

FÜNFSTELLIGE
LOGARITHMEN-TAFELN
VON MOČNIK-REIDINGER

FÜNFSTELLIGE
LOGARITHMEN-TAFELN

ZUM

SCHULGEBRAUCHE

VON

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DRITTE AUFLAGE

DURCHGESEHEN VON

PROF. JOH. REIDINGER.

PREIS, GEBUNDEN, 2 K.

20
K 2'20 +

WIEN
F. TEMPSKY



LEIPZIG
G. FREYTAG, G. M. B. H.

1916.

d I 735289

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201601017

Einrichtung und Gebrauch der Tafeln I und II.

Tafel I.

Diese Tafel enthält die gemeinen oder Briggs'schen Logarithmen der Zahlen von 1 bis 11009.

Im allgemeinen ist jeder gemeine Logarithmus einer Zahl ein Dezimalbruch, dessen Ganze man die Charakteristik und dessen Dezimalziffern man die Mantisse nennt. Die Charakteristik des gemeinen Logarithmus einer Zahl ist gleich dem Rangexponenten der höchsten geltenden Ziffer dieser Zahl, wobei die zugehörige Mantisse immer positiv ist. Die Mantisse eines gemeinen Logarithmus hängt bloß von der Ziffernfolge der gegebenen Zahl ohne Rücksicht auf deren Rang ab, so daß alle Zahlen, welche sich nur in der Stellung des Dezimalpunktes unterscheiden, dieselbe Mantisse haben.

Die erste Abteilung der Tafel I (Seite 1) enthält die gemeinen Logarithmen (Charakteristik und Mantisse) der Zahlen von 1 bis 100 mit fünf Dezimalstellen.

Die zweite Abteilung von Seite 2 bis Seite 19 enthält die fünfstelligen Mantissen der gemeinen Logarithmen aller vierziffrigen Zahlen; die leicht zu bestimmende Charakteristik ist durchgängig weggelassen. In der ersten oben und unten mit N (Numerus) bezeichneten Spalte findet man der Ordnung nach die ersten drei Ziffern aller Zahlen; die vierte Ziffer einer solchen Zahl steht in der obersten oder untersten mit 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 bezeichneten Zeile.

Die einer vierziffrigen Zahl zugehörige Mantisse steht mit ihren letzten drei Dezimalen in der Zeile, in welcher sich die ersten drei Ziffern der Zahl befinden und zwar in derjenigen Spalte, welche oben und unten die vierte Ziffer als Aufschrift hat; die ersten zwei Dezimalen der Mantisse, welche für mehrere aufeinanderfolgende Logarithmen gleich bleiben, sind nur in der mit 0 bezeichneten Spalte angeführt und gehören zu allen neben und unter ihnen stehenden dreistelligen Mantissenteilen wie auch zu den vor der ersten Ziffer mit einem Sternchen versehenen Mantissenteilchen der nächst vorhergehenden Zeile.

Zur Bestimmung der Mantissen fünf- oder sechsziffriger Zahlen enthält diese Abteilung der Tafel auf jeder Seite rechts mehrere Hilfstäfelchen, in denen jede Spalte die Differenz zweier unmittelbar

aufeinanderfolgender Tafelmantissen als Überschrift hat. Die unter dieser Differenz stehenden Zahlen sind die entsprechenden Proportionalteile für die links im Eingange der Tafelchen befindlichen Ziffern 1, 2, 3, 4, 5, 6, 7, 8, 9, wenn diese die fünfte Ziffer der gegebenen Zahl bedeuten. Der zehnte Teil dieser Proportionalteile gibt die bezüglichen Proportionalteile für die sechste Ziffer einer Zahl.

Z. B. Für die Differenz **26** (Seite 3) gehören

zu 6 als 5te Ziffer der Zahl ... die Proportionalteile 15·6,
 „ 9 „ 6te „ „ „ ... „ „ 2·3;

umgekehrt gehört für dieselbe Differenz **26**

zu den Proportionalteilen 13 ... 5 als 5te Ziffer der Zahl,
 „ „ „ 1·9 ... 7 „ 6te „ „ „ „
 zu den Proportionalteilen 12

und zwar zu 10·4...4 als 5te Ziffer der Zahl,
 zu dem Reste 1·6...6 „ 6te „ „ „ .

Außerdem befindet sich am Fuße jeder Seite ein Hilfstäfelchen zur Verwandlung der Sekunden in Grade und Minuten; davon wird bei den Logarithmen der Winkelfunktionen Gebrauch gemacht werden.

Die dritte Abteilung (Seite 20 und Seite 21) enthält die Mantissen der fünfziffrigen Zahlen von 10000 bis 11009. Die Einrichtung ist dieselbe wie die der zweiten Abteilung; nur sind die Zahlen unter N vierziffrig und die Mantissen sechsstellig.

Im Anhang (Seite 22) sind einige bei logarithmischen Rechnungen häufig vorkommende Konstanten zusammengestellt; ihre Bedeutung ist aus dem Texte selbst genügend zu ersehen.

I. Zu einer gegebenen Zahl den zugehörigen gemeinen Logarithmus zu finden.

1. Die Logarithmen ein- und zweiziffriger Zahlen stehen auf Seite 1.

2. Enthält die Zahl drei Ziffern, so sucht man dieselbe von Seite 2 bis Seite 19 in der mit N bezeichneten Spalte auf; die Mantisse ihres Logarithmus steht daneben in der mit 0 bezeichneten Spalte. Findet man hier nur die letzten drei Mantissenziffern, so entnimmt man die ersten zwei etwas weiter oben aus derselben Spalte. Der so gefundenen Mantisse wird noch die entsprechende Charakteristik beigefügt. So findet man z. B. (Seite 5)

$$\log 257 = 2\cdot40\ 993 \quad | \quad \log 0\cdot293 = 0\cdot46\ 687 - 1.$$

3. Ist die gegebene Zahl vierziffrig, so sucht man die ersten drei Ziffern in der mit N bezeichneten Spalte auf und geht von da in derselben Zeile in die Spalte, welche oben und unten die vierte Ziffer als Aufschrift hat; hier findet man die letzten drei Mantissenziffern. Die ersten zwei Ziffern stehen in der mit 0 bezeichneten Spalte und zwar in derselben Zeile oder etwas weiter oben oder auch, wenn sich vor der ersten der drei Mantissenziffern ein Sternchen befindet, in der nächstfolgenden Zeile. Endlich wird noch die Charakteristik beigefügt. So findet man z. B. (Seite 10)

$$\begin{array}{l|l} \log 5134 = 3.71\ 046 & \log 0.5375 = 0.73\ 038-1 \\ \log 528.9 = 2.72\ 337 & \log 0.05497 = 0.74\ 013-2. \end{array}$$

4. Enthält die gegebene Zahl fünf oder sechs Ziffern, so entnehme man aus der Tafel nach 3. zu den ersten vier Ziffern die zugehörige Mantisse und bestimme die Differenz zwischen dieser und der nächst größeren Tafelmantisse (Tafeldifferenz). Dann suche man aus den Hilfstäfelchen unter der erhaltenen Tafeldifferenz die Proportionalteile für die 5te und 6te Ziffer der gegebenen Zahl und addiere sie zu der bereits gefundenen Mantisse. Endlich wird noch die entsprechende Charakteristik beigefügt.

Liegen die ersten fünf Ziffern zwischen 10000 und 11009, so bestimmt man den Logarithmus rascher und genauer aus den sechsstelligen Mantissen der dritten Abteilung (Seite 20 und Seite 21); das Verfahren ist dem früheren analog.

Beispiele:

| | |
|--|--|
| <p>1) $\log 21587 = 4.33\ 405$ (S. 4) Diff. 20 714 <u> </u> 4.33 419</p> | <p>3) $\log 0.724\ 638 = 0.86\ 010$ (S. 14) Diff. 6 318 805 <u> </u> 0.86 012-1</p> |
| <p>2) $\log 47.4735 = 1.67\ 642$ (S. 9) Diff. 9 327 505 <u> </u> 1.67 645</p> | <p>4) $\log 1.04\ 989 = 0.021\ 107$ (S. 20) Diff. 41 9369 <u> </u> 0.021 144.</p> |

II. Zu einem gegebenen Logarithmus die zugehörige Zahl zu finden.

1. Man suche in der Abteilung von Seite 2 bis Seite 19 in der mit 0 bezeichneten Spalte die ersten zwei Mantissenziffern, die letzten Mantissenziffern aber in derselben oder in einer der nächst folgenden Zeilen oder auch an den mit einem Sternchen bezeichneten Stellen der nächst vorhergehenden Zeile.

Sind die letzten Mantissenziffern in der Tafel genau enthalten, so entnehme man die ersten drei Ziffern der gesuchten Zahl aus der mit N bezeichneten Spalte in jener Zeile, in welcher die letzten Mantissenziffern gefunden wurden, die vierte Ziffer aber aus der obersten oder untersten Zeile in der Spalte, in welcher jene Mantissenziffern stehen. Dann wird in der gefundenen Ziffernreihe aus der Charakteristik des gegebenen Logarithmus und dem sich daraus ergebenden Rangexponenten der höchsten Ziffer der gesuchten Zahl noch die Stellung des Dezimalpunktes bestimmt. Z. B.

$$\log x = 2.91\,046, \quad x = 813.7 \quad | \quad \log y = 0.90\,811 - 2, \quad y = 0.08\,093$$

$$\log z = 0.90\,026, \quad z = 7.948.$$

2. Ist die gegebene Mantisse in der Tafel nicht genau enthalten, so suche man die nächst kleinere Mantisse, welche in der Tafel steht, und bestimme nach 1. die ihr zugehörige vierziffrige Zahl; diese gibt die ersten vier Ziffern der gegebenen Zahl. Sodann suche man sowohl die Differenz der beiden Tafelmantissen, zwischen denen die gegebene Mantisse liegt, als auch den Unterschied zwischen der gegebenen und der aus der Tafel entnommenen nächst kleineren Mantisse und bestimme aus den Hilfstäfelchen zu den Proportionalteilen, welche der letztere Unterschied angibt, für die erhaltene Tafeldifferenz die entsprechende fünfte und sechste Ziffer. In der so gefundenen Ziffernreihe wird endlich aus der gegebenen Charakteristik noch die Stellung des Dezimalpunktes bestimmt.

In dem besonderen Falle, wo die ersten drei Mantissenziffern zwischen 000 und 037 liegen, ist es vorteilhafter, die dritte Abteilung (Seite 20 und Seite 21) zu benützen, weil man dort ohne Proportionalteile sogleich fünf Ziffern der Zahl ablesen kann.

Beispiele:

$$1) \log x = 2.50\,721$$

| | |
|----------|-------------------|
| | 718...3215 (S. 6) |
| Diff. 14 | <u>3</u> |
| | 28.....2 |
| | <u>2.....1</u> |
| | x = 321.521 |

$$2) \log y = 1.81\,254$$

| | |
|---------|-------------------|
| | 251..6494 (S. 12) |
| Diff. 7 | <u>3</u> |
| | 28.....4 |
| | <u>2.....3</u> |
| | y = 64.9443 |

$$3) \log a = 0.28\,224 - 1$$

| | |
|----------|-------------------|
| | 217...1915 (S. 3) |
| Diff. 23 | <u>7.....3</u> |
| | a = 0.19153 |

$$4) \log b = 0.032\,359$$

| | |
|----------|-------------------|
| | 337.10773 (S. 21) |
| Diff. 40 | <u>22</u> |
| | 20.....5 |
| | <u>2.....5</u> |
| | b = 1.077355. |

Tafel II.

Diese Tafel enthält die gemeinen Logarithmen der Winkelfunktionen von 0° bis 90° von Minute zu Minute mit fünf Dezimalstellen.

Alle diese Logarithmen sind auf die Charakteristik -10 reduziert, welche jedoch, damit Raum erspart werde, in der Tafel weggelassen ist; jedem aus der Tafel gefundenen Logarithmus ist daher noch die Charakteristik -10 beizufügen.

Von 0° bis 45° stehen die Grade, in natürlicher Folge vorwärts schreitend, oben und die Minuten links im Eingange; für diese gilt der obere Tabellenkopf. Von 45° bis 90° stehen die Grade, in natürlicher Folge rückwärts schreitend, unten und die Minuten rechts im Eingange; für diese gilt der untere Tabellenkopf.

Zur Bestimmung der Logarithmen der Funktionen von Winkeln, welche außer den Graden und Minuten auch Sekunden enthalten, sind für jeden Grad rechts von der Haupttafel besondere Hilfstäfelchen angebracht, nach deren verschiedener Einrichtung die Tafel II. in zwei Abteilungen zerfällt.

Die erste Abteilung (Seite 25 bis Seite 27) erstreckt sich auf die Winkel von 0° bis 3° und von 90° bis 87° .

Bezeichnet x'' den in Sekunden ausgedrückten Winkel x und führt man für Winkel, welche zwischen 0° und 3° liegen, die goniometrischen Hilfszahlen

$$s(x) = \log \frac{\sin x}{x''} = \log \sin x - \log x'' \text{ und}$$

$$t(x) = \log \frac{\text{tang } x}{x''} = \log \text{tang } x - \log x''$$

ein, so ist

$$\begin{array}{l|l} \log \sin x = s(x) + \log x'' \dots 1) & \log \text{tang } x = t(x) + \log x'' \dots 2) \\ \log x'' = \log \sin x - s(x) \dots 3) & \log x'' = \log \text{tang } x - t(x) \dots 4). \end{array}$$

Zur Verwandlung der in Graden und Minuten gegebenen Winkel von 0° bis 3° in Sekunden dient die Hilfsspalte links vor der Haupttafel. Die Hilfszahlen $s(x)$ und $t(x)$ stehen in der mittleren Spalte der rechts von der Haupttafel angebrachten Hilfstafeln; sie sind wie die Logarithmen der Winkelfunktionen noch durch Anfügung der Charakteristik -10 zu ergänzen. Die erste Spalte dieser Hilfstafeln enthält die Winkel, zwischen denen sich die ersten fünf Dezimalen der Hilfszahl $s(x)$, bezüglich $t(x)$ nicht ändern, und die dritte Spalte die Logarithmen der zu diesen Winkeln gehörigen Sinus oder Tangenten. Jede Hilfszahl $s(x)$ oder $t(x)$ gehört daher zu allen Winkeln, welche zwischen den links oben und unten stehenden zwei Winkeln liegen,

sowie zu allen $\log \sin x$, bezüglich $\log \tan x$, welche zwischen den rechts oben und unten stehenden zwei Logarithmen liegen.

So gehört z. B. (Seite 25) zu allen Winkeln x'' zwischen $2409''$ und $3417''$ sowie zu allen $\log \sin x$ zwischen $8.06740-10$ und $8.21920-10$ die Hilfszahl $s(x) = 4.68556-10$. Ebenso gehört zu allen Winkeln x'' zwischen $1726''$ und $2432''$ sowie zu allen $\log \tan x$ zwischen $7.92263-10$ und $8.07156-10$ die Hilfszahl $t(x) = 4.68559-10$.

Als Gedächtnishilfe befinden sich am Kopfe der einzelnen Hilfstafeln die obigen Gleichungen.

In der zweiten Abteilung (von Seite 28 bis Seite 71), welche die Winkel von 3° bis 45° und von 45° bis 87° umfaßt, sind in den Hilfstäfelchen die Proportionalteile angegeben. Jede Spalte eines solchen Hilfstäfelchens hat als Überschrift die Differenz der unmittelbar aufeinanderfolgenden Logarithmen derselben Funktion von zwei in Graden und Minuten angegebenen Winkeln. Die unter dieser Differenz befindlichen Zahlen sind die entsprechenden Proportionalteile für die Sekunden und zwar die oberen fünf Zahlen bezüglich für 10, 20, 30, 40, 50 Sekunden, der zehnte Teil derselben für 1, 2, 3, 4, 5 Sekunden und die unteren vier Zahlen für 6, 7, 8, 9 Sekunden.

So gehören z. B. für die Tafeldifferenz 58 (Seite 39)

| | |
|--------------------------------------|--------------------------------------|
| zu $20''$.. die Proportionalt. 19.3 | zu $50''$.. die Proportionalt. 48.3 |
| " $8''$.. " " 7.7 | " $3''$.. " " 2.9 |
| zu $28''$.. die Proportionalt. 27.0 | zu $53''$.. die Proportionalt. 51.2 |

Umgekehrt gehören für dieselbe Tafeldifferenz 58

| | |
|-------------------------------|--------------------------|
| zu den Proportionalt. 29..30" | zu den Proportionalt. 41 |
| " " " 8.. 8" | und zwar zu $38.7..40''$ |
| | zu dem Reste $2.3.. 2''$ |
| | zusammen ..42". |

I. Zu einem gegebenen Winkel den zugehörigen gemeinen Logarithmus einer Funktion desselben zu finden.

1. Man suche die Grade des gegebenen Winkels und die Benennung der betreffenden Funktion in dem oberen oder unteren Tabellenkopfe auf, je nachdem der Winkel zwischen 0° und 45° oder zwischen 45° und 90° liegt, die Minuten aber im ersten Falle links, im zweiten rechts im Eingange.

Enthält der gegebene Winkel nur Grade und Minuten, so steht der gesuchte Logarithmus dort, wo die Spalte, welche die Be-

nennung der Funktion als Aufschrift hat, mit der Zeile, in welcher die Minuten gefunden wurden, zusammentrifft. So findet man z. B. (Seite 37)

$$\begin{array}{l|l} \log \sin 10^\circ 14' = 9.24958-10 & \log \tan 79^\circ 0' = 10.71135-10 \\ \log \cot 10^\circ 49' = 10.71883-10 & \log \cos 79^\circ 48' = 9.24818-10 \end{array}$$

2. Enthält der gegebene Winkel außer den Graden und Minuten auch Sekunden und liegt er zwischen 0° und 3° oder zwischen 90° und 87° , so verfähre man auf folgende Art:

a) Ist der Logarithmus des Sinus oder der Tangente eines Winkels x , welcher zwischen 0° und 3° liegt, zu bestimmen, so verwandle man mit Rücksicht auf die Gleichungen

$\log \sin x = s(x) + \log x''$ und $\log \tan x = t(x) + \log x''$
den Winkel x in Sekunden, deren Zahl x'' sei, suche aus der Hilfstafel die Hilfszahl $s(x)$ oder $t(x)$, welche zu dem gegebenen Winkel gehört, und addiere zu derselben den aus der Tafel I entnommenen Logarithmus von x'' .

Ist x'' fünfziffrig, so sucht man dessen Logarithmus in der dritten Abteilung, sonst in der zweiten Abteilung der Tafel I auf.

Beispiele:

$$\begin{array}{l|l} 1) \log \sin 0^\circ 36' 44'' = & 2) \log \tan 2^\circ 49' 35'' = \\ \quad s(2204) \dots 4.68557-10 & \quad t(10175) \dots 4.68593-10 \\ \quad \log 2204 \dots 3.34321 & \quad \log 10175 \dots 4.00753 \\ \quad \quad \quad = 8.02878-10 & \quad \quad \quad = 8.69346-10. \end{array}$$

b) Ist der Logarithmus der Kotangente von x , wo x zwischen 0° und 3° liegt, zu suchen, so bestimme man (nach a) $\log \tan x$ und setze $\log \cot x = -\log \tan x$.

c) Ist der Logarithmus des Kosinus, der Kotangente oder Tangente von x , wo x zwischen 90° und 87° liegt, zu suchen, so bestimme man den Komplementwinkel $90^\circ - x$, welcher zwischen 0° und 3° liegen muß, und suche (nach a oder b) bezüglich $\log \sin(90^\circ - x)$, $\log \tan(90^\circ - y)$ oder $\log \cot(90^\circ - x)$; dann ist

$$\begin{aligned} \log \cos x &= \log \sin(90^\circ - x), \quad \log \cot x = \log \tan(90^\circ - x), \\ \log \tan x &= \log \cot(90^\circ - x). \end{aligned}$$

$$\begin{array}{l} \text{Z. B. } \log \cos 87^\circ 57' 13'' = \log \sin 2^\circ 2' 47'' = \\ \quad \quad \quad \quad \quad \quad \quad s(7367) \dots 4.68548-10 \\ \quad \quad \quad \quad \quad \quad \quad \log 7367 \dots 3.86729 \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad = 8.55277-10. \end{array}$$

3. Enthält der gegebene Winkel außer den Graden und Minuten auch Sekunden und liegt er zwischen 3° und 45° oder

zwischen 45° und 87° , so bestimme man nach 1. für die Grade und Minuten den Logarithmus der verlangten Winkelfunktion aus der Tafel und berechne die Differenz der beiden Tafellogarithmen, zwischen denen der gesuchte Logarithmus liegt. Hierauf bestimme man aus den Hilfstäfelchen zu den Sekunden für die erhaltene Tafeldifferenz die entsprechenden Proportionalteile, welche zu dem bereits gefundenen Logarithmus addiert oder von demselben subtrahiert werden, je nachdem der Logarithmus einer Funktion oder Kofunktion zu suchen ist.

