977.04	2.11		20	
50	1.94986	93	9.99989	0	1.64888	94	1.64877	94	(2)974.94	2.10		10	
<b>43'</b>	1.95079		9.99989	0	1.64982		1.64971		(2)972.83				<b>17'</b>
10	1.95174	95	9.99989	0	1.65076	94	1.65065	94	(2)970.73	2.10		50	
20	1.95268	94	9.99989	0	1.65170	95	1.65160	95	(2)968.62	2.11		40	
30	1.95362	95	9.99989	0	1.65265	95	1.65254	94	(2)966.51	2.11		30	
40	1.95457	95	9.99989	0	1.65360	94	1.65349	95	(2)964.41	2.10		20	
50	1.95552	95	9.99989	0	1.65454	96	1.65444	95	(2)962.30	2.11		10	
<b>44'</b>	1.95647		9.99989	0	1.65550		1.65539		(2)960.19				<b>16'</b>
10	1.95743	96	9.99989	0	1.65645	95	1.65634	95	(2)958.09	2.10		50	
20	1.95838	95	9.99989	0	1.65740	95	1.65730	96	(2)955.98	2.11		40	
30	1.95934	96	9.99990	1	1.65836	96	1.65826	96	(2)953.88	2.10		30	
40	1.96030	96	9.99990	0	1.65932	96	1.65922	96	(2)951.77	2.11		20	
50	1.96126	97	9.99990	0	1.66028	97	1.66018	96	(2)949.66	2.10		10	
<b>45'</b>	1.96223		9.99990	0	1.66125		1.66114		(2)947.56				<b>15'</b>
10	1.96319	96	9.99990	0	1.66221	96	1.66211	97	(2)945.45	2.11		50	
20	1.96416	97	9.99990	0	1.66318	97	1.66308	97	(2)943.35	2.10		40	
30	1.96513	97	9.99990	0	1.66415	97	1.66405	97	(2)941.24	2.11		30	
40	1.96610	98	9.99990	0	1.66512	98	1.66502	97	(2)939.13	2.11		20	
50	1.96708	98	9.99990	0	1.66610	98	1.66600	98	(2)937.03	2.10		10	
<b>46'</b>	1.96806		9.99990	0	1.66708		1.66698		(2)934.92				<b>14'</b>
10	1.96903	97	9.99990	0	1.66805	97	1.66795	97	(2)932.82	2.10		50	
20	1.97002	99	9.99990	0	1.66904	99	1.66894	99	(2)930.71	2.11		40	
30	1.97100	98	9.99990	0	1.67002	98	1.66992	98	(2)928.60	2.11		30	
40	1.97199	99	9.99990	0	1.67101	99	1.67091	99	(2)926.50	2.10		20	
50	1.97297	98	9.99990	0	1.67199	98	1.67190	99	(2)924.39	2.11		10	
<b>47'</b>	1.97396		9.99990	0	1.67298		1.67289		(2)922.29				<b>13'</b>
10	1.97496	100	9.99990	0	1.67398	100	1.67388	99	(2)920.18	2.11		50	
20	1.97595	99	9.99990	0	1.67497	99	1.67487	99	(2)918.07	2.11		40	
30	1.97695	100	9.99990	0	1.67597	100	1.67587	100	(2)915.97	2.10		30	
40	1.97795	100	9.99990	0	1.67697	100	1.67687	100	(2)913.86	2.11		20	
50	1.97895	101	9.99990	0	1.67797	100	1.67787	100	(2)911.76	2.10		10	
<b>48'</b>	1.97996		9.99990	0	1.67897		1.67888		(2)909.65				<b>12'</b>
10	1.98096	101	9.99991	1	1.67998	101	1.67988	101	(2)907.54	2.11		50	
20	1.98197	101	9.99991	0	1.68099	101	1.68089	101	(2)905.44	2.10		40	
30	1.98298	101	9.99991	0	1.68200	101	1.68191	102	(2)903.33	2.10		30	
40	1.98400	102	9.99991	0	1.68301	101	1.68292	101	(2)901.23	2.10		20	
50	1.98501	101	9.99991	0	1.68403	102	1.68394	102	(2)899.12	2.11		10	
<b>49'</b>	1.98603		9.99991	0	1.68505		1.68495		(2)897.01				<b>11'</b>
10	1.98705	102	9.99991	0	1.68607	102	1.68597	102	(2)894.91	2.10		50	
20	1.98807	102	9.99991	0	1.68709	102	1.68700	103	(2)892.80	2.11		40	
30	1.98910	103	9.99991	0	1.68812	103	1.68802	102	(2)890.70	2.10		30	
40	1.99013	103	9.99991	0	1.68914	102	1.68905	103	(2)888.59	2.11		20	
50	1.99116	103	9.99991	0	1.69017	103	1.69008	103	(2)886.49	2.10		10	
<b>50'</b>	1.99219	103	9.99991	0	1.69121	104	1.69112	104	(2)884.38	2.11			<b>10'</b>

$\log \cos \omega$  Diff.  $\log \cotg \omega$  Diff.  $\log \sec \omega$  Diff.  $z'$  Diff.  $\omega$