Beispiele:

$$\begin{array}{r}
 1) \log \sin 18^\circ 14' 54'' = \\
 18^\circ 14' \dots\dots 9 \cdot 49539 - 10 \\
 \text{Diff. } 38 \quad 50'' \dots\dots 317 \\
 \quad \quad 4'' \dots\dots 25 \\
 \hline
 = 9 \cdot 49573 - 10
 \end{array}$$

$$\begin{array}{r}
 2) \log \text{tang } 7^\circ 26' 21'' = \\
 7^\circ 26' \dots\dots 9 \cdot 11551 - 10 \\
 \text{Diff. } 98 \quad 20'' \dots\dots 327 \\
 \quad \quad 1'' \dots\dots 16 \\
 \hline
 = 9 \cdot 11585 - 10
 \end{array}$$

$$\begin{array}{r}
 3) \log \cos 63^\circ 1' 53'' = \\
 63^\circ 1' \dots\dots 9 \cdot 65680 - 10 \\
 \text{Diff. } 25 \quad 50'' \dots\dots 208 \\
 \quad \quad 3'' \dots\dots 13 \\
 \hline
 = 9 \cdot 65658 - 10
 \end{array}$$

$$\begin{array}{r}
 4) \log \cot 19^\circ 39' 29'' = \\
 19^\circ 39' \dots\dots 10 \cdot 44725 - 10 \\
 \text{Diff. } 40 \quad 20'' \dots\dots 133 \\
 \quad \quad 9'' \dots\dots 60 \\
 \hline
 = 10 \cdot 44706 - 10.
 \end{array}$$

II. Zu dem gegebenen gemeinen Logarithmus einer Winkelfunktion den zugehörigen Winkel zu finden.

1. Man suche den gegebenen Logarithmus in einer der Spalten auf, welche oben oder unten mit der Benennung der bezüglichen Winkelfunktion bezeichnet sind.

Kommt der gegebene Logarithmus in der Tafel genau vor, so stehen die Grade des Winkels in der Spalte dieses Logarithmus in dem oberen oder unteren Tabellenkopfe und die Minuten in der Zeile desselben links oder rechts, je nachdem sich die Benennung der Winkelfunktion oben oder unten befindet. Z. B.

$$\log \sin x = 9 \cdot 79494 - 10, x = 38^\circ 35' \quad | \quad \log \cot y = 9 \cdot 62221 - 10, y = 67^\circ 16'$$

2. Kommt der gegebene Logarithmus in der Tafel nicht genau vor und liegt er zwischen zwei Logarithmen der ersten Abteilung (S. 25 bis S. 27), so verfähre man auf folgende Art:

- a) Ist $\log \sin x$ oder $\log \text{tang } x$ gegeben und ergibt sich, daß x zwischen 0° und 3° liegt, so nehme man mit Rücksicht auf die Gleichungen $\log x'' = \log \sin x - s(x)$ und $\log x'' = \log \text{tang } x - t(x)$ aus der Hilfstafel bezüglich der Hilfszahl $s(x)$ oder $t(x)$, welche zu dem gegebenen Logarithmus gehört, und subtrahiere sie von

diesem. Zu dem Reste, welcher der Logarithmus des in Sekunden ausgedrückten Winkels ist, suche man aus der Tafel I. die zugehörige Zahl, welche Sekunden bedeutet, und verwandle diese mit Hilfe der dort am Fuße stehenden Verwandlungstafel in Grade und Minuten. Hat $\log x''$ die Charakteristik 4, ist also die zugehörige Zahl x'' fünfziffrig, so suche man dieselbe in der dritten Abteilung, sonst in der zweiten Abteilung der Tafel I. auf. Z. B.

| | |
|--|---|
| $1) \log \sin x = 7.98609 - 10$ $s(x) = 4.68557 - 10$ $\log x'' = 3.30052$ $x'' = 1997.6''$ $x = 0^\circ 33' 17.6''$ | $2) \log \tan x = 8.70523 - 10$ $t(x) = 4.68595$ $\log x'' = 4.01928$ $x'' = 10454''$ $x = 2^\circ 54' 14''.$ |
|--|---|

b) Ist $\log \cot x$ gegeben und liegt x zwischen 0° und 3° , so setze man $\log \tan x = -\log \cot x$ und bestimme aus $\log \tan x$ nach a) den Winkel x .

c) Ist $\log \cos x$, $\log \cot x$ oder $\log \tan x$ gegeben und ergibt sich, daß x zwischen 90° und 87° liegt, so setze man bezüglich

$$\log \sin (90^\circ - x) = \log \cos x, \quad \log \tan (90^\circ - x) = \log \cot x,$$

$$\log \cot (90^\circ - x) = \log \tan x,$$

wo $90^\circ - x$ zwischen 0° und 3° liegt, suche dann aus $\log \sin (90^\circ - x)$, $\log \tan (90^\circ - x)$ oder $\log \cot (90^\circ - x)$ nach a) oder b) den Winkel $(90^\circ - x)$ und zu diesem den Komplementwinkel x .

Z. B. Es sei $\log \cos x = 7.67945 - 10$, dann ist

$$\log \sin (90^\circ - x) = 7.67945 - 10$$

$$s(90^\circ - x) = 4.68557 - 10$$

$$\log (90^\circ - x)'' = 2.99388$$

$$(90^\circ - x)'' = 986''$$

$$90^\circ - x = 0^\circ 16' 26''$$

$$x = 89^\circ 43' 34''.$$

3. Kommt der gegebene Logarithmus in der Tafel nicht genau vor und liegt er zwischen zwei aufeinanderfolgenden Logarithmen der zweiten Abteilung (S. 28 bis S. 71), so nehme man den nächst kleineren Logarithmus, welcher in der Tafel steht, und bestimme nach 1. den ihm zugehörigen Winkel. Sodann suche man sowohl die Differenzen der beiden Tafellogarithmen, zwischen denen der gegebene Logarithmus liegt, als auch den Unterschied zwischen dem gegebenen und dem aus der Tafel entnommenen nächst kleineren Logarithmus, bestimme aus den Hilfstäfelchen zu den Proportionalteilen, welche der letztere Unterschied angibt, für die erhaltene Tafeldifferenz die ent-

sprechenden Sekunden, welche zu dem bereits gefundenen Winkel addiert oder von demselben subtrahiert werden, je nachdem der Logarithmus einer Funktion oder Kofunktion gegeben ist.

Beispiele:

1) $\log \sin x = 9.39793 - 10$

$$\begin{array}{r} \text{Diff. 49} \quad \underline{762 \dots 14^\circ 28'} \\ \quad \quad \quad 31 \\ \quad \quad \quad \underline{245 \dots \dots \dots 30''} \\ \quad \quad \quad \quad \quad \quad 65 \dots \dots \dots 8'' \\ \quad \quad \quad \quad \quad \quad \underline{\quad \quad \quad \quad \quad \quad} \\ \quad \quad \quad \quad \quad \quad x = 14^\circ 28' 38'' \end{array}$$

2) $\log \text{tang } y = 11.23745 - 10$

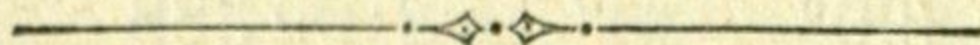
$$\begin{array}{r} \text{Diff. 219} \quad \underline{694 \dots 86^\circ 41'} \\ \quad \quad \quad 51 \\ \quad \quad \quad \underline{365 \dots \dots \dots 10''} \\ \quad \quad \quad \quad \quad \quad 145 \dots \dots \dots 4'' \\ \quad \quad \quad \quad \quad \quad \underline{\quad \quad \quad \quad \quad \quad} \\ \quad \quad \quad \quad \quad \quad y = 86^\circ 41' 14'' \end{array}$$

3) $\log \cos A = 9.77149 - 10$

$$\begin{array}{r} \text{Diff. 17} \quad \underline{147 \dots 53^\circ 47'} \\ \quad \quad \quad 2 \dots \dots \quad \quad \quad 7'' \\ \quad \quad \quad \underline{\quad \quad \quad \quad \quad \quad} \\ \quad \quad \quad \quad \quad \quad A = 53^\circ 46' 53'' \end{array}$$

4) $\log \cos B = 10.21740 - 10$

$$\begin{array}{r} \text{Diff. 28} \quad \underline{23 \dots 31^\circ 14'} \\ \quad \quad \quad 17 \\ \quad \quad \quad \underline{140 \dots \dots \dots 30''} \\ \quad \quad \quad \quad \quad \quad 30 \dots \dots \dots 6'' \\ \quad \quad \quad \quad \quad \quad \underline{\quad \quad \quad \quad \quad \quad} \\ \quad \quad \quad \quad \quad \quad B = 31^\circ 13' 24'' \end{array}$$



Vor dem Gebrauche sind folgende Berichtigungen vorzunehmen:

- Seite IX, Zeile 9 von unten lies $\log \operatorname{tang} (90^\circ - x)$,
,, XII, ,, 6 ,, ,, ,, $\log \cot B$.
,, 9, Spalte 1, Zeile 6 von unten lies 500.
,, 9, P. P., Zeile 16 von oben lies 5 (statt 6).
,, 14, Spalte 5, Zeile 14 von unten lies 058.
,, 18, ,, 11, ,, 12 ,, ,, ,, 539.
,, 21, ,, 1, ,, 16 ,, ,, ,, 1089.
,, 22, lies $\log \sqrt{\frac{4\pi}{3}} = 0.207363$.
,, 27, ,, $\log \operatorname{tang} x = t(x) + \log x''$.
,, 33, Spalte 6, Zeile 21 von oben lies 41.
,, 34, P. P., 3. und 6. Tafel lies 50.
,, 36, Spalte 5, Zeile 6 von oben lies 9.99454.
,, 39, ,, 3, ,, 23 ,, unten lies 9.35111.
,, 43, ,, 4, ,, 10 ,, oben lies 10.53870.
,, 44, P. P., letzte Tafel lies 30.
,, 46, Spalte 3, Zeile 2, 3 und 4 von unten lies 9.56...
,, 63, ,, 3, ,, 30 von unten lies 9.86974.
,, 75, ,, 4, ,, 24 ,, ,, ,, 48841.

I.

Gemeine Logarithmen

der

Zahlen von 1 bis 11 009.

| N | log | N | log | N | log | N | log | N | log |
|----|----------|----|----------|----|----------|----|----------|-----|----------|
| 1 | 0.00 000 | 21 | 1.32 222 | 41 | 1.61 278 | 61 | 1.78 533 | 81 | 1.90 849 |
| 2 | 0.30 103 | 22 | 1.34 242 | 42 | 1.62 325 | 62 | 1.79 239 | 82 | 1.91 381 |
| 3 | 0.47 712 | 23 | 1.36 173 | 43 | 1.63 347 | 63 | 1.79 934 | 83 | 1.91 908 |
| 4 | 0.60 206 | 24 | 1.38 021 | 44 | 1.64 345 | 64 | 1.80 618 | 84 | 1.92 428 |
| 5 | 0.69 897 | 25 | 1.39 794 | 45 | 1.65 321 | 65 | 1.81 291 | 85 | 1.92 942 |
| 6 | 0.77 815 | 26 | 1.41 497 | 46 | 1.66 276 | 66 | 1.81 954 | 86 | 1.93 450 |
| 7 | 0.84 510 | 27 | 1.43 136 | 47 | 1.67 210 | 67 | 1.82 607 | 87 | 1.93 952 |
| 8 | 0.90 309 | 28 | 1.44 716 | 48 | 1.68 124 | 68 | 1.83 251 | 88 | 1.94 448 |
| 9 | 0.95 424 | 29 | 1.46 240 | 49 | 1.69 020 | 69 | 1.83 885 | 89 | 1.94 939 |
| 10 | 1.00 000 | 30 | 1.47 712 | 50 | 1.69 897 | 70 | 1.84 510 | 90 | 1.95 424 |
| 11 | 1.04 139 | 31 | 1.49 136 | 51 | 1.70 757 | 71 | 1.85 126 | 91 | 1.95 904 |
| 12 | 1.07 918 | 32 | 1.50 515 | 52 | 1.71 600 | 72 | 1.85 733 | 92 | 1.96 379 |
| 13 | 1.11 394 | 33 | 1.51 851 | 53 | 1.72 428 | 73 | 1.86 332 | 93 | 1.96 848 |
| 14 | 1.14 613 | 34 | 1.53 148 | 54 | 1.73 239 | 74 | 1.86 923 | 94 | 1.97 313 |
| 15 | 1.17 609 | 35 | 1.54 407 | 55 | 1.74 036 | 75 | 1.87 506 | 95 | 1.97 772 |
| 16 | 1.20 412 | 36 | 1.55 630 | 56 | 1.74 819 | 76 | 1.88 081 | 96 | 1.98 227 |
| 17 | 1.23 045 | 37 | 1.56 820 | 57 | 1.75 587 | 77 | 1.88 649 | 97 | 1.98 677 |
| 18 | 1.25 527 | 38 | 1.57 978 | 58 | 1.76 343 | 78 | 1.89 209 | 98 | 1.99 123 |
| 19 | 1.27 875 | 39 | 1.59 106 | 59 | 1.77 085 | 79 | 1.89 763 | 99 | 1.99 564 |
| 20 | 1.30 103 | 40 | 1.60 206 | 60 | 1.77 815 | 80 | 1.90 309 | 100 | 2.00 000 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|-----------------|--------|-----|------|-----------------|------|------|------|------|-----------------|------|-------|---------------------|
| 150 | 17 609 | 638 | 667 | 696 | 725 | 754 | 782 | 811 | 840 | 869 | | |
| 151 | 898 | 926 | 955 | 984 | *013 | *041 | *070 | *099 | *127 | *156 | | |
| 152 | 18 184 | 213 | 241 | 270 | 298 | 327 | 355 | 384 | 412 | 441 | | 29 28 |
| 153 | 469 | 498 | 526 | 554 | 583 | 611 | 639 | 667 | 696 | 724 | 1 | 2.9 2.8 |
| 154 | 752 | 780 | 808 | 837 | 865 | 893 | 921 | 949 | 977 | *005 | 2 | 5.8 5.6 |
| 155 | 19 033 | 061 | 089 | 117 | 145 | 173 | 201 | 229 | 257 | 285 | 3 | 8.7 8.4 |
| 156 | 312 | 340 | 368 | 396 | 424 | 451 | 479 | 507 | 535 | 562 | 4 | 11.6 11.2 |
| 157 | 590 | 618 | 645 | 673 | 700 | 728 | 756 | 783 | 811 | 838 | 5 | 14.5 14.0 |
| 158 | 866 | 893 | 921 | 948 | 976 | *003 | *030 | *058 | *085 | *112 | 6 | 17.4 16.8 |
| 159 | 20 140 | 167 | 194 | 222 | 249 | 276 | 303 | 330 | 358 | 385 | 7 | 20.3 19.6 |
| 160 | 412 | 439 | 466 | 493 | 520 | 548 | 575 | 602 | 629 | 656 | 8 | 23.2 22.4 |
| 161 | 683 | 710 | 737 | 763 | 790 | 817 | 844 | 871 | 898 | 925 | 9 | 26.1 25.2 |
| 162 | 952 | 978 | *005 | *032 | *059 | *085 | *112 | *139 | *165 | *192 | | |
| 163 | 21 219 | 245 | 272 | 299 | 325 | 352 | 378 | 405 | 431 | 458 | | 27 26 |
| 164 | 484 | 511 | 537 | 564 | 590 | 617 | 643 | 669 | 696 | 722 | 1 | 2.7 2.6 |
| 165 | 748 | 775 | 801 | 827 | 854 | 880 | 906 | 932 | 958 | 985 | 2 | 5.4 5.2 |
| 166 | 22 011 | 037 | 063 | 089 | 115 | 141 | 167 | 194 | 220 | 246 | 3 | 8.1 7.8 |
| 167 | 272 | 298 | 324 | 350 | 376 | 401 | 427 | 453 | 479 | 505 | 4 | 10.8 10.4 |
| 168 | 531 | 557 | 583 | 608 | 634 | 660 | 686 | 712 | 737 | 763 | 5 | 13.5 13.0 |
| 169 | 789 | 814 | 840 | 866 | 891 | 917 | 943 | 968 | 994 | *019 | 6 | 16.2 15.6 |
| 170 | 23 045 | 070 | 096 | 121 | 147 | 172 | 198 | 223 | 249 | 274 | 7 | 18.9 18.2 |
| 171 | 300 | 325 | 350 | 376 | 401 | 426 | 452 | 477 | 502 | 528 | 8 | 21.6 20.8 |
| 172 | 553 | 578 | 603 | 629 | 654 | 679 | 704 | 729 | 754 | 779 | 9 | 24.3 23.4 |
| 173 | 805 | 830 | 855 | 880 | 905 | 930 | 955 | 980 | *005 | *030 | | |
| 174 | 24 055 | 080 | 105 | 130 | 155 | 180 | 204 | 229 | 254 | 279 | | 25 24 |
| 175 | 304 | 329 | 353 | 378 | 403 | 428 | 452 | 477 | 502 | 527 | 1 | 2.5 2.4 |
| 176 | 551 | 576 | 601 | 625 | 650 | 674 | 699 | 724 | 748 | 773 | 2 | 5.0 4.8 |
| 177 | 797 | 822 | 846 | 871 | 895 | 920 | 944 | 969 | 993 | *018 | 3 | 7.5 7.2 |
| 178 | 25 042 | 066 | 091 | 115 | 139 | 164 | 188 | 212 | 237 | 261 | 4 | 10.0 9.6 |
| 179 | 285 | 310 | 334 | 358 | 382 | 406 | 431 | 455 | 479 | 503 | 5 | 12.5 12.0 |
| 180 | 527 | 551 | 575 | 600 | 624 | 648 | 672 | 696 | 720 | 744 | 6 | 15.0 14.4 |
| 181 | 768 | 792 | 816 | 840 | 864 | 888 | 912 | 935 | 959 | 983 | 7 | 17.5 16.8 |
| 182 | 26 007 | 031 | 055 | 079 | 102 | 126 | 150 | 174 | 198 | 221 | 8 | 20.0 19.2 |
| 183 | 245 | 269 | 293 | 316 | 340 | 364 | 387 | 411 | 435 | 458 | 9 | 22.5 21.6 |
| 184 | 482 | 505 | 529 | 553 | 576 | 600 | 623 | 647 | 670 | 694 | | |
| 185 | 717 | 741 | 764 | 788 | 811 | 834 | 858 | 881 | 905 | 928 | | |
| 186 | 951 | 975 | 998 | *021 | *045 | *068 | *091 | *114 | *138 | *161 | | 23 22 |
| 187 | 27 184 | 207 | 231 | 254 | 277 | 300 | 323 | 346 | 370 | 393 | 1 | 2.3 2.2 |
| 188 | 416 | 439 | 462 | 485 | 508 | 531 | 554 | 577 | 600 | 623 | 2 | 4.6 4.4 |
| 189 | 646 | 669 | 692 | 715 | 738 | 761 | 784 | 807 | 830 | 852 | 3 | 6.9 6.6 |
| 190 | 875 | 898 | 921 | 944 | 967 | 989 | *012 | *035 | *058 | *081 | 4 | 9.2 8.8 |
| 191 | 28 103 | 126 | 149 | 171 | 194 | 217 | 240 | 262 | 285 | 307 | 5 | 11.5 11.0 |
| 192 | 330 | 353 | 375 | 398 | 421 | 443 | 466 | 488 | 511 | 533 | 6 | 13.8 13.2 |
| 193 | 556 | 578 | 601 | 623 | 646 | 668 | 691 | 713 | 735 | 758 | 7 | 16.1 15.4 |
| 194 | 780 | 803 | 825 | 847 | 870 | 892 | 914 | 937 | 959 | 981 | 8 | 18.4 17.6 |
| 195 | 29 003 | 026 | 048 | 070 | 092 | 115 | 137 | 159 | 181 | 203 | 9 | 20.7 19.8 |
| 196 | 226 | 248 | 270 | 292 | 314 | 336 | 358 | 380 | 403 | 425 | | |
| 197 | 447 | 469 | 491 | 513 | 535 | 557 | 579 | 601 | 623 | 645 | | |
| 198 | 667 | 688 | 710 | 732 | 754 | 776 | 798 | 820 | 842 | 863 | | 21 |
| 199 | 885 | 907 | 929 | 951 | 973 | 994 | *016 | *038 | *060 | *081 | 1 | 2.1 |
| 200 | 30 103 | 125 | 146 | 168 | 190 | 211 | 233 | 255 | 276 | 298 | 2 | 4.2 |
| | | | | | | | | | | | 3 | 6.3 |
| | | | | | | | | | | | 4 | 8.4 |
| | | | | | | | | | | | 5 | 10.5 |
| | | | | | | | | | | | 6 | 12.6 |
| | | | | | | | | | | | 7 | 14.7 |
| | | | | | | | | | | | 8 | 16.8 |
| | | | | | | | | | | | 9 | 18.9 |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 120'' = 0° 2' | | | | 1560'' = 0° 26' | | | | | 1800'' = 0° 30' | | | |
| 180'' = 0° 3' | | | | 1620'' = 0° 27' | | | | | 1860'' = 0° 31' | | | |
| 1500'' = 0° 25' | | | | 1680'' = 0° 28' | | | | | 1920'' = 0° 32' | | | |
| | | | | 1740'' = 0° 29' | | | | | 1980'' = 0° 33' | | | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|-------|----------|------|-------|----------|------|-------|----------|------|------|------|-------|--|
| 200 | 30 103 | 125 | 146 | 168 | 190 | 211 | 233 | 255 | 276 | 298 | | |
| 201 | 320 | 341 | 363 | 384 | 406 | 428 | 449 | 471 | 492 | 514 | | |
| 202 | 535 | 557 | 578 | 600 | 621 | 643 | 664 | 685 | 707 | 728 | | |
| 203 | 750 | 771 | 792 | 814 | 835 | 856 | 878 | 899 | 920 | 942 | | |
| 204 | 963 | 984 | *006 | *027 | *048 | *069 | *091 | *112 | *133 | *154 | | |
| 205 | 31 175 | 197 | 218 | 239 | 260 | 281 | 302 | 323 | 345 | 366 | | |
| 206 | 387 | 408 | 429 | 450 | 471 | 492 | 513 | 534 | 555 | 576 | | |
| 207 | 597 | 618 | 639 | 660 | 681 | 702 | 723 | 744 | 765 | 785 | | |
| 208 | 806 | 827 | 848 | 869 | 890 | 911 | 931 | 952 | 973 | 994 | | |
| 209 | 32 015 | 035 | 056 | 077 | 098 | 118 | 139 | 160 | 181 | 201 | | |
| 210 | 222 | 243 | 263 | 284 | 305 | 325 | 346 | 366 | 387 | 408 | | |
| 211 | 428 | 449 | 469 | 490 | 510 | 531 | 552 | 572 | 593 | 613 | | |
| 212 | 634 | 654 | 675 | 695 | 715 | 736 | 756 | 777 | 797 | 818 | | |
| 213 | 838 | 858 | 879 | 899 | 919 | 940 | 960 | 980 | *001 | *021 | | |
| 214 | 33 041 | 062 | 082 | 102 | 122 | 143 | 163 | 183 | 203 | 224 | | |
| 215 | 244 | 264 | 284 | 304 | 325 | 345 | 365 | 385 | 405 | 425 | | |
| 216 | 445 | 465 | 486 | 506 | 526 | 546 | 566 | 586 | 606 | 626 | | |
| 217 | 646 | 666 | 686 | 706 | 726 | 746 | 766 | 786 | 806 | 826 | | |
| 218 | 846 | 866 | 885 | 905 | 925 | 945 | 965 | 985 | *005 | *025 | | |
| 219 | 34 044 | 064 | 084 | 104 | 124 | 143 | 163 | 183 | 203 | 223 | | |
| 220 | 242 | 262 | 282 | 301 | 321 | 341 | 361 | 380 | 400 | 420 | | |
| 221 | 439 | 459 | 479 | 498 | 518 | 537 | 557 | 577 | 596 | 616 | | |
| 222 | 635 | 655 | 674 | 694 | 713 | 733 | 753 | 772 | 792 | 811 | | |
| 223 | 830 | 850 | 869 | 889 | 908 | 928 | 947 | 967 | 986 | *005 | | |
| 224 | 35 025 | 044 | 064 | 083 | 102 | 122 | 141 | 160 | 180 | 199 | | |
| 225 | 218 | 238 | 257 | 276 | 295 | 315 | 334 | 353 | 372 | 392 | | |
| 226 | 411 | 430 | 449 | 468 | 488 | 507 | 526 | 545 | 564 | 583 | | |
| 227 | 603 | 622 | 641 | 660 | 679 | 698 | 717 | 736 | 755 | 774 | | |
| 228 | 793 | 813 | 832 | 851 | 870 | 889 | 908 | 927 | 946 | 965 | | |
| 229 | 984 | *003 | *021 | *040 | *059 | *078 | *097 | *116 | *135 | *154 | | |
| 230 | 36 173 | 192 | 211 | 229 | 248 | 267 | 286 | 305 | 324 | 342 | | |
| 231 | 361 | 380 | 399 | 418 | 436 | 455 | 474 | 493 | 511 | 530 | | |
| 232 | 549 | 568 | 586 | 605 | 624 | 642 | 661 | 680 | 698 | 717 | | |
| 233 | 736 | 754 | 773 | 791 | 810 | 829 | 847 | 866 | 884 | 903 | | |
| 234 | 922 | 940 | 959 | 977 | 996 | *014 | *033 | *051 | *070 | *088 | | |
| 235 | 37 107 | 125 | 144 | 162 | 181 | 199 | 218 | 236 | 254 | 273 | | |
| 236 | 291 | 310 | 328 | 346 | 365 | 383 | 401 | 420 | 438 | 457 | | |
| 237 | 475 | 493 | 511 | 530 | 548 | 566 | 585 | 603 | 621 | 639 | | |
| 238 | 658 | 676 | 694 | 712 | 731 | 749 | 767 | 785 | 803 | 822 | | |
| 239 | 840 | 858 | 876 | 894 | 912 | 931 | 949 | 967 | 985 | *003 | | |
| 240 | 38 021 | 039 | 057 | 075 | 093 | 112 | 130 | 148 | 166 | 184 | | |
| 241 | 202 | 220 | 238 | 256 | 274 | 292 | 310 | 328 | 346 | 364 | | |
| 242 | 382 | 399 | 417 | 435 | 453 | 471 | 489 | 507 | 525 | 543 | | |
| 243 | 561 | 578 | 596 | 614 | 632 | 650 | 668 | 686 | 703 | 721 | | |
| 244 | 739 | 757 | 775 | 792 | 810 | 828 | 846 | 863 | 881 | 899 | | |
| 245 | 917 | 934 | 952 | 970 | 987 | *005 | *023 | *041 | *058 | *076 | | |
| 246 | 39 094 | 111 | 129 | 146 | 164 | 182 | 199 | 217 | 235 | 252 | | |
| 247 | 270 | 287 | 305 | 322 | 340 | 358 | 375 | 393 | 410 | 428 | | |
| 248 | 445 | 463 | 480 | 498 | 515 | 533 | 550 | 568 | 585 | 602 | | |
| 249 | 620 | 637 | 655 | 672 | 690 | 707 | 724 | 742 | 759 | 777 | | |
| 250 | 794 | 811 | 829 | 846 | 863 | 881 | 898 | 915 | 933 | 950 | | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 180" | = 0° 3' | | 2040" | = 0° 34' | | 2280" | = 0° 38' | | | | | |
| 240" | = 0° 4' | | 2100" | = 0° 35' | | 2340" | = 0° 39' | | | | | |
| 1980" | = 0° 33' | | 2160" | = 0° 36' | | 2400" | = 0° 40' | | | | | |
| | | | 2220" | = 0° 37' | | 2460" | = 0° 41' | | | | | |

| | 22 | 21 |
|---|------|------|
| 1 | 2.2 | 2.1 |
| 2 | 4.4 | 4.2 |
| 3 | 6.6 | 6.3 |
| 4 | 8.8 | 8.4 |
| 5 | 11.0 | 10.5 |
| 6 | 13.2 | 12.6 |
| 7 | 15.4 | 14.7 |
| 8 | 17.6 | 16.8 |
| 9 | 19.8 | 18.9 |

| | 20 |
|---|------|
| 1 | 2.0 |
| 2 | 4.0 |
| 3 | 6.0 |
| 4 | 8.0 |
| 5 | 10.0 |
| 6 | 12.0 |
| 7 | 14.0 |
| 8 | 16.0 |
| 9 | 18.0 |

| | 19 | 18 |
|---|------|------|
| 1 | 1.9 | 1.8 |
| 2 | 3.8 | 3.6 |
| 3 | 5.7 | 5.4 |
| 4 | 7.6 | 7.2 |
| 5 | 9.5 | 9.0 |
| 6 | 11.4 | 10.8 |
| 7 | 13.3 | 12.6 |
| 8 | 15.2 | 14.4 |
| 9 | 17.1 | 16.2 |

| | 17 |
|---|------|
| 1 | 1.7 |
| 2 | 3.4 |
| 3 | 5.1 |
| 4 | 6.8 |
| 5 | 8.5 |
| 6 | 10.2 |
| 7 | 11.9 |
| 8 | 13.6 |
| 9 | 15.3 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|--------|----------|------|------|------|------|------|------|------|------|------|-------|--|
| 250 | 39 794 | 811 | 829 | 846 | 863 | 881 | 898 | 915 | 933 | 950 | | |
| 251 | 967 | 985 | *002 | *019 | *037 | *054 | *071 | *088 | *106 | *123 | | |
| 252 | 40 140 | 157 | 175 | 192 | 209 | 226 | 243 | 261 | 278 | 295 | | |
| 253 | 312 | 329 | 346 | 364 | 381 | 398 | 415 | 432 | 449 | 466 | | |
| 254 | 483 | 500 | 518 | 535 | 552 | 569 | 586 | 603 | 620 | 637 | | |
| 255 | 654 | 671 | 688 | 705 | 722 | 739 | 756 | 773 | 790 | 807 | | |
| 256 | 824 | 841 | 858 | 875 | 892 | 909 | 926 | 943 | 960 | 976 | | |
| 257 | 993 | *010 | *027 | *044 | *061 | *078 | *095 | *111 | *128 | *145 | | |
| 258 | 41 162 | 179 | 196 | 212 | 229 | 246 | 263 | 280 | 296 | 313 | | |
| 259 | 330 | 347 | 363 | 380 | 397 | 414 | 430 | 447 | 464 | 481 | | |
| 260 | 497 | 514 | 531 | 547 | 564 | 581 | 597 | 614 | 631 | 647 | | |
| 261 | 664 | 681 | 697 | 714 | 731 | 747 | 764 | 780 | 797 | 814 | | |
| 262 | 830 | 847 | 863 | 880 | 896 | 913 | 929 | 946 | 963 | 979 | | |
| 263 | 996 | *012 | *029 | *045 | *062 | *078 | *095 | *111 | *127 | *144 | | |
| 264 | 42 160 | 177 | 193 | 210 | 226 | 243 | 259 | 275 | 292 | 308 | | |
| 265 | 325 | 341 | 357 | 374 | 390 | 406 | 423 | 439 | 455 | 472 | | |
| 266 | 488 | 504 | 521 | 537 | 553 | 570 | 586 | 602 | 619 | 635 | | |
| 267 | 651 | 667 | 684 | 700 | 716 | 732 | 749 | 765 | 781 | 797 | | |
| 268 | 813 | 830 | 846 | 862 | 878 | 894 | 911 | 927 | 943 | 959 | | |
| 269 | 975 | 991 | *008 | *024 | *040 | *056 | *072 | *088 | *104 | *120 | | |
| 270 | 43 136 | 152 | 169 | 185 | 201 | 217 | 233 | 249 | 265 | 281 | | |
| 271 | 297 | 313 | 329 | 345 | 361 | 377 | 393 | 409 | 425 | 441 | | |
| 272 | 457 | 473 | 489 | 505 | 521 | 537 | 553 | 569 | 584 | 600 | | |
| 273 | 616 | 632 | 648 | 664 | 680 | 696 | 712 | 727 | 743 | 759 | | |
| 274 | 775 | 791 | 807 | 823 | 838 | 854 | 870 | 886 | 902 | 917 | | |
| 275 | 933 | 949 | 965 | 981 | 996 | *012 | *028 | *044 | *059 | *075 | | |
| 276 | 44 091 | 107 | 122 | 138 | 154 | 170 | 185 | 201 | 217 | 232 | | |
| 277 | 248 | 264 | 279 | 295 | 311 | 326 | 342 | 358 | 373 | 389 | | |
| 278 | 404 | 420 | 436 | 451 | 467 | 483 | 498 | 514 | 529 | 545 | | |
| 279 | 560 | 576 | 592 | 607 | 623 | 638 | 654 | 669 | 685 | 700 | | |
| 280 | 716 | 731 | 747 | 762 | 778 | 793 | 809 | 824 | 840 | 855 | | |
| 281 | 871 | 886 | 902 | 917 | 932 | 948 | 963 | 979 | 994 | *010 | | |
| 282 | 45 025 | 040 | 056 | 071 | 086 | 102 | 117 | 133 | 148 | 163 | | |
| 283 | 179 | 194 | 209 | 225 | 240 | 255 | 271 | 286 | 301 | 317 | | |
| 284 | 332 | 347 | 362 | 378 | 393 | 408 | 423 | 439 | 454 | 469 | | |
| 285 | 484 | 500 | 515 | 530 | 545 | 561 | 576 | 591 | 606 | 621 | | |
| 286 | 637 | 652 | 667 | 682 | 697 | 712 | 728 | 743 | 758 | 773 | | |
| 287 | 788 | 803 | 818 | 834 | 849 | 864 | 879 | 894 | 909 | 924 | | |
| 288 | 939 | 954 | 969 | 984 | *000 | *015 | *030 | *045 | *060 | *075 | | |
| 289 | 46 090 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | | |
| 290 | 240 | 255 | 270 | 285 | 300 | 315 | 330 | 345 | 359 | 374 | | |
| 291 | 389 | 404 | 419 | 434 | 449 | 464 | 479 | 494 | 509 | 523 | | |
| 292 | 538 | 553 | 568 | 583 | 598 | 613 | 627 | 642 | 657 | 672 | | |
| 293 | 687 | 702 | 716 | 731 | 746 | 761 | 776 | 790 | 805 | 820 | | |
| 294 | 835 | 850 | 864 | 879 | 894 | 909 | 923 | 938 | 953 | 967 | | |
| 295 | 982 | 997 | *012 | *026 | *041 | *056 | *070 | *085 | *100 | *114 | | |
| 296 | 47 129 | 144 | 159 | 173 | 188 | 202 | 217 | 232 | 246 | 261 | | |
| 297 | 276 | 290 | 305 | 319 | 334 | 349 | 363 | 378 | 392 | 407 | | |
| 298 | 422 | 436 | 451 | 465 | 480 | 494 | 509 | 524 | 538 | 553 | | |
| 299 | 567 | 582 | 596 | 611 | 625 | 640 | 654 | 669 | 683 | 698 | | |
| 300 | 712 | 727 | 741 | 756 | 770 | 784 | 799 | 813 | 828 | 842 | | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 240'' | = 0° 4' | | | | | | | | | | | |
| 300'' | = 0° 5' | | | | | | | | | | | |
| 2460'' | = 0° 41' | | | | | | | | | | | |
| 2520'' | = 0° 42' | | | | | | | | | | | |
| 2580'' | = 0° 43' | | | | | | | | | | | |
| 2640'' | = 0° 44' | | | | | | | | | | | |
| 2700'' | = 0° 45' | | | | | | | | | | | |
| 2760'' | = 0° 46' | | | | | | | | | | | |
| 2820'' | = 0° 47' | | | | | | | | | | | |
| 2880'' | = 0° 48' | | | | | | | | | | | |
| 2940'' | = 0° 49' | | | | | | | | | | | |
| 3000'' | = 0° 50' | | | | | | | | | | | |

| | 18 | 17 |
|---|------|------|
| 1 | 1.8 | 1.7 |
| 2 | 3.6 | 3.4 |
| 3 | 5.4 | 5.1 |
| 4 | 7.2 | 6.8 |
| 5 | 9.0 | 8.5 |
| 6 | 10.8 | 10.2 |
| 7 | 12.6 | 11.9 |
| 8 | 14.4 | 13.6 |
| 9 | 16.2 | 15.3 |

| | 16 |
|---|------|
| 1 | 1.6 |
| 2 | 3.2 |
| 3 | 4.8 |
| 4 | 6.4 |
| 5 | 8.0 |
| 6 | 9.6 |
| 7 | 11.2 |
| 8 | 12.8 |
| 9 | 14.4 |

| | 15 |
|---|------|
| 1 | 1.5 |
| 2 | 3.0 |
| 3 | 4.5 |
| 4 | 6.0 |
| 5 | 7.5 |
| 6 | 9.0 |
| 7 | 10.5 |
| 8 | 12.0 |
| 9 | 13.5 |

| | 14 |
|---|------|
| 1 | 1.4 |
| 2 | 2.8 |
| 3 | 4.2 |
| 4 | 5.6 |
| 5 | 7.0 |
| 6 | 8.4 |
| 7 | 9.8 |
| 8 | 11.2 |
| 9 | 12.6 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|-----------------|-----------------|------|------|-----------------|------|------|------|------|------|------|-------|
| 300 | 47 712 | 727 | 741 | 756 | 770 | 784 | 799 | 813 | 828 | 842 | |
| 301 | 857 | 871 | 885 | 900 | 914 | 929 | 943 | 958 | 972 | 986 | |
| 302 | 48 001 | 015 | 029 | 044 | 058 | 073 | 087 | 101 | 116 | 130 | |
| 303 | 144 | 159 | 173 | 187 | 202 | 216 | 230 | 244 | 259 | 273 | |
| 304 | 287 | 302 | 316 | 330 | 344 | 359 | 373 | 387 | 401 | 416 | |
| 305 | 430 | 444 | 458 | 473 | 487 | 501 | 515 | 530 | 544 | 558 | |
| 306 | 572 | 586 | 601 | 615 | 629 | 643 | 657 | 671 | 686 | 700 | |
| 307 | 714 | 728 | 742 | 756 | 770 | 785 | 799 | 813 | 827 | 841 | |
| 308 | 855 | 869 | 883 | 897 | 911 | 926 | 940 | 954 | 968 | 982 | |
| 309 | 996 | *010 | *024 | *038 | *052 | *066 | *080 | *094 | *108 | *122 | |
| 310 | 49 136 | 150 | 164 | 178 | 192 | 206 | 220 | 234 | 248 | 262 | |
| 311 | 276 | 290 | 304 | 318 | 332 | 346 | 360 | 374 | 388 | 402 | |
| 312 | 415 | 429 | 443 | 457 | 471 | 485 | 499 | 513 | 527 | 541 | |
| 313 | 554 | 568 | 582 | 596 | 610 | 624 | 638 | 651 | 665 | 679 | |
| 314 | 693 | 707 | 721 | 734 | 748 | 762 | 776 | 790 | 803 | 817 | |
| 315 | 831 | 845 | 859 | 872 | 886 | 900 | 914 | 927 | 941 | 955 | |
| 316 | 969 | 982 | 996 | *010 | *024 | *037 | *051 | *065 | *079 | *092 | |
| 317 | 50 106 | 120 | 133 | 147 | 161 | 174 | 188 | 202 | 215 | 229 | |
| 318 | 243 | 256 | 270 | 284 | 297 | 311 | 325 | 338 | 352 | 365 | |
| 319 | 379 | 393 | 406 | 420 | 433 | 447 | 461 | 474 | 488 | 501 | |
| 320 | 515 | 529 | 542 | 556 | 569 | 583 | 596 | 610 | 623 | 637 | |
| 321 | 651 | 664 | 678 | 691 | 705 | 718 | 732 | 745 | 759 | 772 | |
| 322 | 786 | 799 | 813 | 826 | 840 | 853 | 866 | 880 | 893 | 907 | |
| 323 | 920 | 934 | 947 | 961 | 974 | 987 | *001 | *014 | *028 | *041 | |
| 324 | 51 055 | 068 | 081 | 095 | 108 | 121 | 135 | 148 | 162 | 175 | |
| 325 | 188 | 202 | 215 | 228 | 242 | 255 | 268 | 282 | 295 | 308 | |
| 326 | 322 | 335 | 348 | 362 | 375 | 388 | 402 | 415 | 428 | 441 | |
| 327 | 455 | 468 | 481 | 495 | 508 | 521 | 534 | 548 | 561 | 574 | |
| 328 | 587 | 601 | 614 | 627 | 640 | 654 | 667 | 680 | 693 | 706 | |
| 329 | 720 | 733 | 746 | 759 | 772 | 786 | 799 | 812 | 825 | 838 | |
| 330 | 851 | 865 | 878 | 891 | 904 | 917 | 930 | 943 | 957 | 970 | |
| 331 | 983 | 996 | *009 | *022 | *035 | *048 | *061 | *075 | *088 | *101 | |
| 332 | 52 114 | 127 | 140 | 153 | 166 | 179 | 192 | 205 | 218 | 231 | |
| 333 | 244 | 257 | 270 | 284 | 297 | 310 | 323 | 336 | 349 | 362 | |
| 334 | 375 | 388 | 401 | 414 | 427 | 440 | 453 | 466 | 479 | 492 | |
| 335 | 504 | 517 | 530 | 543 | 556 | 569 | 582 | 595 | 608 | 621 | |
| 336 | 634 | 647 | 660 | 673 | 686 | 699 | 711 | 724 | 737 | 750 | |
| 337 | 763 | 776 | 789 | 802 | 815 | 827 | 840 | 853 | 866 | 879 | |
| 338 | 892 | 905 | 917 | 930 | 943 | 956 | 969 | 982 | 994 | *007 | |
| 339 | 53 020 | 033 | 046 | 058 | 071 | 084 | 097 | 110 | 122 | 135 | |
| 340 | 148 | 161 | 173 | 186 | 199 | 212 | 224 | 237 | 250 | 263 | |
| 341 | 275 | 288 | 301 | 314 | 326 | 339 | 352 | 364 | 377 | 390 | |
| 342 | 403 | 415 | 428 | 441 | 453 | 466 | 479 | 491 | 504 | 517 | |
| 343 | 529 | 542 | 555 | 567 | 580 | 593 | 605 | 618 | 631 | 643 | |
| 344 | 656 | 668 | 681 | 694 | 706 | 719 | 732 | 744 | 757 | 769 | |
| 345 | 782 | 794 | 807 | 820 | 832 | 845 | 857 | 870 | 882 | 895 | |
| 346 | 908 | 920 | 933 | 945 | 958 | 970 | 983 | 995 | *008 | *020 | |
| 347 | 54 033 | 045 | 058 | 070 | 083 | 095 | 108 | 120 | 133 | 145 | |
| 348 | 158 | 170 | 183 | 195 | 208 | 220 | 233 | 245 | 258 | 270 | |
| 349 | 283 | 295 | 307 | 320 | 332 | 345 | 357 | 370 | 382 | 394 | |
| 350 | 407 | 419 | 432 | 444 | 456 | 469 | 481 | 494 | 506 | 518 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 300'' = 0° 5' | 3120'' = 0° 52' | | | 3360'' = 0° 56' | | | | | | | |
| 3000'' = 0° 50' | 3180'' = 0° 53' | | | 3420'' = 0° 57' | | | | | | | |
| 3060'' = 0° 51' | 3240'' = 0° 54' | | | 3480'' = 0° 58' | | | | | | | |
| | 3300'' = 0° 55' | | | | | | | | | | |