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>50'</b>	1.99219		9.99991	0	1.69121		1.69112		103	(2)884.38	2.11	<b>10'</b>
10	1.99323	104	9.99991	0	1.69224		1.69215		104	(2)882.27	2.10	50
20	1.99426	103	9.99991	0	1.69328		1.69319		104	(2)880.17	2.11	40
30		104		0					104			30
40	1.99530	105	9.99991	0	1.69432		1.69423		104	(2)878.06	2.10	20
50	1.99633	104	9.99991	0	1.69536		1.69527		105	(2)875.96	2.11	10
	1.99739	105	9.99991	0	1.69641		1.69632		104	(2)873.85	2.11	
<b>51'</b>	1.99844	105	9.99991	0	1.69745		1.69737		105	(2)871.74	2.10	<b>50'</b>
10	1.99949	105	9.99991	0	1.69850		1.69842		105	(2)869.64	2.11	50
20	2.00054	106	9.99991	0	1.69956		1.69947		105	(2)867.53	2.10	40
30	2.00160	106	9.99991	0	1.70061		1.70053		105	(2)865.43	2.11	30
40	2.00266	106	9.99991	0	1.70167		1.70158		106	(2)863.32	2.11	20
50	2.00372	106	9.99991	0	1.70273		1.70264		106	(2)861.21	2.10	10
<b>52'</b>	2.00478	107	9.99992	1	1.70379		1.70371		107	(2)859.11	2.11	<b>8'</b>
10	2.00585	107	9.99992	0	1.70486		1.70477		106	(2)857.00	2.10	40
20	2.00692	107	9.99992	0	1.70593		1.70584		107	(2)854.90	2.11	50
30	2.00799	107	9.99992	0	1.70700		1.70691		107	(2)852.79	2.11	30
40	2.00906	108	9.99992	0	1.70807		1.70799		107	(2)850.68	2.10	20
50	2.01014	108	9.99992	0	1.70915		1.70906		108	(2)848.58	2.11	10
<b>53'</b>	2.01122	108	9.99992	0	1.71023		1.71014		108	(2)846.47	2.10	<b>7'</b>
10	2.01230	108	9.99992	0	1.71131		1.71123		109	(2)844.37	2.11	50
20	2.01338	109	9.99992	0	1.71239		1.71231		108	(2)842.26	2.11	40
30	2.01447	109	9.99992	0	1.71348		1.71340		109	(2)840.15	2.10	30
40	2.01556	109	9.99992	0	1.71457		1.71449		109	(2)838.05	2.11	20
50	2.01665	110	9.99992	0	1.71566		1.71558		109	(2)835.94	2.11	10
<b>54'</b>	2.01775	109	9.99992	0	1.71676		1.71668		110	(2)833.84	2.10	<b>6'</b>
10	2.01884	109	9.99992	0	1.71785		1.71777		109	(2)831.73	2.11	50
20	2.01995	111	9.99992	0	1.71896		1.71888		111	(2)829.62	2.10	40
30	2.02105	111	9.99992	0	1.72006		1.71998		110	(2)827.52	2.11	30
40	2.02216	111	9.99992	0	1.72117		1.72109		111	(2)825.41	2.10	20
50	2.02327	111	9.99992	0	1.72227		1.72220		111	(2)823.31	2.11	10
<b>55'</b>	2.02438	111	9.99992	0	1.72339		1.72331		112	(2)821.20	2.10	<b>5'</b>
10	2.02549	112	9.99992	0	1.72450		1.72442		111	(2)819.10	2.11	50
20	2.02661	112	9.99992	0	1.72562		1.72554		112	(2)816.99	2.11	40
30	2.02773	113	9.99992	0	1.72674		1.72666		112	(2)814.88	2.10	30
40	2.02886	112	9.99992	0	1.72786		1.72779		113	(2)812.78	2.11	20
50	2.02998	113	9.99992	0	1.72899		1.72891		112	(2)810.67	2.10	10
<b>56'</b>	2.03111	113	9.99992	0	1.73012		1.73004		113	(2)808.57	2.11	<b>4'</b>
10	2.03224	113	9.99993	1	1.73125		1.73118		114	(2)806.46	2.11	50
20	2.03338	114	9.99993	0	1.73239		1.73231		113	(2)804.35	2.10	40
30	2.03452	114	9.99993	0	1.73352		1.73345		114	(2)802.25	2.11	30
40	2.03566	114	9.99993	0	1.73467		1.73459		114	(2)800.14	2.10	20
50	2.03680	115	9.99993	0	1.73581		1.73574		115	(2)798.04	2.11	10
<b>57'</b>	2.03795	115	9.99993	0	1.73696		1.73688		114	(2)795.93	2.10	<b>3'</b>
10	2.03910	116	9.99993	0	1.73811		1.73804		116	(2)793.82	2.11	50
20	2.04026	115	9.99993	0	1.73926		1.73919		115	(2)791.72	2.10	40
30	2.04141	116	9.99993	0	1.74042		1.74035		116	(2)789.61	2.11	30
40	2.04257	116	9.99993	0	1.74158		1.74151		116	(2)787.51	2.10	20
50	2.04373	117	9.99993	0	1.74274		1.74267		116	(2)785.40	2.11	10
<b>58'</b>	2.04490	117	9.99993	0	1.74391		1.74384		117	(2)783.30	2.10	<b>2'</b>
10	2.04607	117	9.99993	0	1.74507		1.74500		117	(2)781.19	2.11	50
20	2.04724	118	9.99993	0	1.74625		1.74618		118	(2)779.08	2.10	40
30	2.04842	118	9.99993	0	1.74742		1.74735		117	(2)776.98	2.11	30
40	2.04960	118	9.99993	0	1.74860		1.74853		118	(2)774.87	2.10	20
50	2.05078	118	9.99993	0	1.74978		1.74971		118	(2)772.77	2.11	10
<b>59'</b>	2.05196	119	9.99993	0	1.75097		1.75090		119	(2)770.66	2.10	<b>1'</b>
10	2.05315	119	9.99993	0	1.75215		1.75209		119	(2)768.55	2.11	50
20	2.05434	120	9.99993	0	1.75335		1.75328		119	(2)766.45	2.10	40
30	2.05554	120	9.99993	0	1.75454		1.75447		119	(2)764.34	2.11	30
40	2.05674	120	9.99993	0	1.75574		1.75567		120	(2)762.24	2.10	20
50	2.05794	120	9.99993	0	1.75694		1.75687		120	(2)760.13	2.11	10
<b>60'</b>	2.05914	120	9.99993	0	1.75814		1.75808		121	(2)758.03	2.10	<b>0'</b>