| 15 | |
|----|------|
| 1 | 1.5 |
| 2 | 3.0 |
| 3 | 4.5 |
| 4 | 6.0 |
| 5 | 7.5 |
| 6 | 9.0 |
| 7 | 10.5 |
| 8 | 12.0 |
| 9 | 13.5 |

| 14 | |
|----|------|
| 1 | 1.4 |
| 2 | 2.8 |
| 3 | 4.2 |
| 4 | 5.6 |
| 5 | 7.0 |
| 6 | 8.4 |
| 7 | 9.8 |
| 8 | 11.2 |
| 9 | 12.6 |

| 13 | |
|----|------|
| 1 | 1.3 |
| 2 | 2.6 |
| 3 | 3.9 |
| 4 | 5.2 |
| 5 | 6.5 |
| 6 | 7.8 |
| 7 | 9.1 |
| 8 | 10.4 |
| 9 | 11.7 |

| 12 | |
|----|------|
| 1 | 1.2 |
| 2 | 2.4 |
| 3 | 3.6 |
| 4 | 4.8 |
| 5 | 6.0 |
| 6 | 7.2 |
| 7 | 8.4 |
| 8 | 9.6 |
| 9 | 10.8 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|-------|---------|-----|-------|----------|------|-------|----------|------|------|------|-----------|
| 400 | 60 206 | 217 | 228 | 239 | 249 | 260 | 271 | 282 | 293 | 304 | |
| 401 | 314 | 325 | 336 | 347 | 358 | 369 | 379 | 390 | 401 | 412 | |
| 402 | 423 | 433 | 444 | 455 | 466 | 477 | 487 | 498 | 509 | 520 | |
| 403 | 531 | 541 | 552 | 563 | 574 | 584 | 595 | 606 | 617 | 627 | |
| 404 | 638 | 649 | 660 | 670 | 681 | 692 | 703 | 713 | 724 | 735 | |
| 405 | 746 | 756 | 767 | 778 | 788 | 799 | 810 | 821 | 831 | 842 | |
| 406 | 853 | 863 | 874 | 885 | 895 | 906 | 917 | 927 | 938 | 949 | |
| 407 | 959 | 970 | 981 | 991 | *002 | *013 | *023 | *034 | *045 | *055 | |
| 408 | 61 066 | 077 | 087 | 098 | 109 | 119 | 130 | 140 | 151 | 162 | |
| 409 | 172 | 183 | 194 | 204 | 215 | 225 | 236 | 247 | 257 | 268 | |
| 410 | 278 | 289 | 300 | 310 | 321 | 331 | 342 | 352 | 363 | 374 | 11 |
| 411 | 384 | 395 | 405 | 416 | 426 | 437 | 448 | 458 | 469 | 479 | 1 1.1 |
| 412 | 490 | 500 | 511 | 521 | 532 | 542 | 553 | 563 | 574 | 584 | 2 2.2 |
| 413 | 595 | 606 | 616 | 627 | 637 | 648 | 658 | 669 | 679 | 690 | 3 3.3 |
| 414 | 700 | 711 | 721 | 731 | 742 | 752 | 763 | 773 | 784 | 794 | 4 4.4 |
| 415 | 805 | 815 | 826 | 836 | 847 | 857 | 868 | 878 | 888 | 899 | 5 5.5 |
| 416 | 909 | 920 | 930 | 941 | 951 | 962 | 972 | 982 | 993 | *003 | 6 6.6 |
| 417 | 62 014 | 024 | 034 | 045 | 055 | 066 | 076 | 086 | 097 | 107 | 7 7.7 |
| 418 | 118 | 128 | 138 | 149 | 159 | 170 | 180 | 190 | 201 | 211 | 8 8.8 |
| 419 | 221 | 232 | 242 | 252 | 263 | 273 | 284 | 294 | 304 | 315 | 9 9.9 |
| 420 | 325 | 335 | 346 | 356 | 366 | 377 | 387 | 397 | 408 | 418 | |
| 421 | 428 | 439 | 449 | 459 | 469 | 480 | 490 | 500 | 511 | 521 | |
| 422 | 531 | 542 | 552 | 562 | 572 | 583 | 593 | 603 | 613 | 624 | |
| 423 | 634 | 644 | 655 | 665 | 675 | 685 | 696 | 706 | 716 | 726 | |
| 424 | 737 | 747 | 757 | 767 | 778 | 788 | 798 | 808 | 818 | 829 | 10 |
| 425 | 839 | 849 | 859 | 870 | 880 | 890 | 900 | 910 | 921 | 931 | 1 1.0 |
| 426 | 941 | 951 | 961 | 972 | 982 | 992 | *002 | *012 | *022 | *033 | 2 2.0 |
| 427 | 63 043 | 053 | 063 | 073 | 083 | 094 | 104 | 114 | 124 | 134 | 3 3.0 |
| 428 | 144 | 155 | 165 | 175 | 185 | 195 | 205 | 215 | 225 | 236 | 4 4.0 |
| 429 | 246 | 256 | 266 | 276 | 286 | 296 | 306 | 317 | 327 | 337 | 5 5.0 |
| 430 | 347 | 357 | 367 | 377 | 387 | 397 | 407 | 417 | 428 | 438 | 6 6.0 |
| 431 | 448 | 458 | 468 | 478 | 488 | 498 | 508 | 518 | 528 | 538 | 7 7.0 |
| 432 | 548 | 558 | 568 | 579 | 589 | 599 | 609 | 619 | 629 | 639 | 8 8.0 |
| 433 | 649 | 659 | 669 | 679 | 689 | 699 | 709 | 719 | 729 | 739 | 9 9.0 |
| 434 | 749 | 759 | 769 | 779 | 789 | 799 | 809 | 819 | 829 | 839 | |
| 435 | 849 | 859 | 869 | 879 | 889 | 899 | 909 | 919 | 929 | 939 | |
| 436 | 949 | 959 | 969 | 979 | 988 | 998 | *008 | *018 | *028 | *038 | |
| 437 | 64 048 | 058 | 068 | 078 | 088 | 098 | 108 | 118 | 128 | 137 | |
| 438 | 147 | 157 | 167 | 177 | 187 | 197 | 207 | 217 | 227 | 237 | 9 |
| 439 | 246 | 256 | 266 | 276 | 286 | 296 | 306 | 316 | 326 | 335 | 1 0.9 |
| 440 | 345 | 355 | 365 | 375 | 385 | 395 | 404 | 414 | 424 | 434 | 2 1.8 |
| 441 | 444 | 454 | 464 | 473 | 483 | 493 | 503 | 513 | 523 | 532 | 3 2.7 |
| 442 | 542 | 552 | 562 | 572 | 582 | 591 | 601 | 611 | 621 | 631 | 4 3.6 |
| 443 | 640 | 650 | 660 | 670 | 680 | 689 | 699 | 709 | 719 | 729 | 5 4.5 |
| 444 | 738 | 748 | 758 | 768 | 777 | 787 | 797 | 807 | 816 | 826 | 6 5.4 |
| 445 | 836 | 846 | 856 | 865 | 875 | 885 | 895 | 904 | 914 | 924 | 7 6.3 |
| 446 | 933 | 943 | 953 | 963 | 972 | 982 | 992 | *002 | *011 | *021 | 8 7.2 |
| 447 | 65 031 | 040 | 050 | 060 | 070 | 079 | 089 | 099 | 108 | 118 | 9 8.1 |
| 448 | 128 | 137 | 147 | 157 | 167 | 176 | 186 | 196 | 205 | 215 | |
| 449 | 225 | 234 | 244 | 254 | 263 | 273 | 283 | 292 | 302 | 312 | |
| 450 | 321 | 331 | 341 | 350 | 360 | 369 | 379 | 389 | 398 | 408 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 360" | = 0° 6' | | 4080" | = 1° 8' | | 4320" | = 1° 12' | | | | |
| 420" | = 0° 7' | | 4140" | = 1° 9' | | 4380" | = 1° 13' | | | | |
| 3960" | = 1° 6' | | 4200" | = 1° 10' | | 4440" | = 1° 14' | | | | |
| 4020" | = 1° 7' | | 4260" | = 1° 11' | | 4500" | = 1° 15' | | | | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|-----|--------|------|------|------|------|------|------|------|------|------|-------|
| 450 | 65 321 | 331 | 341 | 350 | 360 | 369 | 379 | 389 | 398 | 408 | |
| 451 | 418 | 427 | 437 | 447 | 456 | 466 | 475 | 485 | 495 | 504 | |
| 452 | 514 | 523 | 533 | 543 | 552 | 562 | 571 | 581 | 591 | 600 | |
| 453 | 610 | 619 | 629 | 639 | 648 | 658 | 667 | 677 | 686 | 696 | |
| 454 | 706 | 715 | 725 | 734 | 744 | 753 | 763 | 772 | 782 | 792 | |
| 455 | 801 | 811 | 820 | 830 | 839 | 849 | 858 | 868 | 877 | 887 | |
| 456 | 896 | 906 | 916 | 925 | 935 | 944 | 954 | 963 | 973 | 982 | |
| 457 | 992 | *001 | *011 | *020 | *030 | *039 | *049 | *058 | *068 | *077 | |
| 458 | 66 087 | 096 | 106 | 115 | 124 | 134 | 143 | 153 | 162 | 172 | |
| 459 | 181 | 191 | 200 | 210 | 219 | 229 | 238 | 247 | 257 | 266 | |
| 460 | 276 | 285 | 295 | 304 | 314 | 323 | 332 | 342 | 351 | 361 | |
| 461 | 370 | 380 | 389 | 398 | 408 | 417 | 427 | 436 | 445 | 455 | |
| 462 | 464 | 474 | 483 | 492 | 502 | 511 | 521 | 530 | 539 | 549 | |
| 463 | 558 | 567 | 577 | 586 | 596 | 605 | 614 | 624 | 633 | 642 | |
| 464 | 652 | 661 | 671 | 680 | 689 | 699 | 708 | 717 | 727 | 736 | |
| 465 | 745 | 755 | 764 | 773 | 783 | 792 | 801 | 811 | 820 | 829 | |
| 466 | 839 | 848 | 857 | 867 | 876 | 885 | 894 | 904 | 913 | 922 | |
| 467 | 932 | 941 | 950 | 960 | 969 | 978 | 987 | 997 | *006 | *015 | |
| 468 | 67 025 | 034 | 043 | 052 | 062 | 071 | 080 | 089 | 099 | 108 | |
| 469 | 117 | 127 | 136 | 145 | 154 | 164 | 173 | 182 | 191 | 201 | |
| 470 | 210 | 219 | 228 | 237 | 247 | 256 | 265 | 274 | 284 | 293 | |
| 471 | 302 | 311 | 321 | 330 | 339 | 348 | 357 | 367 | 376 | 385 | |
| 472 | 394 | 403 | 413 | 422 | 431 | 440 | 449 | 459 | 468 | 477 | |
| 473 | 486 | 495 | 504 | 514 | 523 | 532 | 541 | 550 | 560 | 569 | |
| 474 | 578 | 587 | 596 | 605 | 614 | 624 | 633 | 642 | 651 | 660 | |
| 475 | 669 | 679 | 688 | 697 | 706 | 715 | 724 | 733 | 742 | 752 | |
| 476 | 761 | 770 | 779 | 788 | 797 | 806 | 815 | 825 | 834 | 843 | |
| 477 | 852 | 861 | 870 | 879 | 888 | 897 | 906 | 916 | 925 | 934 | |
| 478 | 943 | 952 | 961 | 970 | 979 | 988 | 997 | *006 | *015 | *024 | |
| 479 | 68 034 | 043 | 052 | 061 | 070 | 079 | 088 | 097 | 106 | 115 | |
| 480 | 124 | 133 | 142 | 151 | 160 | 169 | 178 | 187 | 196 | 205 | |
| 481 | 215 | 224 | 233 | 242 | 251 | 260 | 269 | 278 | 287 | 296 | |
| 482 | 305 | 314 | 323 | 332 | 341 | 350 | 359 | 368 | 377 | 386 | |
| 483 | 395 | 404 | 413 | 422 | 431 | 440 | 449 | 458 | 467 | 476 | |
| 484 | 485 | 494 | 502 | 511 | 520 | 529 | 538 | 547 | 556 | 565 | |
| 485 | 574 | 583 | 592 | 601 | 610 | 619 | 628 | 637 | 646 | 655 | |
| 486 | 664 | 673 | 681 | 690 | 699 | 708 | 717 | 726 | 735 | 744 | |
| 487 | 753 | 762 | 771 | 780 | 789 | 797 | 806 | 815 | 824 | 833 | |
| 488 | 842 | 851 | 860 | 869 | 878 | 886 | 895 | 904 | 913 | 922 | |
| 489 | 931 | 940 | 949 | 958 | 966 | 975 | 984 | 993 | *002 | *011 | |
| 490 | 69 020 | 028 | 037 | 046 | 055 | 064 | 073 | 082 | 090 | 099 | |
| 491 | 108 | 117 | 126 | 135 | 144 | 152 | 161 | 170 | 179 | 188 | |
| 492 | 197 | 205 | 214 | 223 | 232 | 241 | 249 | 258 | 267 | 276 | |
| 493 | 285 | 294 | 302 | 311 | 320 | 329 | 338 | 346 | 355 | 364 | |
| 494 | 373 | 381 | 390 | 399 | 408 | 417 | 425 | 434 | 443 | 452 | |
| 495 | 461 | 469 | 478 | 487 | 496 | 504 | 513 | 522 | 531 | 539 | |
| 496 | 548 | 557 | 566 | 574 | 583 | 592 | 601 | 609 | 618 | 627 | |
| 497 | 636 | 644 | 653 | 662 | 671 | 679 | 688 | 697 | 705 | 714 | |
| 498 | 723 | 732 | 740 | 749 | 758 | 767 | 775 | 784 | 793 | 801 | |
| 499 | 810 | 819 | 827 | 836 | 845 | 854 | 862 | 871 | 880 | 888 | |
| 500 | 897 | 906 | 914 | 923 | 932 | 940 | 949 | 958 | 966 | 975 | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|----------|---|-------|----------|---|-------|----------|---|---|---|
| 420" | = 0° 7' | | 4560" | = 1° 16' | | 4800" | = 1° 20' | | | |
| 480" | = 0° 8' | | 4620" | = 1° 17' | | 4860" | = 1° 21' | | | |
| 4500" | = 1° 15' | | 4680" | = 1° 18' | | 4920" | = 1° 22' | | | |
| | | | 4740" | = 1° 19' | | 4980" | = 1° 23' | | | |

| 10 | |
|----|-----|
| 1 | 1.0 |
| 2 | 2.0 |
| 3 | 3.0 |
| 4 | 4.0 |
| 5 | 5.0 |
| 6 | 6.0 |
| 7 | 7.0 |
| 8 | 8.0 |
| 9 | 9.0 |

| 9 | |
|---|-----|
| 1 | 0.9 |
| 2 | 1.8 |
| 3 | 2.7 |
| 4 | 3.6 |
| 5 | 4.5 |
| 6 | 5.4 |
| 7 | 6.3 |
| 8 | 7.2 |
| 9 | 8.1 |

| 8 | |
|---|-----|
| 1 | 0.8 |
| 2 | 1.6 |
| 3 | 2.4 |
| 4 | 3.2 |
| 5 | 4.0 |
| 6 | 4.8 |
| 7 | 5.6 |
| 8 | 6.4 |
| 9 | 7.2 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|-----|--------|-----|------|------|------|------|------|------|------|------|-------|
| 500 | 69 897 | 906 | 914 | 923 | 932 | 940 | 949 | 958 | 966 | 975 | |
| 501 | | 984 | 992 | *001 | *010 | *018 | *027 | *036 | *044 | *053 | *062 |
| 502 | 70 070 | 079 | 088 | 096 | 105 | 114 | 122 | 131 | 140 | 148 | |
| 503 | | 157 | 165 | 174 | 183 | 191 | 200 | 209 | 217 | 226 | 234 |
| 504 | | 243 | 252 | 260 | 269 | 278 | 286 | 295 | 303 | 312 | 321 |
| 505 | | 329 | 338 | 346 | 355 | 364 | 372 | 381 | 389 | 398 | 406 |
| 506 | | 415 | 424 | 432 | 441 | 449 | 458 | 467 | 475 | 484 | 492 |
| 507 | | 501 | 509 | 518 | 526 | 535 | 544 | 552 | 561 | 569 | 578 |
| 508 | | 586 | 595 | 603 | 612 | 621 | 629 | 638 | 646 | 655 | 663 |
| 509 | | 672 | 680 | 689 | 697 | 706 | 714 | 723 | 731 | 740 | 749 |
| 510 | | 757 | 766 | 774 | 783 | 791 | 800 | 808 | 817 | 825 | 834 |
| 511 | | 842 | 851 | 859 | 868 | 876 | 885 | 893 | 902 | 910 | 919 |
| 512 | | 927 | 935 | 944 | 952 | 961 | 969 | 978 | 986 | 995 | *003 |
| 513 | 71 012 | 020 | 029 | 037 | 046 | 054 | 063 | 071 | 079 | 088 | |
| 514 | | 096 | 105 | 113 | 122 | 130 | 139 | 147 | 155 | 164 | 172 |
| 515 | | 181 | 189 | 198 | 206 | 214 | 223 | 231 | 240 | 248 | 257 |
| 516 | | 265 | 273 | 282 | 290 | 299 | 307 | 315 | 324 | 332 | 341 |
| 517 | | 349 | 357 | 366 | 374 | 383 | 391 | 399 | 408 | 416 | 425 |
| 518 | | 433 | 441 | 450 | 458 | 466 | 475 | 483 | 492 | 500 | 508 |
| 519 | | 517 | 525 | 533 | 542 | 550 | 559 | 567 | 575 | 584 | 592 |
| 520 | | 600 | 609 | 617 | 625 | 634 | 642 | 650 | 659 | 667 | 675 |
| 521 | | 684 | 692 | 700 | 709 | 717 | 725 | 734 | 742 | 750 | 759 |
| 522 | | 767 | 775 | 784 | 792 | 800 | 809 | 817 | 825 | 834 | 842 |
| 523 | | 850 | 858 | 867 | 875 | 883 | 892 | 900 | 908 | 917 | 925 |
| 524 | | 933 | 941 | 950 | 958 | 966 | 975 | 983 | 991 | 999 | *008 |
| 525 | 72 016 | 024 | 032 | 041 | 049 | 057 | 066 | 074 | 082 | 090 | |
| 526 | | 099 | 107 | 115 | 123 | 132 | 140 | 148 | 156 | 165 | 173 |
| 527 | | 181 | 189 | 198 | 206 | 214 | 222 | 230 | 239 | 247 | 255 |
| 528 | | 263 | 272 | 280 | 288 | 296 | 304 | 313 | 321 | 329 | 337 |
| 529 | | 346 | 354 | 362 | 370 | 378 | 387 | 395 | 403 | 411 | 419 |
| 530 | | 428 | 436 | 444 | 452 | 460 | 469 | 477 | 485 | 493 | 501 |
| 531 | | 509 | 518 | 526 | 534 | 542 | 550 | 558 | 567 | 575 | 583 |
| 532 | | 591 | 599 | 607 | 616 | 624 | 632 | 640 | 648 | 656 | 665 |
| 533 | | 673 | 681 | 689 | 697 | 705 | 713 | 722 | 730 | 738 | 746 |
| 534 | | 754 | 762 | 770 | 779 | 787 | 795 | 803 | 811 | 819 | 827 |
| 535 | | 835 | 843 | 852 | 860 | 868 | 876 | 884 | 892 | 900 | 908 |
| 536 | | 916 | 925 | 933 | 941 | 949 | 957 | 965 | 973 | 981 | 989 |
| 537 | | 997 | *006 | *014 | *022 | *030 | *038 | *046 | *054 | *062 | *070 |
| 538 | 73 078 | 086 | 094 | 102 | 111 | 119 | 127 | 135 | 143 | 151 | |
| 539 | | 159 | 167 | 175 | 183 | 191 | 199 | 207 | 215 | 223 | 231 |
| 540 | | 239 | 247 | 255 | 263 | 272 | 280 | 288 | 296 | 304 | 312 |
| 541 | | 320 | 328 | 336 | 344 | 352 | 360 | 368 | 376 | 384 | 392 |
| 542 | | 400 | 408 | 416 | 424 | 432 | 440 | 448 | 456 | 464 | 472 |
| 543 | | 480 | 488 | 496 | 504 | 512 | 520 | 528 | 536 | 544 | 552 |
| 544 | | 560 | 568 | 576 | 584 | 592 | 600 | 608 | 616 | 624 | 632 |
| 546 | | 640 | 648 | 656 | 664 | 672 | 679 | 687 | 695 | 703 | 711 |
| 545 | | 719 | 727 | 735 | 743 | 751 | 759 | 767 | 775 | 783 | 791 |
| 547 | | 799 | 807 | 815 | 823 | 830 | 838 | 846 | 854 | 862 | 870 |
| 548 | | 878 | 886 | 894 | 902 | 910 | 918 | 926 | 933 | 941 | 949 |
| 549 | | 957 | 965 | 973 | 981 | 989 | 997 | *005 | *013 | *020 | *028 |
| 550 | 74 036 | 044 | 052 | 060 | 068 | 076 | 084 | 092 | 099 | 107 | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|----------|---|---|---|---|---|---|---|---|---|
| 480" | = 0° 8' | | | | | | | | | |
| 540" | = 0° 9' | | | | | | | | | |
| 4980" | = 1° 23' | | | | | | | | | |
| 5040" | = 1° 24' | | | | | | | | | |
| 5100" | = 1° 25' | | | | | | | | | |
| 5160" | = 1° 26' | | | | | | | | | |
| 5220" | = 1° 27' | | | | | | | | | |
| 5280" | = 1° 28' | | | | | | | | | |
| 5340" | = 1° 29' | | | | | | | | | |
| 5400" | = 1° 30' | | | | | | | | | |
| 5460" | = 1° 31' | | | | | | | | | |

| 9 | |
|---|-----|
| 1 | 0.9 |
| 2 | 1.8 |
| 3 | 2.7 |
| 4 | 3.6 |
| 5 | 4.5 |
| 6 | 5.4 |
| 7 | 6.3 |
| 8 | 7.2 |
| 9 | 8.1 |

| 8 | |
|---|-----|
| 1 | 0.8 |
| 2 | 1.6 |
| 3 | 2.4 |
| 4 | 3.2 |
| 5 | 4.0 |
| 6 | 4.8 |
| 7 | 5.6 |
| 8 | 6.4 |
| 9 | 7.2 |

| 7 | |
|---|-----|
| 1 | 0.7 |
| 2 | 1.4 |
| 3 | 2.1 |
| 4 | 2.8 |
| 5 | 3.5 |
| 6 | 4.2 |
| 7 | 4.9 |
| 8 | 5.6 |
| 9 | 6.3 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|----------------|--------|-----|----------------|-----|-----|----------------|------|------|------|------|-------|
| 600 | 77 815 | 822 | 830 | 837 | 844 | 851 | 859 | 866 | 873 | 880 | |
| 601 | 887 | 895 | 902 | 909 | 916 | 924 | 931 | 938 | 945 | 952 | |
| 602 | 960 | 967 | 974 | 981 | 988 | 996 | *003 | *010 | *017 | *025 | |
| 603 | 78 032 | 039 | 046 | 053 | 061 | 068 | 075 | 082 | 089 | 097 | |
| 604 | 104 | 111 | 118 | 125 | 132 | 140 | 147 | 154 | 161 | 168 | |
| 605 | 176 | 183 | 190 | 197 | 204 | 211 | 219 | 226 | 233 | 240 | |
| 606 | 247 | 254 | 262 | 269 | 276 | 283 | 290 | 297 | 305 | 312 | |
| 607 | 319 | 326 | 333 | 340 | 347 | 355 | 362 | 369 | 376 | 383 | |
| 608 | 390 | 398 | 405 | 412 | 419 | 426 | 433 | 440 | 447 | 455 | |
| 609 | 462 | 469 | 476 | 483 | 490 | 497 | 504 | 512 | 519 | 526 | |
| 610 | 533 | 540 | 547 | 554 | 561 | 569 | 576 | 583 | 590 | 597 | |
| 611 | 604 | 611 | 618 | 625 | 633 | 640 | 647 | 654 | 661 | 668 | |
| 612 | 675 | 682 | 689 | 696 | 704 | 711 | 718 | 725 | 732 | 739 | |
| 613 | 746 | 753 | 760 | 767 | 774 | 781 | 789 | 796 | 803 | 810 | |
| 614 | 817 | 824 | 831 | 838 | 845 | 852 | 859 | 866 | 873 | 880 | |
| 615 | 888 | 895 | 902 | 909 | 916 | 923 | 930 | 937 | 944 | 951 | |
| 616 | 958 | 965 | 972 | 979 | 986 | 993 | *000 | *007 | *014 | *021 | |
| 617 | 79 029 | 036 | 043 | 050 | 057 | 064 | 071 | 078 | 085 | 092 | |
| 618 | 099 | 106 | 113 | 120 | 127 | 134 | 141 | 148 | 155 | 162 | |
| 619 | 169 | 176 | 183 | 190 | 197 | 204 | 211 | 218 | 225 | 232 | |
| 620 | 239 | 246 | 253 | 260 | 267 | 274 | 281 | 288 | 295 | 302 | |
| 621 | 309 | 316 | 323 | 330 | 337 | 344 | 351 | 358 | 365 | 372 | |
| 622 | 379 | 386 | 393 | 400 | 407 | 414 | 421 | 428 | 435 | 442 | |
| 623 | 449 | 456 | 463 | 470 | 477 | 484 | 491 | 498 | 505 | 511 | |
| 624 | 518 | 525 | 532 | 539 | 546 | 553 | 560 | 567 | 574 | 581 | |
| 625 | 588 | 595 | 602 | 609 | 616 | 623 | 630 | 637 | 644 | 650 | |
| 626 | 657 | 664 | 671 | 678 | 685 | 692 | 699 | 706 | 713 | 720 | |
| 627 | 727 | 734 | 741 | 748 | 754 | 761 | 768 | 775 | 782 | 789 | |
| 628 | 796 | 803 | 810 | 817 | 824 | 831 | 837 | 844 | 851 | 858 | |
| 629 | 865 | 872 | 879 | 886 | 893 | 900 | 906 | 913 | 920 | 927 | |
| 630 | 934 | 941 | 948 | 955 | 962 | 969 | 975 | 982 | 989 | 996 | |
| 631 | 80 003 | 010 | 017 | 024 | 030 | 037 | 044 | 051 | 058 | 065 | |
| 632 | 072 | 079 | 085 | 092 | 099 | 106 | 113 | 120 | 127 | 134 | |
| 633 | 140 | 147 | 154 | 161 | 168 | 175 | 182 | 188 | 195 | 202 | |
| 634 | 209 | 216 | 223 | 229 | 236 | 243 | 250 | 257 | 264 | 271 | |
| 635 | 277 | 284 | 291 | 298 | 305 | 312 | 318 | 325 | 332 | 339 | |
| 636 | 346 | 353 | 359 | 366 | 373 | 380 | 387 | 393 | 400 | 407 | |
| 637 | 414 | 421 | 428 | 434 | 441 | 448 | 455 | 462 | 468 | 475 | |
| 638 | 482 | 489 | 496 | 502 | 509 | 516 | 523 | 530 | 536 | 543 | |
| 639 | 550 | 557 | 564 | 570 | 577 | 584 | 591 | 598 | 604 | 611 | |
| 640 | 618 | 625 | 632 | 638 | 645 | 652 | 659 | 665 | 672 | 679 | |
| 641 | 686 | 693 | 699 | 706 | 713 | 720 | 726 | 733 | 740 | 747 | |
| 642 | 754 | 760 | 767 | 774 | 781 | 787 | 794 | 801 | 808 | 814 | |
| 643 | 821 | 828 | 835 | 841 | 848 | 855 | 862 | 868 | 875 | 882 | |
| 644 | 889 | 895 | 902 | 909 | 916 | 922 | 929 | 936 | 943 | 949 | |
| 645 | 956 | 963 | 969 | 976 | 983 | 990 | 996 | *003 | *010 | *017 | |
| 646 | 81 023 | 030 | 037 | 043 | 050 | 057 | 064 | 070 | 077 | 084 | |
| 647 | 090 | 097 | 104 | 111 | 117 | 124 | 131 | 137 | 144 | 151 | |
| 648 | 158 | 164 | 171 | 178 | 184 | 191 | 198 | 204 | 211 | 218 | |
| 649 | 224 | 231 | 238 | 245 | 251 | 258 | 265 | 271 | 278 | 285 | |
| 650 | 291 | 298 | 305 | 311 | 318 | 325 | 331 | 338 | 345 | 351 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 600" = 0° 10' | | | 6120" = 1° 42' | | | 6360" = 1° 46' | | | | | |
| 6000" = 1° 40' | | | 6180" = 1° 43' | | | 6420" = 1° 47' | | | | | |
| 6060" = 1° 41' | | | 6240" = 1° 44' | | | 6480" = 1° 48' | | | | | |
| | | | 6300" = 1° 45' | | | | | | | | |

| 8 | |
|---|-----|
| 1 | 0.8 |
| 2 | 1.6 |
| 3 | 2.4 |
| 4 | 3.2 |
| 5 | 4.0 |
| 6 | 4.8 |
| 7 | 5.6 |
| 8 | 6.4 |
| 9 | 7.2 |

| 7 | |
|---|-----|
| 1 | 0.7 |
| 2 | 1.4 |
| 3 | 2.1 |
| 4 | 2.8 |
| 5 | 3.5 |
| 6 | 4.2 |
| 7 | 4.9 |
| 8 | 5.6 |
| 9 | 6.3 |

| 6 | |
|---|-----|
| 1 | 0.6 |
| 2 | 1.2 |
| 3 | 1.8 |
| 4 | 2.4 |
| 5 | 3.0 |
| 6 | 3.6 |
| 7 | 4.2 |
| 8 | 4.8 |
| 9 | 5.4 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|-----|----|-----|------|------|------|------|------|------|------|------|-------|--|
| 650 | 81 | 291 | 298 | 305 | 311 | 318 | 325 | 331 | 338 | 345 | 351 | |
| 651 | | 358 | 365 | 371 | 378 | 385 | 391 | 398 | 405 | 411 | 418 | |
| 652 | | 425 | 431 | 438 | 445 | 451 | 458 | 465 | 471 | 478 | 485 | |
| 653 | | 491 | 498 | 505 | 511 | 518 | 525 | 531 | 538 | 544 | 551 | |
| 654 | | 558 | 564 | 571 | 578 | 584 | 591 | 598 | 604 | 611 | 617 | |
| 655 | | 624 | 631 | 637 | 644 | 651 | 657 | 664 | 671 | 677 | 684 | |
| 656 | | 690 | 697 | 704 | 710 | 717 | 723 | 730 | 737 | 743 | 750 | |
| 657 | | 757 | 763 | 770 | 776 | 783 | 790 | 796 | 803 | 809 | 816 | |
| 658 | | 823 | 829 | 836 | 842 | 849 | 856 | 862 | 869 | 875 | 882 | |
| 659 | | 889 | 895 | 902 | 908 | 915 | 921 | 928 | 935 | 941 | 948 | |
| 660 | | 954 | 961 | 968 | 974 | 981 | 987 | 994 | *000 | *007 | *014 | |
| 661 | 82 | 020 | 027 | 033 | 040 | 046 | 053 | 060 | 066 | 073 | 079 | |
| 662 | | 086 | 092 | 099 | 105 | 112 | 119 | 125 | 132 | 138 | 145 | |
| 663 | | 151 | 158 | 164 | 171 | 178 | 184 | 191 | 197 | 204 | 210 | |
| 664 | | 217 | 223 | 230 | 236 | 243 | 249 | 256 | 263 | 269 | 276 | |
| 665 | | 282 | 289 | 295 | 302 | 308 | 315 | 321 | 328 | 334 | 341 | |
| 666 | | 347 | 354 | 360 | 367 | 373 | 380 | 387 | 393 | 400 | 406 | |
| 667 | | 413 | 419 | 426 | 432 | 439 | 445 | 452 | 458 | 465 | 471 | |
| 668 | | 478 | 484 | 491 | 497 | 504 | 510 | 517 | 523 | 530 | 536 | |
| 669 | | 543 | 549 | 556 | 562 | 569 | 575 | 582 | 588 | 595 | 601 | |
| 670 | | 607 | 614 | 620 | 627 | 633 | 640 | 646 | 653 | 659 | 666 | |
| 671 | | 672 | 679 | 685 | 692 | 698 | 705 | 711 | 718 | 724 | 730 | |
| 672 | | 737 | 743 | 750 | 756 | 763 | 769 | 776 | 782 | 789 | 795 | |
| 673 | | 802 | 808 | 814 | 821 | 827 | 834 | 840 | 847 | 853 | 860 | |
| 674 | | 866 | 872 | 879 | 885 | 892 | 898 | 905 | 911 | 918 | 924 | |
| 675 | | 930 | 937 | 943 | 950 | 956 | 963 | 969 | 975 | 982 | 988 | |
| 676 | | 995 | *001 | *008 | *014 | *020 | *027 | *033 | *040 | *046 | *052 | |
| 677 | 83 | 059 | 065 | 072 | 078 | 085 | 091 | 097 | 104 | 110 | 117 | |
| 678 | | 123 | 129 | 136 | 142 | 149 | 155 | 161 | 168 | 174 | 181 | |
| 679 | | 187 | 193 | 200 | 206 | 213 | 219 | 225 | 232 | 238 | 245 | |
| 680 | | 251 | 257 | 264 | 270 | 276 | 283 | 289 | 296 | 302 | 308 | |
| 681 | | 315 | 321 | 327 | 334 | 340 | 347 | 353 | 359 | 366 | 372 | |
| 682 | | 378 | 385 | 391 | 398 | 404 | 410 | 417 | 423 | 429 | 436 | |
| 683 | | 442 | 448 | 455 | 461 | 467 | 474 | 480 | 487 | 493 | 499 | |
| 684 | | 506 | 512 | 518 | 525 | 531 | 537 | 544 | 550 | 556 | 563 | |
| 685 | | 569 | 575 | 582 | 588 | 594 | 601 | 607 | 613 | 620 | 626 | |
| 686 | | 632 | 639 | 645 | 651 | 658 | 664 | 670 | 677 | 683 | 689 | |
| 687 | | 696 | 702 | 708 | 715 | 721 | 727 | 734 | 740 | 746 | 753 | |
| 688 | | 759 | 765 | 771 | 778 | 784 | 790 | 797 | 803 | 809 | 816 | |
| 689 | | 822 | 828 | 835 | 841 | 847 | 853 | 860 | 866 | 872 | 879 | |
| 690 | | 885 | 891 | 897 | 904 | 910 | 916 | 923 | 929 | 935 | 942 | |
| 691 | | 948 | 954 | 960 | 967 | 973 | 979 | 985 | 992 | 998 | *004 | |
| 692 | 84 | 011 | 017 | 023 | 029 | 036 | 042 | 048 | 055 | 061 | 067 | |
| 693 | | 073 | 080 | 086 | 092 | 098 | 105 | 111 | 117 | 123 | 130 | |
| 694 | | 136 | 142 | 148 | 155 | 161 | 167 | 173 | 180 | 186 | 192 | |
| 695 | | 198 | 205 | 211 | 217 | 223 | 230 | 236 | 242 | 248 | 255 | |
| 696 | | 261 | 267 | 273 | 280 | 286 | 292 | 298 | 305 | 311 | 317 | |
| 697 | | 323 | 330 | 336 | 342 | 348 | 354 | 361 | 367 | 373 | 379 | |
| 698 | | 386 | 392 | 398 | 404 | 410 | 417 | 423 | 429 | 435 | 442 | |
| 699 | | 448 | 454 | 460 | 466 | 473 | 479 | 485 | 491 | 497 | 504 | |
| 700 | | 510 | 516 | 522 | 528 | 535 | 541 | 547 | 553 | 559 | 566 | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|----------|---|-------|----------|---|-------|----------|---|---|---|
| 600" | = 0° 10' | | 6540" | = 1° 49' | | 6780" | = 1° 53' | | | |
| 660" | = 0° 11' | | 6600" | = 1° 50' | | 6840" | = 1° 54' | | | |
| 6480" | = 1° 48' | | 6660" | = 1° 51' | | 6900" | = 1° 55' | | | |
| | | | 6720" | = 1° 52' | | 6960" | = 1° 56' | | | |

| | 7 |
|---|-----|
| 1 | 0.7 |
| 2 | 1.4 |
| 3 | 2.1 |
| 4 | 2.8 |
| 5 | 3.5 |
| 6 | 4.2 |
| 7 | 4.9 |
| 8 | 5.6 |
| 9 | 6.3 |