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.				
<b>0'</b>	2.05914		9.99993	0	1.75814		1.75808		(2)758.03			
10	2.06035	121	9.99993	0	1.75935	121	1.75929	121	(2)755.92	2.11	<b>60'</b>	
20	2.06156	121	9.99993	0	1.76056	121	1.76050	121	(2)753.81	2.11	50	
		122		0		122		121		2.10	40	
30	2.06278		9.99993		1.76178		1.76171		(2)751.71	2.11	30	
40	2.06399	121	9.99994	1	1.76300	122	1.76293	122	(2)749.60	2.11	20	
50	2.06522	123	9.99994	0	1.76422	122	1.76415	122	(2)747.50	2.10	10	
		122		0		122		123		2.11		
<b>1'</b>	2.06644		9.99994		1.76544		1.76538		(2)745.39	2.11	<b>59'</b>	
10	2.06767	123	9.99994	0	1.76667	123	1.76661	123	(2)743.28	2.10	50	
20	2.06890	123	9.99994	0	1.76790	123	1.76784	123	(2)741.18	2.10	40	
		124		0		124		124		2.11		
30	2.07014		9.99994		1.76914		1.76908		(2)739.07	2.10	30	
40	2.07138	124	9.99994	0	1.77038	124	1.77032	124	(2)736.97	2.10	20	
50	2.07262	124	9.99994	0	1.77162	124	1.77156	124	(2)734.86	2.11	10	
		125		0		125		124		2.10		
<b>2'</b>	2.07387		9.99994		1.77287		1.77280		(2)732.76	2.11	<b>58'</b>	
10	2.07512	125	9.99994	0	1.77412	125	1.77405	125	(2)730.65	2.11	50	
20	2.07637	125	9.99994	0	1.77537	125	1.77531	126	(2)728.54	2.11	40	
		126		0		126		126		2.10		
30	2.07763		9.99994		1.77663		1.77657		(2)726.44	2.11	30	
40	2.07889	126	9.99994	0	1.77789	126	1.77783	126	(2)724.33	2.11	20	
50	2.08015	126	9.99994	0	1.77915	126	1.77909	126	(2)722.23	2.10	10	
		127		0		127		127		2.11		
<b>3'</b>	2.08142		9.99994		1.78042		1.78036		(2)720.12	2.11	<b>57'</b>	
10	2.08269	127	9.99994	0	1.78169	127	1.78163	127	(2)718.01	2.11	50	
20	2.08397	128	9.99994	0	1.78297	128	1.78291	128	(2)715.91	2.10	40	
		128		0		127		128		2.11		
30	2.08525		9.99994		1.78424		1.78419		(2)713.80	2.10	30	
40	2.08653	128	9.99994	0	1.78553	129	1.78547	128	(2)711.70	2.10	20	
50	2.08782	129	9.99994	0	1.78681	128	1.78676	129	(2)709.59	2.11	10	
		129		0		130		129		2.10		
<b>4'</b>	2.08911		9.99994		1.78811		1.78805		(2)707.49	2.11	<b>56'</b>	
10	2.09040	129	9.99994	0	1.78940	129	1.78934	129	(2)705.38	2.11	50	
20	2.09170	130	9.99994	0	1.79070	130	1.79064	130	(2)703.27	2.11	40	
		130		0		130		130		2.10		
30	2.09300		9.99994		1.79200		1.79194		(2)701.17	2.11	30	
40	2.09431	131	9.99994	0	1.79331	131	1.79325	131	(2)699.06	2.11	20	
50	2.09562	131	9.99994	0	1.79462	131	1.79456	131	(2)696.96	2.10	10	
		131		0		131		131		2.11		
<b>5'</b>	2.09693		9.99994		1.79593		1.79587		(2)694.85	2.11	<b>55'</b>	
10	2.09825	132	9.99994	0	1.79725	132	1.79719	132	(2)692.75	2.10	50	
20	2.09957	132	9.99995	1	1.79857	132	1.79851	132	(2)690.64	2.11	40	
		133		0		133		133		2.11		
30	2.10090		9.99995		1.79990		1.79984		(2)688.53	2.11	30	
40	2.10223	133	9.99995	0	1.80123	133	1.80117	133	(2)686.43	2.10	20	
50	2.10356	133	9.99995	0	1.80256	133	1.80251	134	(2)684.32	2.11	10	
		134		0		134		133		2.10		
<b>6'</b>	2.10490		9.99995		1.80390		1.80384		(2)682.22	2.11	<b>54'</b>	
10	2.10624	134	9.99995	0	1.80524	134	1.80519	135	(2)680.11	2.11	50	
20	2.10759	135	9.99995	0	1.80659	135	1.80653	134	(2)678.00	2.11	40	
		135		0		135		136		2.10		
30	2.10894		9.99995		1.80794		1.80789		(2)675.90	2.11	30	
40	2.11030	136	9.99995	0	1.80929	135	1.80924	135	(2)673.79	2.11	20	
50	2.11166	136	9.99995	0	1.81065	136	1.81060	136	(2)671.69	2.10	10	
		136		0		137		136		2.11		
<b>7'</b>	2.11302		9.99995		1.81202		1.81196		(2)669.58	2.11	<b>53'</b>	
10	2.11439	137	9.99995	0	1.81338	136	1.81333	137	(2)667.48	2.10	50	
20	2.11576	137	9.99995	0	1.81476	138	1.81470	137	(2)665.37	2.11	40	
		138		0		137		138		2.11		
30	2.11714		9.99995		1.81613		1.81608		(2)663.26	2.10	30	
40	2.11852	138	9.99995	0	1.81751	138	1.81746	138	(2)661.16	2.10	20	
50	2.11990	138	9.99995	0	1.81890	139	1.81885	139	(2)659.05	2.11	10	
		139		0		139		139		2.10		
<b>8'</b>	2.12129		9.99995		1.82029		1.82024		(2)656.95	2.11	<b>52'</b>	
10	2.12269	140	9.99995	0	1.82168	139	1.82163	139	(2)654.84	2.11	50	
20	2.12409	140	9.99995	0	1.82308	140	1.82303	140	(2)652.74	2.10	40	
		140		0		140		140		2.11		
30	2.12549		9.99995		1.82448		1.82443		(2)650.63	2.11	30	
40	2.12690	141	9.99995	0	1.82589	141	1.82584	141	(2)648.52	2.11	20	
50	2.12831	141	9.99995	0	1.82730	141	1.82725	141	(2)646.42	2.10	10	
		142		0		142		142		2.11		
<b>9'</b>	2.12973		9.99995		1.82872		1.82867		(2)644.31	2.11	<b>51'</b>	
10	2.13115	142	9.99995	0	1.83014	142	1.83009	142	(2)642.21	2.10	50	
20	2.13257	142	9.99995	0	1.83157	143	1.83152	143	(2)640.10	2.11	40	
		143		0		143		143		2.10		
30	2.13400		9.99995		1.83300		1.83295		(2)638.00	2.11	30	
40	2.13544	144	9.99995	0	1.83443	143	1.83439	144	(2)635.89	2.11	20	
50	2.13688	144	9.99995	0	1.83587	144	1.83583	144	(2)633.78	2.11	10	
		145		0		145		144		2.10		
<b>10'</b>	2.13833		9.99995		1.83732		1.83727		(2)631.68	2.10	<b>50'</b>	