| | 6 |
|---|-----|
| 1 | 0.6 |
| 2 | 1.2 |
| 3 | 1.8 |
| 4 | 2.4 |
| 5 | 3.0 |
| 6 | 3.6 |
| 7 | 4.2 |
| 8 | 4.8 |
| 9 | 5.4 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|-------|----------|-----|-------|----------|-----|-------|---------|------|------|------|-------|-------|
| 700 | 84 510 | 516 | 522 | 528 | 535 | 541 | 547 | 553 | 559 | 566 | | |
| 701 | | 572 | 578 | 584 | 590 | 597 | 603 | 609 | 615 | 628 | | |
| 702 | | 634 | 640 | 646 | 652 | 658 | 665 | 671 | 677 | 689 | | |
| 703 | | 696 | 702 | 708 | 714 | 720 | 726 | 733 | 739 | 751 | | |
| 704 | | 757 | 763 | 770 | 776 | 782 | 788 | 794 | 800 | 813 | | |
| 705 | | 819 | 825 | 831 | 837 | 844 | 850 | 856 | 862 | 874 | | |
| 706 | | 880 | 887 | 893 | 899 | 905 | 911 | 917 | 924 | 936 | | |
| 707 | | 942 | 948 | 954 | 960 | 967 | 973 | 979 | 985 | 997 | | |
| 708 | 85 | 003 | 009 | 016 | 022 | 028 | 034 | 040 | 046 | 058 | | |
| 709 | | 065 | 071 | 077 | 083 | 089 | 095 | 101 | 107 | 120 | | |
| 710 | | 126 | 132 | 138 | 144 | 150 | 156 | 163 | 169 | 181 | 7 | |
| 711 | | 187 | 193 | 199 | 205 | 211 | 217 | 224 | 230 | 242 | 1 0.7 | |
| 712 | | 248 | 254 | 260 | 266 | 272 | 278 | 285 | 291 | 303 | 2 1.4 | |
| 713 | | 309 | 315 | 321 | 327 | 333 | 339 | 345 | 352 | 364 | 3 2.1 | |
| 714 | | 370 | 376 | 382 | 388 | 394 | 400 | 406 | 412 | 425 | 4 2.8 | |
| 715 | | 431 | 437 | 443 | 449 | 455 | 461 | 467 | 473 | 485 | 5 3.5 | |
| 716 | | 491 | 497 | 503 | 509 | 516 | 522 | 528 | 534 | 546 | 6 4.2 | |
| 717 | | 552 | 558 | 564 | 570 | 576 | 582 | 588 | 594 | 606 | 7 4.9 | |
| 718 | | 612 | 618 | 625 | 631 | 637 | 643 | 649 | 655 | 667 | 8 5.6 | |
| 719 | | 673 | 679 | 685 | 691 | 697 | 703 | 709 | 715 | 727 | 9 6.3 | |
| 720 | | 733 | 739 | 745 | 751 | 757 | 763 | 769 | 775 | 788 | | |
| 721 | | 794 | 800 | 806 | 812 | 818 | 824 | 830 | 836 | 848 | | |
| 722 | | 854 | 860 | 866 | 872 | 878 | 884 | 890 | 896 | 908 | | |
| 723 | | 914 | 920 | 926 | 932 | 938 | 944 | 950 | 956 | 968 | | |
| 724 | | 974 | 980 | 986 | 992 | 998 | *004 | *010 | *016 | *022 | *028 | 6 |
| 725 | 86 | 034 | 040 | 046 | 052 | 058 | 064 | 070 | 076 | 082 | 088 | 1 0.6 |
| 726 | | 094 | 100 | 106 | 112 | 118 | 124 | 130 | 136 | 141 | 147 | 2 1.2 |
| 727 | | 153 | 159 | 165 | 171 | 177 | 183 | 189 | 195 | 201 | 207 | 3 1.8 |
| 728 | | 213 | 219 | 225 | 231 | 237 | 243 | 249 | 255 | 261 | 267 | 4 2.4 |
| 729 | | 273 | 279 | 285 | 291 | 297 | 303 | 308 | 314 | 320 | 326 | 5 3.0 |
| 730 | | 332 | 338 | 344 | 350 | 356 | 362 | 368 | 374 | 380 | 386 | 6 3.6 |
| 731 | | 392 | 398 | 404 | 410 | 415 | 421 | 427 | 433 | 439 | 445 | 7 4.2 |
| 732 | | 451 | 457 | 463 | 469 | 475 | 481 | 487 | 493 | 499 | 504 | 8 4.8 |
| 733 | | 510 | 516 | 522 | 528 | 534 | 540 | 546 | 552 | 558 | 564 | 9 5.4 |
| 734 | | 570 | 576 | 581 | 587 | 593 | 599 | 605 | 611 | 617 | 623 | |
| 735 | | 629 | 635 | 641 | 646 | 652 | 658 | 664 | 670 | 676 | 682 | |
| 736 | | 688 | 694 | 700 | 705 | 711 | 717 | 723 | 729 | 735 | 741 | |
| 737 | | 747 | 753 | 759 | 764 | 770 | 776 | 782 | 788 | 794 | 800 | |
| 738 | | 806 | 812 | 817 | 823 | 829 | 835 | 841 | 847 | 853 | 859 | |
| 739 | | 864 | 870 | 876 | 882 | 888 | 894 | 900 | 906 | 911 | 917 | |
| 740 | | 923 | 929 | 935 | 941 | 947 | 953 | 958 | 964 | 970 | 976 | 5 |
| 741 | | 982 | 988 | 994 | 999 | *005 | *011 | *017 | *023 | *029 | *035 | 1 0.5 |
| 742 | 87 | 040 | 046 | 052 | 068 | 064 | 070 | 075 | 081 | 087 | 093 | 2 1.0 |
| 743 | | 099 | 105 | 111 | 116 | 122 | 128 | 134 | 140 | 146 | 151 | 3 1.5 |
| 744 | | 157 | 163 | 169 | 175 | 181 | 186 | 192 | 198 | 204 | 210 | 4 2.0 |
| 745 | | 216 | 221 | 227 | 233 | 239 | 245 | 251 | 256 | 262 | 268 | 5 2.5 |
| 746 | | 274 | 280 | 286 | 291 | 297 | 303 | 309 | 315 | 320 | 326 | 6 3.0 |
| 747 | | 332 | 338 | 344 | 349 | 355 | 361 | 367 | 373 | 379 | 384 | 7 3.5 |
| 748 | | 390 | 396 | 402 | 408 | 413 | 419 | 425 | 431 | 437 | 442 | 8 4.0 |
| 749 | | 448 | 454 | 460 | 466 | 471 | 477 | 483 | 489 | 495 | 500 | 9 4.5 |
| 750 | | 506 | 512 | 518 | 523 | 529 | 535 | 541 | 547 | 552 | 558 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 660" | = 0° 11' | | 7080" | = 1° 58' | | 7320" | = 2° 2' | | | | | |
| 720" | = 0° 12' | | 7140" | = 1° 59' | | 7380" | = 2° 3' | | | | | |
| 6960" | = 1° 56' | | 7200" | = 2° 0' | | 7440" | = 2° 4' | | | | | |
| 7020" | = 1° 57' | | 7260" | = 2° 1' | | 7500" | = 2° 5' | | | | | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|--------|----------|-----|-----|------|------|------|------|------|------|------|-------|
| 750 | 87 506 | 512 | 518 | 523 | 529 | 535 | 541 | 547 | 552 | 558 | |
| 751 | 564 | 570 | 576 | 581 | 587 | 593 | 599 | 604 | 610 | 616 | |
| 752 | 622 | 628 | 633 | 639 | 645 | 651 | 656 | 662 | 668 | 674 | |
| 753 | 679 | 685 | 691 | 697 | 703 | 708 | 714 | 720 | 726 | 731 | |
| 754 | 737 | 743 | 749 | 754 | 760 | 766 | 772 | 777 | 783 | 789 | |
| 755 | 795 | 800 | 806 | 812 | 818 | 823 | 829 | 835 | 841 | 846 | |
| 756 | 852 | 858 | 864 | 869 | 875 | 881 | 887 | 892 | 898 | 904 | |
| 757 | 910 | 915 | 921 | 927 | 933 | 938 | 944 | 950 | 955 | 961 | |
| 758 | 967 | 973 | 978 | 984 | 990 | 996 | *001 | *007 | *013 | *018 | |
| 759 | 88 024 | 030 | 036 | 041 | 047 | 053 | 058 | 064 | 070 | 076 | |
| 760 | 081 | 087 | 093 | 098 | 104 | 110 | 116 | 121 | 127 | 133 | |
| 761 | 138 | 144 | 150 | 156 | 161 | 167 | 173 | 178 | 184 | 190 | |
| 762 | 195 | 201 | 207 | 213 | 218 | 224 | 230 | 235 | 241 | 247 | |
| 763 | 252 | 258 | 264 | 270 | 275 | 281 | 287 | 292 | 298 | 304 | |
| 764 | 309 | 315 | 321 | 326 | 332 | 338 | 343 | 349 | 355 | 360 | |
| 765 | 366 | 372 | 377 | 383 | 389 | 395 | 400 | 406 | 412 | 417 | |
| 766 | 423 | 429 | 434 | 440 | 446 | 451 | 457 | 463 | 468 | 474 | |
| 767 | 480 | 485 | 491 | 497 | 502 | 508 | 513 | 519 | 525 | 530 | |
| 768 | 536 | 542 | 547 | 553 | 559 | 564 | 570 | 576 | 581 | 587 | |
| 769 | 593 | 598 | 604 | 610 | 615 | 621 | 627 | 632 | 638 | 643 | |
| 770 | 649 | 655 | 660 | 666 | 672 | 677 | 683 | 689 | 694 | 700 | |
| 771 | 705 | 711 | 717 | 722 | 728 | 734 | 739 | 745 | 750 | 756 | |
| 772 | 762 | 767 | 773 | 779 | 784 | 790 | 795 | 801 | 807 | 812 | |
| 773 | 818 | 824 | 829 | 835 | 840 | 846 | 852 | 857 | 863 | 868 | |
| 774 | 874 | 880 | 885 | 891 | 897 | 902 | 908 | 913 | 919 | 925 | |
| 775 | 930 | 936 | 941 | 947 | 953 | 958 | 964 | 969 | 975 | 981 | |
| 776 | 986 | 992 | 997 | *003 | *009 | *014 | *020 | *025 | *031 | *037 | |
| 777 | 89 042 | 048 | 053 | 059 | 064 | 070 | 076 | 081 | 087 | 092 | |
| 778 | 098 | 104 | 109 | 115 | 120 | 126 | 131 | 137 | 143 | 148 | |
| 779 | 154 | 159 | 165 | 170 | 176 | 182 | 187 | 193 | 198 | 204 | |
| 780 | 209 | 215 | 221 | 226 | 232 | 237 | 243 | 248 | 254 | 260 | |
| 781 | 265 | 271 | 276 | 282 | 287 | 293 | 298 | 304 | 310 | 315 | |
| 782 | 321 | 326 | 332 | 337 | 343 | 348 | 354 | 360 | 365 | 371 | |
| 783 | 376 | 382 | 387 | 393 | 398 | 404 | 409 | 415 | 421 | 426 | |
| 784 | 432 | 437 | 443 | 448 | 454 | 459 | 465 | 470 | 476 | 481 | |
| 785 | 487 | 492 | 498 | 504 | 509 | 515 | 520 | 526 | 531 | 537 | |
| 786 | 542 | 548 | 553 | 559 | 564 | 570 | 575 | 581 | 586 | 592 | |
| 787 | 597 | 603 | 609 | 614 | 620 | 625 | 631 | 636 | 642 | 647 | |
| 788 | 653 | 658 | 664 | 669 | 675 | 680 | 686 | 691 | 697 | 702 | |
| 789 | 708 | 713 | 719 | 724 | 730 | 735 | 741 | 746 | 752 | 757 | |
| 790 | 763 | 768 | 774 | 779 | 785 | 790 | 796 | 801 | 807 | 812 | |
| 791 | 818 | 823 | 829 | 834 | 840 | 845 | 851 | 856 | 862 | 867 | |
| 792 | 873 | 878 | 883 | 889 | 894 | 900 | 905 | 911 | 916 | 922 | |
| 793 | 927 | 933 | 938 | 944 | 949 | 955 | 960 | 966 | 971 | 977 | |
| 794 | 982 | 988 | 993 | 998 | *004 | *009 | *015 | *020 | *026 | *031 | |
| 795 | 90 037 | 042 | 048 | 053 | 059 | 064 | 069 | 075 | 080 | 086 | |
| 796 | 091 | 097 | 102 | 108 | 113 | 119 | 124 | 129 | 135 | 140 | |
| 797 | 146 | 151 | 157 | 162 | 168 | 173 | 179 | 184 | 189 | 195 | |
| 798 | 200 | 206 | 211 | 217 | 222 | 227 | 233 | 238 | 244 | 249 | |
| 799 | 255 | 260 | 266 | 271 | 276 | 282 | 287 | 293 | 298 | 304 | |
| 800 | 309 | 314 | 320 | 325 | 331 | 336 | 342 | 347 | 352 | 358 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 720'' | = 0° 12' | | | | | | | | | | |
| 780'' | = 0° 13' | | | | | | | | | | |
| 7500'' | = 2° 5' | | | | | | | | | | |
| 7560'' | = 2° 6' | | | | | | | | | | |
| 7620'' | = 2° 7' | | | | | | | | | | |
| 7680'' | = 2° 8' | | | | | | | | | | |
| 7740'' | = 2° 9' | | | | | | | | | | |
| 7800'' | = 2° 10' | | | | | | | | | | |
| 7860'' | = 2° 11' | | | | | | | | | | |
| 7920'' | = 2° 12' | | | | | | | | | | |
| 7980'' | = 2° 13' | | | | | | | | | | |

| 6 | |
|---|-----|
| 1 | 0.6 |
| 2 | 1.2 |
| 3 | 1.8 |
| 4 | 2.4 |
| 5 | 3.0 |
| 6 | 3.6 |
| 7 | 4.2 |
| 8 | 4.8 |
| 9 | 5.4 |

| 5 | |
|---|-----|
| 1 | 0.5 |
| 2 | 1.0 |
| 3 | 1.5 |
| 4 | 2.0 |
| 5 | 2.5 |
| 6 | 3.0 |
| 7 | 3.5 |
| 8 | 4.0 |
| 9 | 4.5 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|------------|----------|-----|-------|----------|-----|-------|----------|-----|------|------|-------|
| 800 | 90 309 | 314 | 320 | 325 | 331 | 336 | 342 | 347 | 352 | 358 | |
| 801 | 363 | 369 | 374 | 380 | 385 | 390 | 396 | 401 | 407 | 412 | |
| 802 | 417 | 423 | 428 | 434 | 439 | 445 | 450 | 455 | 461 | 466 | |
| 803 | 472 | 477 | 482 | 488 | 493 | 499 | 504 | 509 | 515 | 520 | |
| 804 | 526 | 531 | 536 | 542 | 547 | 553 | 558 | 563 | 569 | 574 | |
| 805 | 580 | 585 | 590 | 596 | 601 | 607 | 612 | 617 | 623 | 628 | |
| 806 | 634 | 639 | 644 | 650 | 655 | 660 | 666 | 671 | 677 | 682 | |
| 807 | 687 | 693 | 698 | 703 | 709 | 714 | 720 | 725 | 730 | 736 | |
| 808 | 741 | 747 | 752 | 757 | 763 | 768 | 773 | 779 | 784 | 789 | |
| 809 | 795 | 800 | 806 | 811 | 816 | 822 | 827 | 832 | 838 | 843 | |
| 810 | 849 | 854 | 859 | 865 | 870 | 875 | 881 | 886 | 891 | 897 | |
| 811 | 902 | 907 | 913 | 918 | 924 | 929 | 934 | 940 | 945 | 950 | |
| 812 | 956 | 961 | 966 | 972 | 977 | 982 | 988 | 993 | 998 | *004 | |
| 813 | 91 009 | 014 | 020 | 025 | 030 | 036 | 041 | 046 | 052 | 057 | 6 |
| 814 | 062 | 068 | 073 | 078 | 084 | 089 | 094 | 100 | 105 | 110 | 1 0.6 |
| 815 | 116 | 121 | 126 | 132 | 137 | 142 | 148 | 153 | 158 | 164 | 2 1.2 |
| 816 | 169 | 174 | 180 | 185 | 190 | 196 | 201 | 206 | 212 | 217 | 3 1.8 |
| 817 | 222 | 228 | 233 | 238 | 243 | 249 | 254 | 259 | 265 | 270 | 4 2.4 |
| 818 | 275 | 281 | 286 | 291 | 297 | 302 | 307 | 312 | 318 | 323 | 5 3.0 |
| 819 | 328 | 334 | 339 | 344 | 350 | 355 | 360 | 365 | 371 | 376 | 6 3.6 |
| 820 | 381 | 387 | 392 | 397 | 403 | 408 | 413 | 418 | 424 | 429 | 7 4.2 |
| 821 | 434 | 440 | 445 | 450 | 455 | 461 | 466 | 471 | 477 | 482 | 8 4.8 |
| 822 | 487 | 492 | 498 | 503 | 508 | 514 | 519 | 524 | 529 | 535 | 9 5.4 |
| 823 | 540 | 545 | 551 | 556 | 561 | 566 | 572 | 577 | 582 | 587 | |
| 824 | 593 | 598 | 603 | 609 | 614 | 619 | 624 | 630 | 635 | 640 | |
| 825 | 645 | 651 | 656 | 661 | 666 | 672 | 677 | 682 | 687 | 693 | |
| 826 | 698 | 703 | 709 | 714 | 719 | 724 | 730 | 735 | 740 | 745 | |
| 827 | 751 | 756 | 761 | 766 | 772 | 777 | 782 | 787 | 793 | 798 | |
| 828 | 803 | 808 | 814 | 819 | 824 | 829 | 834 | 840 | 845 | 850 | |
| 829 | 855 | 861 | 866 | 871 | 876 | 882 | 887 | 892 | 897 | 903 | |
| 830 | 908 | 913 | 918 | 924 | 929 | 934 | 939 | 944 | 950 | 955 | |
| 831 | 960 | 965 | 971 | 976 | 981 | 986 | 991 | 997 | *002 | *007 | |
| 832 | 92 012 | 018 | 023 | 028 | 033 | 038 | 044 | 049 | 054 | 059 | |
| 833 | 065 | 070 | 075 | 080 | 085 | 091 | 096 | 101 | 106 | 111 | |
| 834 | 117 | 122 | 127 | 132 | 137 | 143 | 148 | 153 | 158 | 163 | |
| 835 | 169 | 174 | 179 | 184 | 189 | 195 | 200 | 205 | 210 | 215 | 5 |
| 836 | 221 | 226 | 231 | 236 | 241 | 247 | 252 | 257 | 262 | 267 | 1 0.5 |
| 837 | 273 | 278 | 283 | 288 | 293 | 298 | 304 | 309 | 314 | 319 | 2 1.0 |
| 838 | 324 | 330 | 335 | 340 | 345 | 350 | 355 | 361 | 366 | 371 | 3 1.5 |
| 839 | 376 | 381 | 387 | 392 | 397 | 402 | 407 | 412 | 418 | 423 | 4 2.0 |
| 840 | 428 | 433 | 438 | 443 | 449 | 454 | 459 | 464 | 469 | 474 | 5 2.5 |
| 841 | 480 | 485 | 490 | 495 | 500 | 505 | 511 | 516 | 521 | 526 | 6 3.0 |
| 842 | 531 | 536 | 542 | 547 | 552 | 557 | 562 | 567 | 572 | 578 | 7 3.5 |
| 843 | 583 | 588 | 593 | 598 | 603 | 609 | 614 | 619 | 624 | 629 | 8 4.0 |
| 844 | 634 | 639 | 645 | 650 | 655 | 660 | 665 | 670 | 675 | 681 | 9 4.5 |
| 845 | 686 | 691 | 696 | 701 | 706 | 711 | 716 | 722 | 727 | 732 | |
| 846 | 737 | 742 | 747 | 752 | 758 | 763 | 768 | 773 | 778 | 783 | |
| 847 | 788 | 793 | 799 | 804 | 809 | 814 | 819 | 824 | 829 | 834 | |
| 848 | 840 | 845 | 850 | 855 | 860 | 865 | 870 | 875 | 881 | 886 | |
| 849 | 891 | 896 | 901 | 906 | 911 | 916 | 921 | 927 | 932 | 937 | |
| 850 | 942 | 947 | 952 | 957 | 962 | 967 | 973 | 978 | 983 | 988 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 780" | = 0° 13' | | 8040" | = 2° 14' | | 8280" | = 2° 18' | | | | |
| 840" | = 0° 14' | | 8100" | = 2° 15' | | 8340" | = 2° 19' | | | | |
| 7980" | = 2° 13' | | 8160" | = 2° 16' | | 8400" | = 2° 20' | | | | |
| | | | 8220" | = 2° 17' | | 8460" | = 2° 21' | | | | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|--------|----|--------|--------|------|--------|--------|------|--------|------|------|-------|--|
| 850 | 92 | 942 | 947 | 952 | 957 | 962 | 967 | 973 | 978 | 983 | 988 | |
| 851 | | 993 | 998 | *003 | *008 | *013 | *018 | *024 | *029 | *034 | *039 | |
| 852 | 93 | 044 | 049 | 054 | 059 | 064 | 069 | 075 | 080 | 085 | 090 | |
| 853 | | 095 | 100 | 105 | 110 | 115 | 120 | 125 | 131 | 136 | 141 | |
| 854 | | 146 | 151 | 156 | 161 | 166 | 171 | 176 | 181 | 186 | 192 | |
| 855 | | 197 | 202 | 207 | 212 | 217 | 222 | 227 | 232 | 237 | 242 | |
| 856 | | 247 | 252 | 258 | 263 | 268 | 273 | 278 | 283 | 288 | 293 | |
| 857 | | 298 | 303 | 308 | 313 | 318 | 323 | 328 | 334 | 339 | 344 | |
| 858 | | 349 | 354 | 359 | 364 | 369 | 374 | 379 | 384 | 389 | 394 | |
| 859 | | 399 | 404 | 409 | 414 | 420 | 425 | 430 | 435 | 440 | 445 | |
| 860 | | 450 | 455 | 460 | 465 | 470 | 475 | 480 | 485 | 490 | 495 | |
| 861 | | 500 | 505 | 510 | 515 | 520 | 526 | 531 | 536 | 541 | 546 | |
| 862 | | 551 | 556 | 561 | 566 | 571 | 576 | 581 | 586 | 591 | 596 | |
| 863 | | 601 | 606 | 611 | 616 | 621 | 626 | 631 | 636 | 641 | 646 | |
| 864 | | 651 | 656 | 661 | 666 | 671 | 676 | 682 | 687 | 692 | 697 | |
| 865 | | 702 | 707 | 712 | 717 | 722 | 727 | 732 | 737 | 742 | 747 | |
| 866 | | 752 | 757 | 762 | 767 | 772 | 777 | 782 | 787 | 792 | 797 | |
| 867 | | 802 | 807 | 812 | 817 | 822 | 827 | 832 | 837 | 842 | 847 | |
| 868 | | 852 | 857 | 862 | 867 | 872 | 877 | 882 | 887 | 892 | 897 | |
| 869 | | 902 | 907 | 912 | 917 | 922 | 927 | 932 | 937 | 942 | 947 | |
| 870 | | 952 | 957 | 962 | 967 | 972 | 977 | 982 | 987 | 992 | 997 | |
| 871 | 94 | 002 | 007 | 012 | 017 | 022 | 027 | 032 | 037 | 042 | 047 | |
| 872 | | 052 | 057 | 062 | 067 | 072 | 077 | 082 | 086 | 091 | 096 | |
| 873 | | 101 | 106 | 111 | 116 | 121 | 126 | 131 | 136 | 141 | 146 | |
| 874 | | 151 | 156 | 161 | 166 | 171 | 176 | 181 | 186 | 191 | 196 | |
| 875 | | 201 | 206 | 211 | 216 | 221 | 226 | 231 | 236 | 240 | 245 | |
| 876 | | 250 | 255 | 260 | 265 | 270 | 275 | 280 | 285 | 290 | 295 | |
| 877 | | 300 | 305 | 310 | 315 | 320 | 325 | 330 | 335 | 340 | 345 | |
| 878 | | 349 | 354 | 359 | 364 | 369 | 374 | 379 | 384 | 389 | 394 | |
| 879 | | 399 | 404 | 409 | 414 | 419 | 424 | 429 | 433 | 438 | 443 | |
| 880 | | 448 | 453 | 458 | 463 | 468 | 473 | 478 | 483 | 488 | 493 | |
| 881 | | 498 | 503 | 507 | 512 | 517 | 522 | 527 | 532 | 537 | 542 | |
| 882 | | 547 | 552 | 557 | 562 | 567 | 571 | 576 | 581 | 586 | 591 | |
| 883 | | 596 | 601 | 606 | 611 | 616 | 621 | 626 | 630 | 635 | 640 | |
| 884 | | 645 | 650 | 655 | 660 | 665 | 670 | 675 | 680 | 685 | 689 | |
| 885 | | 694 | 699 | 704 | 709 | 714 | 719 | 724 | 729 | 734 | 738 | |
| 886 | | 743 | 748 | 753 | 758 | 763 | 768 | 773 | 778 | 783 | 787 | |
| 887 | | 792 | 797 | 802 | 807 | 812 | 817 | 822 | 827 | 832 | 836 | |
| 888 | | 841 | 846 | 851 | 856 | 861 | 866 | 871 | 876 | 880 | 885 | |
| 889 | | 890 | 895 | 900 | 905 | 910 | 915 | 919 | 924 | 929 | 934 | |
| 890 | | 939 | 944 | 949 | 954 | 959 | 963 | 968 | 973 | 978 | 983 | |
| 891 | | 988 | 993 | 998 | *002 | *007 | *012 | *017 | *022 | *027 | *032 | |
| 892 | 95 | 036 | 041 | 046 | 051 | 056 | 061 | 066 | 071 | 075 | 080 | |
| 893 | | 085 | 090 | 095 | 100 | 105 | 109 | 114 | 119 | 124 | 129 | |
| 894 | | 134 | 139 | 143 | 148 | 153 | 158 | 163 | 168 | 173 | 177 | |
| 895 | | 182 | 187 | 192 | 197 | 202 | 207 | 211 | 216 | 221 | 226 | |
| 896 | | 231 | 236 | 240 | 245 | 250 | 255 | 260 | 265 | 270 | 274 | |
| 897 | | 279 | 284 | 289 | 294 | 299 | 303 | 308 | 313 | 318 | 323 | |
| 898 | | 328 | 332 | 337 | 342 | 347 | 352 | 357 | 361 | 366 | 371 | |
| 899 | | 376 | 381 | 386 | 390 | 395 | 400 | 405 | 410 | 415 | 419 | |
| 900 | | 424 | 429 | 434 | 439 | 444 | 448 | 453 | 458 | 463 | 468 | |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 840'' | = | 0° 14' | 8580'' | = | 2° 23' | 8820'' | = | 2° 27' | | | | |
| 900'' | = | 0° 15' | 8640'' | = | 2° 24' | 8880'' | = | 2° 28' | | | | |
| 8460'' | = | 2° 21' | 8700'' | = | 2° 25' | 8940'' | = | 2° 29' | | | | |
| 8520'' | = | 2° 22' | 8760'' | = | 2° 26' | 9000'' | = | 2° 30' | | | | |