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>10'</b>	2.13833		9.99995	0	1.83732	145	1.83727	145	(2)631.68		<b>50'</b>
10	2.13978	145	9.99995	0	1.83877	145	1.83872	146	(2)629.57	2.11	50
20	2.14123	145	9.99995	0	1.84022	146	1.84018	146	(2)627.47	2.10	40
30	2.14269	146	9.99995	0	1.84168	147	1.84164	146	(2)625.36	2.11	30
40	2.14416	147	9.99996	1	1.84315	147	1.84310	146	(2)623.26	2.10	20
50	2.14563	147	9.99996	0	1.84462	147	1.84457	147	(2)621.15	2.11	10
		147						148			
<b>11'</b>	2.14710	148	9.99996	0	1.84609	148	1.84605	148	(2)619.04	2.10	<b>49'</b>
10	2.14858	149	9.99996	0	1.84757	149	1.84753	148	(2)616.94	2.11	50
20	2.15007	148	9.99996	0	1.84906	149	1.84901	149	(2)614.83	2.11	40
30	2.15155	150	9.99996	0	1.85055	149	1.85050	150	(2)612.73	2.11	30
40	2.15305	150	9.99996	0	1.85204	150	1.85200	150	(2)610.62	2.11	20
50	2.15455	151	9.99996	0	1.85354	150	1.85350	150	(2)608.51	2.11	10
<b>12'</b>	2.15606	151	9.99996	0	1.85505	151	1.85500	152	(2)606.41	2.11	<b>48'</b>
10	2.15757	151	9.99996	0	1.85656	151	1.85652	151	(2)604.30	2.10	50
20	2.15908	152	9.99996	0	1.85807	152	1.85803	152	(2)602.20	2.11	40
30	2.16060	153	9.99996	0	1.85959	153	1.85955	153	(2)600.09	2.10	30
40	2.16213	153	9.99996	0	1.86112	153	1.86108	153	(2)597.99	2.11	20
50	2.16366	154	9.99996	0	1.86265	154	1.86261	154	(2)595.88	2.11	10
<b>13'</b>	2.16520	154	9.99996	0	1.86419	154	1.86415	154	(2)593.77	2.10	<b>47'</b>
10	2.16674	155	9.99996	0	1.86573	155	1.86569	155	(2)591.67	2.11	50
20	2.16829	155	9.99996	0	1.86728	155	1.86724	155	(2)589.56	2.10	40
30	2.16984	156	9.99996	0	1.86883	156	1.86879	156	(2)587.46	2.11	30
40	2.17140	157	9.99996	0	1.87039	157	1.87035	157	(2)585.35	2.10	20
50	2.17297	157	9.99996	0	1.87196	157	1.87192	157	(2)583.25	2.11	10
<b>14'</b>	2.17454	158	9.99996	0	1.87353	158	1.87349	158	(2)581.14	2.11	<b>46'</b>
10	2.17612	158	9.99996	0	1.87511	158	1.87507	158	(2)579.03	2.10	50
20	2.17770	159	9.99996	0	1.87669	159	1.87665	159	(2)576.93	2.11	40
30	2.17929	159	9.99996	0	1.87828	159	1.87824	159	(2)574.82	2.10	30
40	2.18088	160	9.99996	0	1.87987	160	1.87983	160	(2)572.72	2.11	20
50	2.18248	161	9.99996	0	1.88147	160	1.88143	160	(2)570.61	2.10	10
<b>15'</b>	2.18409	161	9.99996	0	1.88307	162	1.88304	161	(2)568.51	2.11	<b>45'</b>
10	2.18570	161	9.99996	0	1.88469	162	1.88465	162	(2)566.40	2.11	50
20	2.18731	163	9.99996	0	1.88630	163	1.88627	162	(2)564.29	2.10	40
30	2.18894	163	9.99996	0	1.88793	163	1.88789	163	(2)562.19	2.11	30
40	2.19057	163	9.99996	0	1.88956	163	1.88952	164	(2)560.08	2.10	20
50	2.19220	165	9.99996	0	1.89119	164	1.89116	164	(2)557.98	2.10	10
<b>16'</b>	2.19385	164	9.99996	0	1.89283	165	1.89280	165	(2)555.87	2.11	<b>44'</b>
10	2.19549	166	9.99996	0	1.89448	166	1.89445	165	(2)553.77	2.10	50
20	2.19715	166	9.99996	0	1.89614	166	1.89610	166	(2)551.66	2.11	40
30	2.19881	167	9.99997	1	1.89780	166	1.89776	166	(2)549.56	2.10	30
40	2.20048	167	9.99997	0	1.89946	168	1.89943	167	(2)547.45	2.11	20
50	2.20215	168	9.99997	0	1.90114	168	1.90110	168	(2)545.34	2.11	10
<b>17'</b>	2.20383	169	9.99997	0	1.90282	168	1.90278	169	(2)543.24	2.10	<b>43'</b>
10	2.20552	169	9.99997	0	1.90450	170	1.90447	169	(2)541.13	2.11	50
20	2.20721	170	9.99997	0	1.90620	170	1.90616	170	(2)539.03	2.10	40
30	2.20891	171	9.99997	0	1.90790	170	1.90786	171	(2)536.92	2.11	30
40	2.21062	171	9.99997	0	1.90960	172	1.90957	171	(2)534.82	2.10	20
50	2.21233	172	9.99997	0	1.91132	172	1.91128	172	(2)532.71	2.11	10
<b>18'</b>	2.21405	173	9.99997	0	1.91304	172	1.91300	173	(2)530.60	2.10	<b>42'</b>
10	2.21578	173	9.99997	0	1.91476	174	1.91473	173	(2)528.50	2.11	50
20	2.21751	174	9.99997	0	1.91650	174	1.91646	174	(2)526.39	2.10	40
30	2.21925	175	9.99997	0	1.91824	174	1.91820	175	(2)524.29	2.11	30
40	2.22100	175	9.99997	0	1.91998	176	1.91995	176	(2)522.18	2.10	20
50	2.22275	176	9.99997	0	1.92174	176	1.92171	176	(2)520.08	2.11	10
<b>19'</b>	2.22451	177	9.99997	0	1.92350	177	1.92347	177	(2)517.97	2.10	<b>41'</b>
10	2.22628	178	9.99997	0	1.92527	178	1.92524	178	(2)515.86	2.11	50
20	2.22806	178	9.99997	0	1.92705	178	1.92702	178	(2)513.76	2.10	40
30	2.22984	179	9.99997	0	1.92888	179	1.92880	179	(2)511.65	2.11	30
40	2.23163	180	9.99997	0	1.93062	180	1.93059	180	(2)509.55	2.10	20
50	2.23343	181	9.99997	0	1.93242	180	1.93239	180	(2)507.44	2.11	10
<b>20'</b>	2.23524	181	9.99997	0	1.93422	180	1.93419	180	(2)505.34	2.10	<b>40'</b>

log cos  $\omega$       Diff.      l. cosec  $\omega$   
log Sec z      Diff.      l. Cotg z



$\omega$	$z'$	Diff.	log Tg. z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>20'</b>	2.23524	181	9.99997	0	1.93422	182	1.93419	182	(2)505.34		<b>40'</b>
10	2.23705	182	9.99997	0	1.93604	183	1.93601	182	(2)503.23	2.11	50
20	2.23887	183	9.99997	0	1.93786	183	1.93783	183	(2)501.12	2.11	40
30	2.24070	184	9.99997	0	1.93969	183	1.93966	183	(2)499.02	2.10	30
40	2.24254	184	9.99997	0	1.94152	185	1.94149	185	(2)496.91	2.11	20
50	2.24438	185	9.99997	0	1.94337	185	1.94334	185	(2)494.81	2.10	10
<b>21'</b>	2.24623	186	9.99997	0	1.94522	186	1.94519	186	(2)492.70	2.11	<b>39'</b>
10	2.24809	187	9.99997	0	1.94708	187	1.94705	187	(2)490.60	2.10	50
20	2.24996	188	9.99997	0	1.94892	187	1.94889	187	(2)488.49	2.11	40
30	2.25184	188	9.99997	0	1.95082	187	1.95079	187	(2)486.39	2.10	30
40	2.25372	190	9.99997	0	1.95271	189	1.95268	189	(2)484.28	2.11	20
50	2.25562	190	9.99997	0	1.95460	189	1.95457	189	(2)482.17	2.10	10
<b>22'</b>	2.25752	190	9.99997	0	1.95650	190	1.95647	190	(2)480.07	2.11	<b>38'</b>
10	2.25942	192	9.99997	0	1.95841	191	1.95838	191	(2)477.96	2.10	50
20	2.26134	193	9.99997	0	1.96033	192	1.96030	192	(2)475.86	2.11	40
30	2.26327	193	9.99997	0	1.96225	192	1.96223	193	(2)473.75	2.10	30
40	2.26520	195	9.99997	0	1.96419	194	1.96416	194	(2)471.65	2.11	20
50	2.26715	195	9.99997	0	1.96613	194	1.96610	194	(2)469.54	2.10	10
<b>23'</b>	2.26910	196	9.99997	1	1.96808	196	1.96806	196	(2)467.43	2.11	<b>37'</b>
10	2.27106	197	9.99998	0	1.97004	197	1.97002	197	(2)465.33	2.10	50
20	2.27303	198	9.99998	0	1.97201	197	1.97199	197	(2)463.22	2.11	40
30	2.27501	198	9.99998	0	1.97399	199	1.97396	199	(2)461.12	2.10	30
40	2.27699	200	9.99998	0	1.97598	199	1.97595	200	(2)459.01	2.11	20
50	2.27899	201	9.99998	0	1.97797	199	1.97795	201	(2)456.91	2.10	10
<b>24'</b>	2.28100	201	9.99998	0	1.97998	201	1.97996	201	(2)454.80	2.11	<b>36'</b>
10	2.28301	203	9.99998	0	1.98199	201	1.98197	203	(2)452.69	2.10	50
20	2.28504	203	9.99998	0	1.98402	203	1.98400	203	(2)450.59	2.11	40
30	2.28707	205	9.99998	0	1.98605	203	1.98603	203	(2)448.48	2.10	30
40	2.28912	205	9.99998	0	1.98810	205	1.98807	204	(2)446.38	2.11	20
50	2.29117	206	9.99998	0	1.99015	205	1.99013	206	(2)444.27	2.10	10
<b>25'</b>	2.29323	208	9.99998	0	1.99221	206	1.99219	206	(2)442.17	2.11	<b>35'</b>
10	2.29531	208	9.99998	0	1.99429	208	1.99426	207	(2)440.06	2.10	50
20	2.29739	209	9.99998	0	1.99637	208	1.99635	209	(2)437.96	2.11	40
30	2.29948	210	9.99998	0	1.99846	209	1.99844	209	(2)435.85	2.10	30
40	2.30158	212	9.99998	0	2.00057	211	2.00054	210	(2)433.74	2.11	20
50	2.30370	212	9.99998	0	2.00268	211	2.00266	212	(2)431.64	2.10	10
<b>26'</b>	2.30582	214	9.99998	0	2.00480	212	2.00478	212	(2)429.53	2.11	<b>34'</b>
10	2.30796	214	9.99998	0	2.00694	214	2.00692	214	(2)427.43	2.10	50
20	2.31010	216	9.99998	0	2.00908	214	2.00906	214	(2)425.32	2.11	40
30	2.31226	216	9.99998	0	2.01124	216	2.01122	216	(2)423.22	2.10	30
40	2.31442	218	9.99998	0	2.01340	216	2.01338	216	(2)421.11	2.11	20
50	2.31660	219	9.99998	0	2.01558	218	2.01556	218	(2)419.00	2.10	10
<b>27'</b>	2.31879	220	9.99998	0	2.01777	219	2.01775	219	(2)416.90	2.11	<b>33'</b>
10	2.32099	221	9.99998	0	2.01997	220	2.01995	220	(2)414.79	2.10	50
20	2.32320	222	9.99998	0	2.02218	221	2.02216	221	(2)412.69	2.11	40
30	2.32542	223	9.99998	0	2.02440	222	2.02438	222	(2)410.58	2.10	30
40	2.32765	224	9.99998	0	2.02663	223	2.02661	223	(2)408.48	2.11	20
50	2.32989	226	9.99998	0	2.02887	224	2.02886	225	(2)406.37	2.10	10
<b>28'</b>	2.33215	227	9.99998	0	2.03113	226	2.03111	225	(2)404.27	2.11	<b>32'</b>
10	2.33442	228	9.99998	0	2.03340	227	2.03338	227	(2)402.16	2.10	50
20	2.33670	229	9.99998	0	2.03568	228	2.03566	228	(2)400.05	2.11	40
30	2.33899	230	9.99998	0	2.03797	229	2.03795	229	(2)397.95	2.10	30
40	2.34129	232	9.99998	0	2.04027	230	2.04026	231	(2)395.84	2.11	20
50	2.34361	233	9.99998	0	2.04259	232	2.04257	231	(2)393.74	2.10	10
<b>29'</b>	2.34594	234	9.99998	0	2.04492	233	2.04490	233	(2)391.63	2.11	<b>31'</b>
10	2.34828	235	9.99998	0	2.04726	234	2.04724	234	(2)389.53	2.10	50
20	2.35063	237	9.99998	0	2.04961	235	2.04960	236	(2)387.42	2.11	40
30	2.35300	238	9.99998	0	2.05198	237	2.05196	236	(2)385.32	2.10	30
40	2.35538	239	9.99998	0	2.05436	238	2.05434	238	(2)383.21	2.11	20
50	2.35777	241	9.99998	0	2.05675	239	2.05674	240	(2)381.10	2.10	10
<b>30'</b>	2.36018		9.99998	0	2.05916	241	2.05914	240	(2)379.00	2.11	<b>30'</b>

log cos  $\omega$       Diff.      l. cosec  $\omega$       Diff.      l. cotg  $\omega$       Diff.      l. cosec z      Diff.      l. Cotg z