| 6 | |
|---|-----|
| 1 | 0.6 |
| 2 | 1.2 |
| 3 | 1.8 |
| 4 | 2.4 |
| 5 | 3.0 |
| 6 | 3.6 |
| 7 | 4.2 |
| 8 | 4.8 |
| 9 | 5.4 |

| 5 | |
|---|-----|
| 1 | 0.5 |
| 2 | 1.0 |
| 3 | 1.5 |
| 4 | 2.0 |
| 5 | 2.5 |
| 6 | 3.0 |
| 7 | 3.5 |
| 8 | 4.0 |
| 9 | 4.5 |

| 4 | |
|---|-----|
| 1 | 0.4 |
| 2 | 0.8 |
| 3 | 1.2 |
| 4 | 1.6 |
| 5 | 2.0 |
| 6 | 2.4 |
| 7 | 2.8 |
| 8 | 3.2 |
| 9 | 3.6 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|-------|----------|-----|----------------|------|------|----------------|------|------|------|------|-------|
| 900 | 95 424 | 429 | 434 | 439 | 444 | 448 | 453 | 458 | 463 | 468 | |
| 901 | | 472 | 477 | 482 | 487 | 492 | 497 | 501 | 506 | 511 | |
| 902 | | 521 | 525 | 530 | 535 | 540 | 545 | 550 | 554 | 559 | |
| 903 | | 569 | 574 | 578 | 583 | 588 | 593 | 598 | 602 | 607 | |
| 904 | | 617 | 622 | 626 | 631 | 636 | 641 | 646 | 650 | 655 | |
| 905 | | 665 | 670 | 674 | 679 | 684 | 689 | 694 | 698 | 703 | |
| 906 | | 713 | 718 | 722 | 727 | 732 | 737 | 742 | 746 | 751 | |
| 907 | | 761 | 766 | 770 | 775 | 780 | 785 | 789 | 794 | 799 | |
| 908 | | 809 | 813 | 818 | 823 | 828 | 832 | 837 | 842 | 847 | |
| 909 | | 856 | 861 | 866 | 871 | 875 | 880 | 885 | 890 | 895 | |
| 910 | | 904 | 909 | 914 | 918 | 923 | 928 | 933 | 938 | 942 | |
| 911 | | 952 | 957 | 961 | 966 | 971 | 976 | 980 | 985 | 990 | |
| 912 | | 999 | *004 | *009 | *014 | *019 | *023 | *028 | *033 | *038 | *042 |
| 913 | 96 | 047 | 052 | 057 | 061 | 066 | 071 | 076 | 080 | 085 | 090 |
| 914 | | 095 | 099 | 104 | 109 | 114 | 118 | 123 | 128 | 133 | 137 |
| 915 | | 142 | 147 | 152 | 156 | 161 | 166 | 171 | 175 | 180 | 185 |
| 916 | | 190 | 194 | 199 | 204 | 209 | 213 | 218 | 223 | 227 | 232 |
| 917 | | 237 | 242 | 246 | 251 | 256 | 261 | 265 | 270 | 275 | 280 |
| 918 | | 284 | 289 | 294 | 298 | 303 | 308 | 313 | 317 | 322 | 327 |
| 919 | | 332 | 336 | 341 | 346 | 350 | 355 | 360 | 365 | 369 | 374 |
| 920 | | 379 | 384 | 388 | 393 | 398 | 402 | 407 | 412 | 417 | 421 |
| 921 | | 426 | 431 | 435 | 440 | 445 | 450 | 454 | 459 | 464 | 468 |
| 922 | | 473 | 478 | 483 | 487 | 492 | 497 | 501 | 506 | 511 | 515 |
| 923 | | 520 | 525 | 530 | 534 | 539 | 544 | 548 | 553 | 558 | 562 |
| 924 | | 567 | 572 | 577 | 581 | 586 | 591 | 595 | 600 | 605 | 609 |
| 925 | | 614 | 619 | 624 | 628 | 633 | 638 | 642 | 647 | 652 | 656 |
| 926 | | 661 | 666 | 670 | 675 | 680 | 685 | 689 | 694 | 699 | 703 |
| 927 | | 708 | 713 | 717 | 722 | 727 | 731 | 736 | 741 | 745 | 750 |
| 928 | | 755 | 759 | 764 | 769 | 774 | 778 | 783 | 788 | 792 | 797 |
| 929 | | 802 | 806 | 811 | 816 | 820 | 825 | 830 | 834 | 839 | 844 |
| 930 | | 848 | 853 | 858 | 862 | 867 | 872 | 876 | 881 | 886 | 890 |
| 931 | | 895 | 900 | 904 | 909 | 914 | 918 | 923 | 928 | 932 | 937 |
| 932 | | 942 | 946 | 951 | 956 | 960 | 965 | 970 | 974 | 979 | 984 |
| 933 | | 988 | 993 | 997 | *002 | *007 | *011 | *016 | *021 | *025 | *030 |
| 934 | 97 | 035 | 039 | 044 | 049 | 053 | 058 | 063 | 067 | 072 | 077 |
| 935 | | 081 | 086 | 090 | 095 | 100 | 104 | 109 | 114 | 118 | 123 |
| 936 | | 128 | 132 | 137 | 142 | 146 | 151 | 155 | 160 | 165 | 169 |
| 937 | | 174 | 179 | 183 | 188 | 192 | 197 | 202 | 206 | 211 | 216 |
| 938 | | 220 | 225 | 230 | 234 | 239 | 243 | 248 | 253 | 257 | 262 |
| 939 | | 267 | 271 | 276 | 280 | 285 | 290 | 294 | 299 | 304 | 308 |
| 940 | | 313 | 317 | 322 | 327 | 331 | 336 | 340 | 345 | 350 | 354 |
| 941 | | 359 | 364 | 368 | 373 | 377 | 382 | 387 | 391 | 396 | 400 |
| 942 | | 405 | 410 | 414 | 419 | 424 | 428 | 433 | 437 | 442 | 447 |
| 943 | | 451 | 456 | 460 | 465 | 470 | 474 | 479 | 483 | 488 | 493 |
| 944 | | 497 | 502 | 506 | 511 | 516 | 520 | 525 | 529 | 534 | 439 |
| 945 | | 543 | 548 | 552 | 557 | 562 | 566 | 571 | 575 | 580 | 585 |
| 946 | | 589 | 594 | 598 | 603 | 607 | 612 | 617 | 621 | 626 | 630 |
| 947 | | 635 | 640 | 644 | 649 | 653 | 658 | 663 | 667 | 672 | 676 |
| 948 | | 681 | 685 | 690 | 695 | 699 | 704 | 708 | 713 | 717 | 722 |
| 949 | | 727 | 731 | 736 | 740 | 745 | 749 | 754 | 759 | 763 | 768 |
| 950 | | 772 | 777 | 782 | 786 | 791 | 795 | 800 | 804 | 809 | 813 |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 900" | = 0° 15' | | 9120" = 2° 32' | | | 9360" = 2° 36' | | | | | |
| 9000" | = 2° 30' | | 9180" = 2° 33' | | | 9420" = 2° 37' | | | | | |
| 9060" | = 2° 31' | | 9240" = 2° 34' | | | 9480" = 2° 38' | | | | | |
| | | | 9300" = 2° 35' | | | | | | | | |

| 5 | |
|---|-----|
| 1 | 0.5 |
| 2 | 1.0 |
| 3 | 1.5 |
| 4 | 2.0 |
| 5 | 2.5 |
| 6 | 3.0 |
| 7 | 3.5 |
| 8 | 4.0 |
| 9 | 4.5 |

| 4 | |
|---|-----|
| 1 | 0.4 |
| 2 | 0.8 |
| 3 | 1.2 |
| 4 | 1.6 |
| 5 | 2.0 |
| 6 | 2.4 |
| 7 | 2.8 |
| 8 | 3.2 |
| 9 | 3.6 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. |
|------|--------|-----|-----|------|------|------|------|------|------|------|-------|
| 950 | 97 772 | 777 | 782 | 786 | 791 | 795 | 800 | 804 | 809 | 813 | |
| 951 | 818 | 823 | 827 | 832 | 836 | 841 | 845 | 850 | 855 | 859 | |
| 952 | 864 | 868 | 873 | 877 | 882 | 886 | 891 | 896 | 900 | 905 | |
| 953 | 909 | 914 | 918 | 923 | 928 | 932 | 937 | 941 | 946 | 950 | |
| 954 | 955 | 959 | 964 | 968 | 973 | 978 | 982 | 987 | 991 | 996 | |
| 955 | 98 000 | 005 | 009 | 014 | 019 | 023 | 028 | 032 | 037 | 041 | |
| 956 | 046 | 050 | 055 | 059 | 064 | 068 | 073 | 078 | 082 | 087 | |
| 957 | 091 | 096 | 100 | 105 | 109 | 114 | 118 | 123 | 127 | 132 | |
| 958 | 137 | 141 | 146 | 150 | 155 | 159 | 164 | 168 | 173 | 177 | |
| 959 | 182 | 186 | 191 | 195 | 200 | 204 | 209 | 214 | 218 | 223 | |
| 960 | 227 | 232 | 236 | 241 | 245 | 250 | 254 | 259 | 263 | 268 | |
| 961 | 272 | 277 | 281 | 286 | 290 | 295 | 299 | 304 | 308 | 313 | |
| 962 | 318 | 322 | 327 | 331 | 336 | 340 | 345 | 349 | 354 | 358 | |
| 963 | 363 | 367 | 372 | 376 | 381 | 385 | 390 | 394 | 399 | 403 | |
| 964 | 408 | 412 | 417 | 421 | 426 | 430 | 435 | 439 | 444 | 448 | |
| 965 | 453 | 457 | 462 | 466 | 471 | 475 | 480 | 484 | 489 | 493 | |
| 966 | 498 | 502 | 507 | 511 | 516 | 520 | 525 | 529 | 534 | 538 | |
| 967 | 543 | 547 | 552 | 556 | 561 | 565 | 570 | 574 | 579 | 583 | |
| 968 | 588 | 592 | 597 | 601 | 605 | 610 | 614 | 619 | 623 | 628 | |
| 969 | 632 | 637 | 641 | 646 | 650 | 655 | 659 | 664 | 668 | 673 | |
| 970 | 677 | 682 | 686 | 691 | 695 | 700 | 704 | 709 | 713 | 717 | |
| 971 | 722 | 726 | 731 | 735 | 740 | 744 | 749 | 753 | 758 | 762 | |
| 972 | 767 | 771 | 776 | 780 | 784 | 789 | 793 | 798 | 802 | 807 | |
| 973 | 811 | 816 | 820 | 825 | 829 | 834 | 838 | 843 | 847 | 851 | |
| 974 | 856 | 860 | 865 | 869 | 874 | 878 | 883 | 887 | 892 | 896 | |
| 975 | 900 | 905 | 909 | 914 | 918 | 923 | 927 | 932 | 936 | 941 | |
| 976 | 945 | 949 | 954 | 958 | 963 | 967 | 972 | 976 | 981 | 985 | |
| 977 | 989 | 994 | 998 | *003 | *007 | *012 | *016 | *021 | *025 | *029 | |
| 978 | 99 034 | 038 | 043 | 047 | 052 | 056 | 061 | 065 | 069 | 074 | |
| 979 | 078 | 083 | 087 | 092 | 096 | 100 | 105 | 109 | 114 | 118 | |
| 980 | 123 | 127 | 131 | 136 | 140 | 145 | 149 | 154 | 158 | 162 | |
| 981 | 167 | 171 | 176 | 180 | 185 | 189 | 193 | 198 | 202 | 207 | |
| 982 | 211 | 216 | 220 | 224 | 229 | 233 | 238 | 242 | 247 | 251 | |
| 983 | 255 | 260 | 264 | 269 | 273 | 277 | 282 | 286 | 291 | 295 | |
| 984 | 300 | 304 | 308 | 313 | 317 | 322 | 326 | 330 | 335 | 339 | |
| 985 | 344 | 348 | 352 | 357 | 361 | 366 | 370 | 374 | 379 | 383 | |
| 986 | 388 | 392 | 396 | 401 | 405 | 410 | 414 | 419 | 423 | 427 | |
| 987 | 432 | 436 | 441 | 445 | 449 | 454 | 458 | 463 | 467 | 471 | |
| 988 | 476 | 480 | 484 | 489 | 493 | 498 | 502 | 506 | 511 | 515 | |
| 989 | 520 | 524 | 528 | 533 | 537 | 542 | 546 | 550 | 555 | 559 | |
| 990 | 564 | 568 | 572 | 577 | 581 | 585 | 590 | 594 | 599 | 603 | |
| 991 | 607 | 612 | 616 | 621 | 625 | 629 | 634 | 638 | 642 | 647 | |
| 992 | 651 | 656 | 660 | 664 | 669 | 673 | 677 | 682 | 686 | 691 | |
| 993 | 695 | 699 | 704 | 708 | 712 | 717 | 721 | 726 | 730 | 734 | |
| 994 | 739 | 743 | 747 | 752 | 756 | 760 | 765 | 769 | 774 | 778 | |
| 995 | 782 | 787 | 791 | 795 | 800 | 804 | 808 | 813 | 817 | 822 | |
| 996 | 826 | 830 | 835 | 839 | 843 | 848 | 852 | 856 | 861 | 865 | |
| 997 | 870 | 874 | 878 | 883 | 887 | 891 | 896 | 900 | 904 | 909 | |
| 998 | 913 | 917 | 922 | 926 | 930 | 935 | 939 | 944 | 948 | 952 | |
| 999 | 957 | 961 | 965 | 970 | 974 | 978 | 983 | 987 | 991 | 996 | |
| 1000 | 00 000 | 004 | 009 | 013 | 017 | 022 | 026 | 030 | 035 | 039 | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|----------|---|---|---|---|---|---|---|---|---|
| 900" | = 0° 15' | | | | | | | | | |
| 960" | = 0° 16' | | | | | | | | | |
| 9480" | = 2° 38' | | | | | | | | | |
| 9540" | = 2° 39' | | | | | | | | | |
| 9600" | = 2° 40' | | | | | | | | | |
| 9660" | = 2° 41' | | | | | | | | | |
| 9720" | = 2° 42' | | | | | | | | | |
| 9780" | = 2° 43' | | | | | | | | | |
| 9840" | = 2° 44' | | | | | | | | | |
| 9900" | = 2° 45' | | | | | | | | | |
| 9960" | = 2° 46' | | | | | | | | | |

| | 5 |
|---|-----|
| 1 | 0.5 |
| 2 | 1.0 |
| 3 | 1.5 |
| 4 | 2.0 |
| 5 | 2.5 |
| 6 | 3.0 |
| 7 | 3.5 |
| 8 | 4.0 |
| 9 | 4.5 |