$\omega$	$z'$	Diff.	$\log Tg z$ $\log \sin \omega$	Diff.	$\log Cos z$ $\log \sec \omega$	Diff.	$\log Sin z$ $\log tg \omega$	Diff.				
<b>30'</b>	2.36018		9.99998		2.05916		2.05914		(2)379.00			
10	2.36260	242	9.99998	0	2.06158	242	2.06156	242	(2)376.89	2.11	<b>30'</b>	50
20	2.36503	243	9.99998	0	2.06401	243	2.06399	243	(2)374.79	2.10		40
30	2.36748	245	9.99998	0	2.06646	245	2.06644	245	(2)372.68	2.11		30
40	2.36994	246	9.99998	0	2.06892	246	2.06890	246	(2)370.58	2.10		20
50	2.37241	247	9.99998	0	2.07139	247	2.07138	248	(2)368.47	2.11		10
		249	9.99998	0	2.07388	249	2.07387	249	(2)366.36	2.11	<b>29'</b>	50
<b>31'</b>	2.37490	251	9.99998	0	2.07638	251	2.07637	250	(2)364.26	2.10		50
10	2.37741	251	9.99998	0	2.07890	252	2.07889	252	(2)362.15	2.11		40
20	2.37992	254	9.99999	1	2.08143	253	2.08142	253	(2)360.05	2.10		30
30	2.38246	254	9.99999	0	2.08398	255	2.08397	255	(2)357.94	2.11		20
40	2.38500	257	9.99999	0	2.08654	256	2.08653	256	(2)355.84	2.10		10
50	2.38757	257	9.99999	0	2.08912	258	2.08911	258	(2)353.73	2.11	<b>28'</b>	50
<b>32'</b>	2.39014	260	9.99999	0	2.09171	259	2.09170	259	(2)351.63	2.10		50
10	2.39274	260	9.99999	0	2.09432	261	2.09431	261	(2)349.52	2.11		40
20	2.39534	263	9.99999	0	2.09695	263	2.09693	262	(2)347.41	2.10		30
30	2.39797	264	9.99999	0	2.09959	264	2.09957	264	(2)345.31	2.10		20
40	2.40061	266	9.99999	0	2.10224	265	2.10223	266	(2)343.20	2.11		10
50	2.40327	267	9.99999	0	2.10491	267	2.10490	267	(2)341.10	2.10	<b>27'</b>	50
<b>33'</b>	2.40594	269	9.99999	0	2.10760	269	2.10759	269	(2)338.99	2.10		50
10	2.40863	270	9.99999	0	2.11031	271	2.11030	271	(2)336.89	2.10		40
20	2.41133	273	9.99999	0	2.11303	272	2.11302	272	(2)334.78	2.11		30
30	2.41406	274	9.99999	0	2.11577	274	2.11576	274	(2)332.68	2.10		20
40	2.41680	275	9.99999	0	2.11853	276	2.11852	274	(2)330.57	2.11		10
50	2.41955	278	9.99999	0	2.12130	277	2.12129	277	(2)328.46	2.11	<b>26'</b>	50
<b>34'</b>	2.42233	279	9.99999	0	2.12410	280	2.12409	280	(2)326.36	2.10		50
10	2.42512	281	9.99999	0	2.12691	281	2.12690	281	(2)324.25	2.11		40
20	2.42793	283	9.99999	0	2.12974	283	2.12973	283	(2)322.15	2.10		30
30	2.43076	285	9.99999	0	2.13259	285	2.13257	284	(2)320.04	2.11		20
40	2.43361	287	9.99999	0	2.13545	286	2.13544	287	(2)317.94	2.10		10
50	2.43648	288	9.99999	0	2.13834	289	2.13833	289	(2)315.83	2.11	<b>25'</b>	50
<b>35'</b>	2.43936	291	9.99999	0	2.14124	290	2.14123	290	(2)313.73	2.10		50
10	2.44227	292	9.99999	0	2.14417	293	2.14416	293	(2)311.62	2.11		40
20	2.44519	295	9.99999	0	2.14711	294	2.14710	294	(2)309.51	2.10		30
30	2.44814	296	9.99999	0	2.15008	297	2.15007	297	(2)307.41	2.10		20
40	2.45110	299	9.99999	0	2.15306	298	2.15305	298	(2)305.30	2.11		10
50	2.45409	300	9.99999	0	2.15607	301	2.15606	301	(2)303.20	2.10	<b>24'</b>	50
<b>36'</b>	2.45709	303	9.99999	0	2.15909	302	2.15908	302	(2)301.09	2.10		50
10	2.46012	305	9.99999	0	2.16214	305	2.16213	305	(2)298.99	2.10		40
20	2.46317	306	9.99999	0	2.16521	307	2.16520	307	(2)296.88	2.11		30
30	2.46623	310	9.99999	0	2.16830	309	2.16829	309	(2)294.77	2.10		20
40	2.46933	311	9.99999	0	2.17141	311	2.17140	311	(2)292.67	2.11		10
50	2.47244	313	9.99999	0	2.17455	314	2.17454	314	(2)290.56	2.10	<b>23'</b>	50
<b>37'</b>	2.47557	316	9.99999	0	2.17771	316	2.17770	316	(2)288.46	2.10		50
10	2.47873	318	9.99999	0	2.18089	318	2.18088	318	(2)286.35	2.11		40
20	2.48191	321	9.99999	0	2.18409	320	2.18409	320	(2)284.25	2.10		30
30	2.48512	323	9.99999	0	2.18732	323	2.18731	322	(2)282.14	2.11		20
40	2.48835	325	9.99999	0	2.19058	326	2.19057	326	(2)280.04	2.10		10
50	2.49160	328	9.99999	0	2.19385	327	2.19385	328	(2)277.93	2.11	<b>22'</b>	50
<b>38'</b>	2.49488	330	9.99999	0	2.19716	331	2.19715	330	(2)275.82	2.10		50
10	2.49818	333	9.99999	0	2.20048	332	2.20048	333	(2)273.72	2.10		40
20	2.50151	335	9.99999	0	2.20384	336	2.20383	335	(2)271.61	2.11		30
30	2.50486	338	9.99999	0	2.20722	338	2.20721	338	(2)269.51	2.10		20
40	2.50824	341	9.99999	0	2.21062	340	2.21062	341	(2)267.40	2.11		10
50	2.51163	343	9.99999	0	2.21406	344	2.21405	343	(2)265.30	2.10	<b>21'</b>	50
<b>39'</b>	2.51508	346	9.99999	0	2.21752	346	2.21751	346	(2)263.19	2.10		50
10	2.51854	349	9.99999	0	2.22101	349	2.22100	349	(2)261.09	2.10		40
20	2.52203	352	9.99999	0	2.22452	351	2.22451	351	(2)258.98	2.11		30
30	2.52555	354	9.99999	0	2.22807	355	2.22806	355	(2)256.87	2.10		20
40	2.52909	358	9.99999	0	2.23164	357	2.23163	357	(2)254.77	2.10		10
50	2.53267	360	9.99999	0	2.23525	361	2.23524	361	(2)252.66	2.11	<b>20'</b>	50



$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>10'</b>	2.53627	364	9.99999	0	2.23525	363	2.23524	363	(2)252.66		<b>20'</b>
10	2.53991	366	9.99999	0	2.23888	367	2.23887	367	(2)250.56		50
20	2.54357	370	9.99999	0	2.24255	369	2.24254	369	(2)248.45		40
30	2.54737	373	9.99999	0	2.24624	373	2.24623	373	(2)246.35		30
40	2.55100	376	9.99999	0	2.24997	376	2.24996	376	(2)244.24		20
50	2.55476	379	9.99999	0	2.25373	379	2.25372	380	(2)242.14		10
<b>11'</b>	2.55855	383	9.99999	0	2.25752	383	2.25752	382	(2)240.03		<b>19'</b>
10	2.56238	386	9.99999	0	2.26135	386	2.26134	386	(2)237.92		50
20	2.56624	389	9.99999	0	2.26521	399	2.26520	390	(2)235.82		40
30	2.57013	393	9.99999	0	2.26910	393	2.26910	393	(2)233.71		30
40	2.57406	397	9.99999	0	2.27303	397	2.27303	396	(2)231.61		20
50	2.57803	400	9.99999	0	2.27700	400	2.27699	401	(2)229.50		10
<b>12'</b>	2.58203	404	9.99999	0	2.28100	404	2.28100	404	(2)227.40		<b>18'</b>
10	2.58607	408	9.99999	0	2.28504	408	2.28504	408	(2)225.29		50
20	2.59015	411	9.99999	0	2.28912	412	2.28912	411	(2)223.19		40
30	2.59426	416	9.99999	0	2.29324	415	2.29323	416	(2)221.08		30
40	2.59842	420	9.99999	0	2.29739	420	2.29739	419	(2)218.97		20
50	2.60262	423	9.99999	0	2.30159	424	2.30158	424	(2)216.87		10
<b>13'</b>	2.60685	428	9.99999	0	2.30583	428	2.30582	428	(2)214.76		<b>17'</b>
10	2.61113	432	9.99999	0	2.31011	432	2.31010	432	(2)212.66		50
20	2.61545	437	9.99999	0	2.31443	436	2.31442	437	(2)210.55		40
30	2.61982	441	9.99999	1	2.31879	441	2.31879	441	(2)208.45		30
40	2.62423	445	0.00000	0	2.32320	445	2.32320	445	(2)206.34		20
50	2.62868	450	0.00000	0	2.32765	451	2.32765	450	(2)204.24		10
<b>14'</b>	2.63318	455	0.00000	0	2.33216	454	2.33215	455	(2)202.13		<b>16'</b>
10	2.63773	460	0.00000	0	2.33670	460	2.33670	459	(2)200.03		50
20	2.64233	464	0.00000	0	2.34130	464	2.34129	465	(2)197.92		40
30	2.64697	470	0.00000	0	2.34594	470	2.34594	469	(2)195.81		30
40	2.65167	474	0.00000	0	2.35064	475	2.35063	475	(2)193.71		20
50	2.65641	480	0.00000	0	2.35539	479	2.35538	480	(2)191.60		10
<b>15'</b>	2.66121	485	0.00000	0	2.36018	486	2.36018	485	(2)189.50		<b>15'</b>
10	2.66606	491	0.00000	0	2.36504	490	2.36503	491	(2)187.39		50
20	2.67097	497	0.00000	0	2.36994	497	2.36994	496	(2)185.29		40
30	2.67594	502	0.00000	0	2.37491	502	2.37490	502	(2)183.18		30
40	2.68096	508	0.00000	0	2.37993	508	2.37992	508	(2)181.08		20
50	2.68604	514	0.00000	0	2.38501	514	2.38500	514	(2)178.97		10
<b>16'</b>	2.69118	520	0.00000	0	2.39015	520	2.39014	520	(2)176.86		<b>14'</b>
10	2.69638	526	0.00000	0	2.39535	526	2.39534	527	(2)174.76		50
20	2.70164	533	0.00000	0	2.40061	533	2.40061	533	(2)172.65		40
30	2.70697	539	0.00000	0	2.40594	540	2.40594	539	(2)170.55		30
40	2.71236	547	0.00000	0	2.41134	546	2.41133	547	(2)168.44		20
50	2.71783	553	0.00000	0	2.41680	553	2.41680	553	(2)166.34		10
<b>17'</b>	2.72336	560	0.00000	0	2.42233	561	2.42233	560	(2)164.23		<b>13'</b>
10	2.72896	568	0.00000	0	2.42794	567	2.42793	568	(2)162.13		50
20	2.73464	575	0.00000	0	2.43361	575	2.43361	575	(2)160.02		40
30	2.74039	583	0.00000	0	2.43936	583	2.43936	583	(2)157.91		30
40	2.74622	591	0.00000	0	2.44519	591	2.44519	591	(2)155.81		20
50	2.75213	599	0.00000	0	2.45110	599	2.45110	599	(2)153.70		10
<b>18'</b>	2.75812	608	0.00000	0	2.45709	608	2.45709	608	(2)151.60		<b>12'</b>
10	2.76420	616	0.00000	0	2.46317	616	2.46317	616	(2)149.49		50
20	2.77036	625	0.00000	0	2.46933	625	2.46933	624	(2)147.39		40
30	2.77661	634	0.00000	0	2.47558	634	2.47557	634	(2)145.28		30
40	2.78295	643	0.00000	0	2.48192	643	2.48191	644	(2)143.18		20
50	2.78938	653	0.00000	0	2.48835	653	2.48835	653	(2)141.07		10
<b>19'</b>	2.79591	663	0.00000	0	2.49488	663	2.49488	663	(2)138.96		<b>11'</b>
10	2.80254	673	0.00000	0	2.50151	674	2.50151	673	(2)136.86		50
20	2.80927	684	0.00000	0	2.50825	684	2.50824	684	(2)134.75		40
30	2.81611	695	0.00000	0	2.51509	694	2.51508	695	(2)132.65		30
40	2.82306	706	0.00000	0	2.52203	707	2.52203	706	(2)130.54		20
50	2.83012	718	0.00000	0	2.52910	717	2.52909	718	(2)128.44		10
<b>50'</b>	2.83730		0.00000	0	2.53627		2.53627		(2)126.33		<b>10'</b>

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff.  $z'$  Diff.  $\omega$   
log Sec z l. Cotg z l. Cosec z

$\omega$	$z'$	Diff.	log Tg z log sin $\omega$	Diff.	log Cos z log sec $\omega$	Diff.	log Sin z log tg $\omega$	Diff.			
<b>50'</b>	2.83730	730	0.00000	0	2.53627	730	2.53627	730	(2)126.33		<b>10'</b>
10	2.84460	743	0.00000	0	2.54357	743	2.54357	743	(2)124.23	2.10	50
20	2.85203	755	0.00000	0	2.55100	755	2.55100	755	(2)122.12	2.11	40
30	2.85958	769	0.00000	0	2.55855	769	2.55855	769	(2)120.01	2.10	30
40	2.86727	782	0.00000	0	2.56624	782	2.56624	782	(2)117.91	2.11	20
50	2.87509	797	0.00000	0	2.57406	797	2.57406	797	(2)115.80	2.10	10
<b>51'</b>	2.88306	812	0.00000	0	2.58203	812	2.58203	812	(2)113.70	2.11	<b>9'</b>
10	2.89118	827	0.00000	0	2.59015	827	2.59015	827	(2)111.59	2.10	50
20	2.89945	843	0.00000	0	2.59842	843	2.59842	843	(2)109.49	2.11	40
30	2.90788	860	0.00000	0	2.60686	860	2.60686	860	(2)107.38	2.10	30
40	2.91648	878	0.00000	0	2.61546	877	2.61546	878	(2)105.28	2.11	20
50	2.92526	895	0.00000	0	2.62423	895	2.62423	895	(2)103.17	2.10	10
<b>52'</b>	2.93421	915	0.00000	0	2.63318	915	2.63318	915	(2)101.07	2.11	<b>8'</b>
10	2.94336	934	0.00000	0	2.64233	934	2.64233	934	(3)98.959	2.105	50
20	2.95270	954	0.00000	0	2.65167	954	2.65167	954	(3)96.854	2.106	40
30	2.96224	976	0.00000	0	2.66121	976	2.66121	976	(3)94.748	2.105	30
40	2.97200	999	0.00000	0	2.67097	999	2.67097	999	(3)92.643	2.106	20
50	2.98199	1022	0.00000	0	2.68096	1022	2.68096	1022	(3)90.537	2.105	10
<b>53'</b>	2.99221	1046	0.00000	0	2.69118	1046	2.69118	1046	(3)88.432	2.106	<b>7'</b>
10	3.00267	1073	0.00000	0	2.70164	1073	2.70164	1072	(3)86.326	2.105	50
20	3.01340	1099	0.00000	0	2.71237	1099	2.71236	1100	(3)84.221	2.106	40
30	3.02439	1128	0.00000	0	2.72336	1128	2.72336	1128	(3)82.115	2.105	30
40	3.03567	1158	0.00000	0	2.73464	1158	2.73464	1158	(3)80.010	2.106	20
50	3.04725	1190	0.00000	0	2.74622	1190	2.74622	1190	(3)77.904	2.105	10
<b>54'</b>	3.05915	1224	0.00000	0	2.75812	1224	2.75812	1224	(3)75.799	2.106	<b>6'</b>
10	3.07139	1259	0.00000	0	2.77036	1259	2.77036	1259	(3)73.693	2.105	50
20	3.08398	1296	0.00000	0	2.78295	1296	2.78295	1296	(3)71.588	2.106	40
30	3.09694	1337	0.00000	0	2.79591	1337	2.79591	1336	(3)69.482	2.105	30
40	3.11031	1378	0.00000	0	2.80928	1378	2.80927	1379	(3)67.377	2.106	20
50	3.12409	1424	0.00000	0	2.82306	1424	2.82306	1424	(3)65.271	2.105	10
<b>55'</b>	3.13833	1473	0.00000	0	2.83730	1473	2.83730	1473	(3)63.166	2.106	<b>5'</b>
10	3.15306	1524	0.00000	0	2.85203	1524	2.85203	1524	(3)61.060	2.105	50
20	3.16830	1579	0.00000	0	2.86727	1579	2.86727	1579	(3)58.955	2.106	40
30	3.18409	1639	0.00000	0	2.88306	1639	2.88306	1639	(3)56.849	2.105	30
40	3.20048	1704	0.00000	0	2.89945	1704	2.89945	1703	(3)54.744	2.106	20
50	3.21752	1772	0.00000	0	2.91649	1772	2.91648	1773	(3)52.638	2.106	10
<b>56'</b>	3.23524	1849	0.00000	0	2.93421	1849	2.93421	1849	(3)50.532	2.105	<b>4'</b>
10	3.25373	1930	0.00000	0	2.95270	1930	2.95570	1930	(3)48.427	2.106	50
20	3.27303	2021	0.00000	0	2.97200	2021	2.97200	2021	(3)46.321	2.105	40
30	3.29324	2119	0.00000	0	2.99221	2119	2.99221	2119	(3)44.216	2.106	30
40	3.31443	2227	0.00000	0	3.01340	2227	3.01340	2227	(3)42.110	2.105	20
50	3.33670	2348	0.00000	0	3.03567	2348	3.03567	2348	(3)40.005	2.106	10
<b>57'</b>	3.36018	2483	0.00000	0	3.05915	2483	3.05915	2483	(3)37.899	2.105	<b>3'</b>
10	3.38501	2633	0.00000	0	3.08398	2633	3.08398	2633	(3)35.794	2.106	50
20	3.41134	2802	0.00000	0	3.11031	2802	3.11031	2802	(3)33.688	2.105	40
30	3.43936	2997	0.00000	0	3.13833	2997	3.13833	2997	(3)31.583	2.106	30
40	3.46933	3218	0.00000	0	3.16830	3218	3.16830	3218	(3)29.477	2.105	20
50	3.50151	3476	0.00000	0	3.20048	3476	3.20048	3476	(3)27.372	2.106	10
<b>58'</b>	3.53627	3779	0.00000	0	3.23524	3779	3.23524	3779	(3)25.266	2.105	<b>2'</b>
10	3.57406	4140	0.00000	0	3.27303	4140	3.27303	4140	(3)23.161	2.106	50
20	3.61546	4575	0.00000	0	3.31443	4575	3.31443	4575	(3)21.055	2.105	40
30	3.66121	5116	0.00000	0	3.36018	5116	3.36018	5116	(3)18.950	2.106	30
40	3.71237	5799	0.00000	0	3.41134	5799	3.41134	5799	(3)16.844	2.105	20
50	3.77036	6694	0.00000	0	3.46933	6694	3.46933	6694	(3)14.739	2.106	10
<b>59'</b>	3.83730	7919	0.00000	0	3.53627	7919	3.53627	7919	(3)12.633	2.105	<b>1'</b>
10	3.91649	9691	0.00000	0	3.61546	9691	3.61546	9691	(3)10.528	2.106	50
20	4.01340	12493	0.00000	0	3.71237	12493	3.71237	12493	(4)8.4221	2.1055	40
30	4.13833	17610	0.00000	0	3.83730	17610	3.83730	17610	(4)6.3166	2.1056	30
40	4.31443	30103	0.00000	0	4.01340	30103	4.01340	30103	(4)4.2110	2.1056	20
50	4.61546		0.00000	0	4.31443		4.31443		(4)2.1055	2.1055	10
<b>60'</b>	∞		0.00000	0	∞		∞				<b>0'</b>

log cos  $\omega$  Diff. l. cosec  $\omega$  Diff. log cotg  $\omega$  Diff.  $z'$  Diff.  $\omega$   
 log Sec z l. Cotg z l. Cosec z



# Skizze

zur

## Vergleichung zwischen den Gudermanschen und den vorliegenden Tafeln.



$\omega$	k = z	log. Tg. z log. sin $\omega$	Diff.	log. Cos z log. sec $\omega$	Diff.	log. Sin. z log. tg. $\omega$	Diff.		
3' 21",8	0.001	6.99690	30410	(6)2	6	6.99690	30410	7.60804	89° 56' 35",2
6' 52",5	0.002	7.30100		(6)9		7.30100		6.90759	89° 53' 7",5
34' 22",6	0.01	7.99998	30099	(4)2	6	8.00000	30106	5.29833	89° 25' 37",4
1° 8' 45",	0.02	8.30097		(4)9		8.30106		4.60521	88° 51' 15",
8° 16' 44",1	0.145	9.15834	294	(2)455	6	9.16289	300	2.62592	81° 43' 15",9
8° 20' 8",2	0.146	9.16128		(2)461		9.16589		2.61907	81° 39' 51",8
14° 30' 36",3	0.256	9.39889	163	(1)1408	11	9.41297	173		
14° 33' 55",9	0.257	9.40052		(1)1419		9.41470			
21° 9' 35",1	0.378	9.55747	104	(1)3031	16	9.58778	120		
21° 12' 47",	0.379	9.55851		(1)3047		9.58898			
69° 23' 43",4	1.705	9.97129	6	0.45356	41	0.42485	46		
69° 24' 55",9	1.706	9.97135		0.45397		0.42531			
74° 34' 12",4	1.999	9.98406		0.57502		0.55908	0.27262	15° 25' 47",6	
74° 35' 7",3	2.000	9.98409	3	0.57544	42	0.55953	45	0.27234	15° 24' 52",7
74° 36' 2",1	2.001	9.98412		0.57586		0.55998		0.27207	15° 23' 57",9
75° 25' 48",0	2.057	9.98580	3	0.59935	42	0.58516	45	0.257	14° 33' 55",9
75° 26' 40",2	2.058	9.98583		0.59977		0.58561			
75° 27' 32",2	2.059	9.98586	3	0.60019	42	0.58606	45		
75° 28' 23",0	2.060	9.98589	3	0.60061	42	0.58650	44		
75° 29' 15",1	2.061	9.98592	3	0.60104	43	0.58695	45	0.256	14° 30' 36",3
75° 30' 6",7	2.062	9.98595	3	0.60146	42	0.58740	45		
81° 39' 49",7	2.619	9.99539	1	0.83869	43	0.83407	44	0.146	8° 20' 8",2
81° 40' 19",3	2.620	9.99540		0.83912		0.83451			
81° 42' 48",7	2.625	9.99544	1	0.84127	43	0.83671	44	0.145	8° 16' 44",1
81° 43' 18",3	2.626	9.99545		0.84170		0.83715			
88° 51' 15",	4.60521	9.99991	7	1.69903	30099	1.69894	30106	0.02	1° 8' 45",
89° 25' 37",4	5.29833	9.99998		2.00002		2.00000		2.00000	0.01
89° 53' 7",5	6.90759	0.00000	0	2.69900	30410	2.69900	30410	0.002	0° 6' 52",5
89° 56' 35",2	7.60804	0.00000		3.00310		3.00310		3.00310	0.001
		log cos $\omega$ log Sec z	Diff.	l. cosec $\omega$ log Cotg z	Diff.	l. cotg $\omega$ l. Cosec z	Diff.	k = z	$\omega$

### Druckfehler.

Pag. 58 statt z' = 0,60750 lies 0,60350.  
 „ „ „ z' = 0,60723 „ 0,60323.  
 „ 128 „ z' = 1,49472 „ 1,49473.