| | 4 |
|---|-----|
| 1 | 0.4 |
| 2 | 0.8 |
| 3 | 1.2 |
| 4 | 1.6 |
| 5 | 2.0 |
| 6 | 2.4 |
| 7 | 2.8 |
| 8 | 3.2 |
| 9 | 3.6 |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|--------|-----|--------|--------|------|--------|--------|------|--------|------|------|-------|-----------|
| 1000 | 000 | 000 | 043 | 087 | 130 | 174 | 217 | 260 | 304 | 347 | 391 | |
| 1001 | | 434 | 477 | 521 | 564 | 608 | 651 | 694 | 738 | 781 | 824 | |
| 1002 | | 868 | 911 | 954 | 998 | *041 | *084 | *128 | *171 | *214 | *258 | |
| 1003 | 001 | 301 | 344 | 388 | 431 | 474 | 517 | 561 | 604 | 647 | 690 | |
| 1004 | | 734 | 777 | 820 | 863 | 907 | 950 | 993 | *036 | *080 | *123 | |
| 1005 | 002 | 166 | 209 | 252 | 296 | 339 | 382 | 425 | 468 | 512 | 555 | 44 |
| 1006 | | 598 | 641 | 684 | 727 | 771 | 814 | 857 | 900 | 943 | 986 | 1 4.4 |
| 1007 | 003 | 029 | 073 | 116 | 159 | 202 | 245 | 288 | 331 | 374 | 417 | 2 8.8 |
| 1008 | | 461 | 504 | 547 | 590 | 633 | 676 | 719 | 762 | 805 | 848 | 3 13.2 |
| 1009 | | 891 | 934 | 977 | *020 | *063 | *106 | *149 | *192 | *235 | *278 | 4 17.6 |
| 1010 | 004 | 321 | 364 | 407 | 450 | 493 | 536 | 579 | 622 | 665 | 708 | 5 22.0 |
| 1011 | | 751 | 794 | 837 | 880 | 923 | 966 | *009 | *052 | *095 | *138 | 6 26.4 |
| 1012 | 005 | 181 | 223 | 266 | 309 | 352 | 395 | 438 | 481 | 524 | 567 | 7 30.8 |
| 1013 | | 609 | 652 | 695 | 738 | 781 | 824 | 867 | 909 | 952 | 995 | 8 35.2 |
| 1014 | 006 | 038 | 081 | 124 | 166 | 209 | 252 | 295 | 338 | 380 | 423 | 9 39.6 |
| 1015 | | 466 | 509 | 552 | 594 | 637 | 680 | 723 | 765 | 808 | 851 | |
| 1016 | | 894 | 936 | 979 | *022 | *065 | *107 | *150 | *193 | *236 | *278 | |
| 1017 | 007 | 321 | 364 | 406 | 449 | 492 | 534 | 577 | 620 | 662 | 705 | |
| 1018 | | 748 | 790 | 833 | 876 | 918 | 961 | *004 | *046 | *089 | *132 | 43 |
| 1019 | 008 | 174 | 217 | 259 | 302 | 345 | 387 | 430 | 472 | 515 | 558 | 1 4.3 |
| 1020 | | 600 | 643 | 685 | 728 | 770 | 813 | 856 | 898 | 941 | 983 | 2 8.6 |
| 1021 | 009 | 026 | 068 | 111 | 153 | 196 | 238 | 281 | 323 | 366 | 408 | 3 12.9 |
| 1022 | | 451 | 493 | 536 | 578 | 621 | 663 | 706 | 748 | 791 | 833 | 4 17.2 |
| 1023 | | 876 | 918 | 961 | *003 | *045 | *088 | *130 | *173 | *215 | *258 | 5 21.5 |
| 1024 | 010 | 300 | 342 | 385 | 427 | 470 | 512 | 554 | 597 | 639 | 681 | 6 25.8 |
| 1025 | | 724 | 766 | 809 | 851 | 893 | 936 | 978 | *020 | *063 | *105 | 7 30.1 |
| 1026 | 011 | 147 | 190 | 232 | 274 | 317 | 359 | 401 | 444 | 486 | 528 | 8 34.4 |
| 1027 | | 570 | 613 | 655 | 697 | 740 | 782 | 824 | 866 | 909 | 951 | 9 38.7 |
| 1028 | | 993 | *035 | *078 | *120 | *162 | *204 | *247 | *289 | *331 | *373 | |
| 1029 | 012 | 415 | 458 | 500 | 542 | 584 | 626 | 669 | 711 | 753 | 795 | |
| 1030 | | 837 | 879 | 922 | 964 | *006 | *048 | *090 | *132 | *174 | *217 | 42 |
| 1031 | 013 | 259 | 301 | 343 | 385 | 427 | 469 | 511 | 553 | 596 | 638 | 1 4.2 |
| 1032 | | 680 | 722 | 764 | 806 | 848 | 890 | 932 | 974 | *016 | *058 | 2 8.4 |
| 1033 | 014 | 100 | 142 | 184 | 226 | 268 | 310 | 353 | 395 | 437 | 479 | 3 12.6 |
| 1034 | | 521 | 563 | 605 | 647 | 689 | 730 | 772 | 814 | 856 | 898 | 4 16.8 |
| 1035 | | 940 | 982 | *024 | *066 | *108 | *150 | *192 | *234 | *276 | *318 | 5 21.0 |
| 1036 | 015 | 360 | 402 | 444 | 485 | 527 | 569 | 611 | 653 | 695 | 737 | 6 25.2 |
| 1037 | | 779 | 821 | 863 | 904 | 946 | 988 | *030 | *072 | *114 | *156 | 7 29.4 |
| 1038 | 016 | 197 | 239 | 281 | 323 | 365 | 407 | 448 | 490 | 532 | 574 | 8 33.6 |
| 1039 | | 616 | 657 | 699 | 741 | 783 | 824 | 866 | 908 | 950 | 992 | 9 37.8 |
| 1040 | 017 | 033 | 075 | 117 | 159 | 200 | 242 | 284 | 326 | 367 | 409 | |
| 1041 | | 451 | 492 | 534 | 576 | 618 | 659 | 701 | 743 | 784 | 826 | |
| 1042 | | 868 | 909 | 951 | 993 | *034 | *076 | *118 | *159 | *201 | *243 | |
| 1043 | 018 | 284 | 326 | 368 | 409 | 451 | 492 | 534 | 576 | 617 | 659 | 41 |
| 1044 | | 700 | 742 | 784 | 825 | 867 | 908 | 950 | 992 | *033 | *075 | 1 4.1 |
| 1045 | 019 | 116 | 158 | 199 | 241 | 282 | 324 | 366 | 407 | 449 | 490 | 2 8.2 |
| 1046 | | 532 | 573 | 615 | 656 | 698 | 739 | 781 | 822 | 864 | 905 | 3 12.3 |
| 1047 | | 947 | 988 | *030 | *071 | *113 | *154 | *195 | *237 | *278 | *320 | 4 16.4 |
| 1048 | 020 | 361 | 403 | 444 | 486 | 527 | 566 | 610 | 651 | 693 | 734 | 5 20.5 |
| 1049 | | 775 | 817 | 858 | 900 | 941 | 982 | *024 | *065 | *107 | *148 | 6 24.6 |
| 1050 | 021 | 189 | 231 | 272 | 313 | 355 | 396 | 437 | 479 | 520 | 561 | 7 28.7 |
| | | | | | | | | | | | | 8 32.8 |
| | | | | | | | | | | | | 9 36.9 |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 9960" | = | 2° 46' | 10140" | = | 2° 49' | 10380" | = | 2° 53' | | | | |
| 10020" | = | 2° 47' | 10200" | = | 2° 50' | 10440" | = | 2° 54' | | | | |
| 10080" | = | 2° 48' | 10260" | = | 2° 51' | 10500" | = | 2° 55' | | | | |
| | | | 10320" | = | 2° 52' | | | | | | | |

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | P. P. | |
|--------|-----|--------|------|--------|------|--------|------|--------|------|-------|-------|--------|
| 1050 | 021 | 189 | 231 | 272 | 313 | 355 | 396 | 437 | 479 | 520 | 561 | |
| 1051 | | 603 | 644 | 685 | 727 | 768 | 809 | 851 | 892 | 933 | 974 | |
| 1052 | 022 | 016 | 057 | 098 | 140 | 181 | 222 | 263 | 305 | 346 | 387 | |
| 1053 | | 428 | 470 | 511 | 552 | 593 | 635 | 676 | 717 | 758 | 799 | |
| 1054 | | 841 | 882 | 923 | 964 | *005 | *047 | *088 | *129 | *170 | *211 | |
| 1055 | 023 | 252 | 294 | 335 | 376 | 417 | 458 | 499 | 541 | 582 | 623 | 42 |
| 1056 | | 664 | 705 | 746 | 787 | 828 | 870 | 911 | 952 | 993 | *034 | 1 4.2 |
| 1057 | 024 | 075 | 116 | 157 | 198 | 239 | 280 | 321 | 363 | 404 | 445 | 2 8.4 |
| 1058 | | 486 | 527 | 568 | 609 | 650 | 691 | 732 | 773 | 814 | 855 | 3 12.6 |
| 1059 | | 896 | 937 | 978 | *019 | *060 | *101 | *142 | *183 | *224 | *265 | 4 16.8 |
| 1060 | 025 | 306 | 347 | 388 | 429 | 470 | 511 | 552 | 593 | 634 | 674 | 5 21.0 |
| 1061 | | 715 | 756 | 797 | 838 | 879 | 920 | 961 | 002 | *043 | *084 | 6 25.2 |
| 1062 | 026 | 125 | 165 | 206 | 247 | 288 | 329 | 370 | 411 | 452 | 492 | 7 29.4 |
| 1063 | | 533 | 574 | 615 | 656 | 697 | 737 | 778 | 819 | 860 | 901 | 8 33.6 |
| 1064 | | 942 | 982 | *023 | *064 | *105 | *146 | *186 | *227 | *268 | *309 | 9 37.8 |
| 1065 | 027 | 350 | 390 | 431 | 472 | 513 | 553 | 594 | 635 | 676 | 716 | |
| 1066 | | 757 | 798 | 839 | 879 | 920 | 961 | *002 | *042 | *083 | *124 | |
| 1067 | 028 | 164 | 205 | 246 | 287 | 327 | 368 | 409 | 449 | 490 | 531 | |
| 1068 | | 571 | 612 | 653 | 693 | 734 | 775 | 815 | 856 | 896 | 937 | 41 |
| 1069 | | 978 | *018 | *059 | *100 | *140 | *181 | *221 | *262 | *303 | *343 | 1 4.1 |
| 1070 | 029 | 384 | 424 | 465 | 506 | 546 | 587 | 627 | 668 | 708 | 749 | 2 8.2 |
| 1071 | | 789 | 830 | 871 | 911 | 952 | 992 | *033 | *073 | *114 | *154 | 3 12.3 |
| 1072 | 030 | 195 | 235 | 276 | 316 | 357 | 397 | 438 | 478 | 519 | 559 | 4 16.4 |
| 1073 | | 600 | 640 | 681 | 721 | 762 | 802 | 843 | 883 | 923 | 964 | 5 20.5 |
| 1074 | 031 | 004 | 045 | 085 | 126 | 166 | 206 | 247 | 287 | 328 | 368 | 6 24.6 |
| 1075 | | 408 | 449 | 489 | 530 | 570 | 610 | 651 | 691 | 732 | 772 | 7 28.7 |
| 1076 | | 812 | 853 | 893 | 933 | 974 | *014 | *054 | *095 | *135 | *175 | 8 32.8 |
| 1077 | 032 | 216 | 256 | 296 | 337 | 377 | 417 | 458 | 498 | 538 | 578 | 9 36.9 |
| 1078 | | 619 | 659 | 699 | 740 | 780 | 820 | 860 | 901 | 941 | 981 | |
| 1079 | 033 | 021 | 062 | 102 | 142 | 182 | 223 | 263 | 303 | 343 | 384 | |
| 1080 | | 424 | 464 | 504 | 544 | 585 | 625 | 665 | 705 | 745 | 786 | 40 |
| 1081 | | 826 | 866 | 906 | 946 | 986 | *027 | *067 | *107 | *147 | *187 | 1 4.0 |
| 1082 | 034 | 227 | 267 | 308 | 348 | 388 | 428 | 468 | 508 | 548 | 588 | 2 8.0 |
| 1083 | | 628 | 669 | 709 | 749 | 789 | 829 | 869 | 909 | 949 | 989 | 3 12.0 |
| 1084 | 035 | 029 | 069 | 109 | 149 | 190 | 230 | 270 | 310 | 350 | 390 | 4 16.0 |
| 1085 | | 430 | 470 | 510 | 550 | 590 | 630 | 670 | 710 | 750 | 790 | 5 20.0 |
| 1086 | | 830 | 870 | 910 | 950 | 990 | *030 | *070 | *110 | *150 | *190 | 6 24.0 |
| 1087 | 036 | 230 | 269 | 309 | 349 | 389 | 429 | 469 | 509 | 549 | 589 | 7 28.0 |
| 1088 | | 629 | 669 | 709 | 749 | 789 | 828 | 868 | 908 | 948 | 988 | 8 32.0 |
| 1089 | 037 | 028 | 068 | 108 | 148 | 187 | 227 | 267 | 307 | 347 | 387 | 9 36.0 |
| 1090 | | 426 | 466 | 506 | 546 | 586 | 626 | 665 | 705 | 745 | 785 | |
| 1091 | | 825 | 865 | 904 | 944 | 984 | *024 | *064 | *103 | *143 | *183 | |
| 1092 | 038 | 223 | 262 | 302 | 342 | 382 | 421 | 461 | 501 | 541 | 580 | |
| 1093 | | 620 | 660 | 700 | 739 | 779 | 819 | 859 | 898 | 938 | 978 | 39 |
| 1094 | 039 | 017 | 057 | 097 | 136 | 176 | 216 | 255 | 295 | 335 | 374 | 1 3.9 |
| 1095 | | 414 | 454 | 493 | 533 | 573 | 612 | 652 | 692 | 731 | 771 | 2 7.8 |
| 1096 | | 811 | 850 | 890 | 929 | 969 | *009 | *048 | *088 | *127 | *167 | 3 11.7 |
| 1097 | 040 | 207 | 246 | 286 | 325 | 365 | 405 | 444 | 484 | 523 | 563 | 4 15.6 |
| 1098 | | 602 | 642 | 681 | 721 | 761 | 800 | 840 | 879 | 919 | 958 | 5 19.5 |
| 1099 | | 998 | *037 | *077 | *116 | *156 | *195 | *235 | *274 | *314 | *353 | 6 23.4 |
| 1100 | 041 | 393 | 432 | 472 | 511 | 551 | 590 | 630 | 669 | 708 | 748 | 7 27.3 |
| | | | | | | | | | | | | 8 31.2 |
| | | | | | | | | | | | | 9 35.1 |
| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 10500" | = | 2° 55' | | 10680" | = | 2° 58' | | 10860" | = | 3° 1' | | |
| 10560" | = | 2° 56' | | 10740" | = | 2° 59' | | 10920" | = | 3° 2' | | |
| 10620" | = | 2° 57' | | 10800" | = | 3° 0' | | 10980" | = | 3° 3' | | |

Häufig vorkommende Konstanten.

1. Verhältnis zwischen der Peripherie und dem Durchmesser eines Kreises.

| | | | |
|---------------------------------------|--|---|--|
| $\pi = 3.141\ 593$ | $\log \pi = 0.497\ 150$ | $\sqrt{\pi} = 1.772\ 454$ | $\log \sqrt{\pi} = 0.248\ 575$ |
| $\frac{4\pi}{3} = 4.188\ 790$ | $\log \frac{4\pi}{3} = 0.622\ 089$ | $\frac{1}{\sqrt{\pi}} = 0.564\ 190$ | $\log \frac{1}{\sqrt{\pi}} = 0.751\ 425-1$ |
| $\frac{\pi}{6} = 0.523\ 599$ | $\log \frac{\pi}{6} = 0.718\ 999-1$ | $\sqrt[3]{\pi} = 1.464\ 592$ | $\log \sqrt[3]{\pi} = 0.165\ 717$ |
| $\frac{1}{\pi} = 0.318\ 310$ | $\log \frac{1}{\pi} = 0.502\ 850-1$ | $\frac{1}{\sqrt[3]{\pi}} = 0.682\ 784$ | $\log \frac{1}{\sqrt[3]{\pi}} = 0.834\ 283-1$ |
| $\pi\sqrt{2} = 4.442\ 883$ | $\log \pi\sqrt{2} = 0.647\ 665$ | $\sqrt[3]{\frac{\pi}{6}} = 0.805\ 996$ | $\log \sqrt[3]{\frac{\pi}{6}} = 0.906\ 333-1$ |
| $\frac{\pi}{\sqrt{2}} = 2.221\ 441$ | $\log \frac{\pi}{\sqrt{2}} = 0.346\ 635$ | $\sqrt[3]{\frac{4\pi}{3}} = 1.611\ 992$ | $\log \sqrt[3]{\frac{4\pi}{3}} = 0.207\ 363-1$ |
| $\frac{1}{\pi} \sqrt{2} = 0.450\ 158$ | $\log \frac{1}{\pi} \sqrt{2} = 0.653\ 365-1$ | $\sqrt[3]{\frac{3}{4\pi}} = 0.620\ 350$ | $\log \sqrt[3]{\frac{3}{4\pi}} = 0.792\ 637-1$ |
| $\pi^2 = 9.869\ 604$ | $\log \pi^2 = 0.994\ 300$ | | |
| $\frac{1}{\pi^2} = 0.101\ 321$ | $\log \frac{1}{\pi^2} = 0.005\ 700-1$ | | |

2. Der dem Halbmesser gleiche Kreisbogen.

$$\rho = 57^\circ 17' 44.806''$$

| | | |
|----------------------------|---------------------------|----------------------------|
| $\rho^0 = 57.295\ 78$ | $\rho' = 3437.747$ | $\rho'' = 206264.8$ |
| $\log \rho^0 = 1.758\ 123$ | $\log \rho' = 3.536\ 274$ | $\log \rho'' = 5.314\ 425$ |

3. Verwandlung der gemeinen Logarithmen in natürliche und der natürlichen Logarithmen in gemeine.

Die Basis der natürlichen Logarithmen ist $e = 2.718\ 282$.

$$\log \text{ nat } 10 = 2.302\ 585$$

$$\log \text{ vulg } e = 0.434\ 294$$

$$\log \text{ nat } N = 2.302\ 585 \log \text{ vulg } N$$

$$\log \text{ vulg } N = 0.434\ 294 \log \text{ nat } N$$

| Vielfache von 2.302 585 | | | | Vielfache von 0.434 294 | | | |
|-------------------------|------------|----|------------|-------------------------|-----------|----|-----------|
| 1 | 2.302 585 | 6 | 13.815 511 | 1 | 0.434 294 | 6 | 2.605 767 |
| 2 | 4.605 170 | 7 | 16.118 096 | 2 | 0.868 589 | 7 | 3.040 061 |
| 3 | 6.907 755 | 8 | 18.420 681 | 3 | 1.302 883 | 8 | 3.474 356 |
| 4 | 9.210 340 | 9 | 20.723 266 | 4 | 1.737 178 | 9 | 3.908 650 |
| 5 | 11.512 926 | 10 | 23.025 851 | 5 | 2.171 472 | 10 | 4.342 945 |

II.

Gemeine Logarithmen

der

Winkelfunktionen von Minute zu Minute.

| Sek. | M | sin 0° | tang 0° | cot 0° | cos 0° | ' |
|------|----|----------|----------|-----------|-----------|----|
| 0 | 0 | — ∞ | — ∞ | + ∞ | 10.00 000 | 60 |
| 60 | 1 | 6.46 373 | 6.46 373 | 13.53 627 | 10.00 000 | 59 |
| 120 | 2 | 6.76 476 | 6.76 476 | 13.23 524 | 10.00 000 | 58 |
| 180 | 3 | 6.94 085 | 6.94 085 | 13.05 915 | 10.00 000 | 57 |
| 240 | 4 | 7.06 579 | 7.06 579 | 12.93 421 | 10.00 000 | 56 |
| 300 | 5 | 7.16 270 | 7.16 270 | 12.83 730 | 10.00 000 | 55 |
| 360 | 6 | 7.24 188 | 7.24 188 | 12.75 812 | 10.00 000 | 54 |
| 420 | 7 | 7.30 882 | 7.30 882 | 12.69 118 | 10.00 000 | 53 |
| 480 | 8 | 7.36 682 | 7.36 682 | 12.63 318 | 10.00 000 | 52 |
| 540 | 9 | 7.41 797 | 7.41 797 | 12.58 203 | 10.00 000 | 51 |
| 600 | 10 | 7.46 373 | 7.46 373 | 12.53 627 | 10.00 000 | 50 |
| 660 | 11 | 7.50 512 | 7.50 512 | 12.49 488 | 10.00 000 | 49 |
| 720 | 12 | 7.54 291 | 7.54 291 | 12.45 709 | 10.00 000 | 48 |
| 780 | 13 | 7.57 767 | 7.57 767 | 12.42 233 | 10.00 000 | 47 |
| 840 | 14 | 7.60 985 | 7.60 986 | 12.39 014 | 10.00 000 | 46 |
| 900 | 15 | 7.63 982 | 7.63 982 | 12.36 018 | 10.00 000 | 45 |
| 960 | 16 | 7.66 784 | 7.66 785 | 12.33 215 | 10.00 000 | 44 |
| 1020 | 17 | 7.69 417 | 7.69 418 | 12.30 582 | 9.99 999 | 43 |
| 1080 | 18 | 7.71 900 | 7.71 900 | 12.28 100 | 9.99 999 | 42 |
| 1140 | 19 | 7.74 248 | 7.74 248 | 12.25 752 | 9.99 999 | 41 |
| 1200 | 20 | 7.76 475 | 7.76 476 | 12.23 524 | 9.99 999 | 40 |
| 1260 | 21 | 7.78 594 | 7.78 595 | 12.21 405 | 9.99 999 | 39 |
| 1320 | 22 | 7.80 615 | 7.80 615 | 12.19 385 | 9.99 999 | 38 |
| 1380 | 23 | 7.82 545 | 7.82 546 | 12.17 454 | 9.99 999 | 37 |
| 1440 | 24 | 7.84 393 | 7.84 394 | 12.15 606 | 9.99 999 | 36 |
| 1500 | 25 | 7.86 166 | 7.86 167 | 12.13 833 | 9.99 999 | 35 |
| 1560 | 26 | 7.87 870 | 7.87 871 | 12.12 129 | 9.99 999 | 34 |
| 1620 | 27 | 7.89 509 | 7.89 510 | 12.10 490 | 9.99 999 | 33 |
| 1680 | 28 | 7.91 088 | 7.91 089 | 12.08 911 | 9.99 999 | 32 |
| 1740 | 29 | 7.92 612 | 7.92 613 | 12.07 387 | 9.99 998 | 31 |
| 1800 | 30 | 7.94 084 | 7.94 086 | 12.05 914 | 9.99 998 | 30 |
| 1860 | 31 | 7.95 508 | 7.95 510 | 12.04 490 | 9.99 998 | 29 |
| 1920 | 32 | 7.96 887 | 7.96 889 | 12.03 111 | 9.99 998 | 28 |
| 1980 | 33 | 7.98 223 | 7.98 225 | 12.01 775 | 9.99 998 | 27 |
| 2040 | 34 | 7.99 520 | 7.99 522 | 12.00 478 | 9.99 998 | 26 |
| 2100 | 35 | 8.00 779 | 8.00 781 | 11.99 219 | 9.99 998 | 25 |
| 2160 | 36 | 8.02 002 | 8.02 004 | 11.97 996 | 9.99 998 | 24 |
| 2220 | 37 | 8.03 192 | 8.03 194 | 11.96 806 | 9.99 997 | 23 |
| 2280 | 38 | 8.04 350 | 8.04 353 | 11.95 647 | 9.99 997 | 22 |
| 2340 | 39 | 8.05 478 | 8.05 481 | 11.94 519 | 9.99 997 | 21 |
| 2400 | 40 | 8.06 578 | 8.06 581 | 11.93 419 | 9.99 997 | 20 |
| 2460 | 41 | 8.07 650 | 8.07 653 | 11.92 347 | 9.99 997 | 19 |
| 2520 | 42 | 8.08 696 | 8.08 700 | 11.91 300 | 9.99 997 | 18 |
| 2580 | 43 | 8.09 718 | 8.09 722 | 11.90 278 | 9.99 997 | 17 |
| 2640 | 44 | 8.10 717 | 8.10 720 | 11.89 280 | 9.99 996 | 16 |
| 2700 | 45 | 8.11 693 | 8.11 696 | 11.88 304 | 9.99 996 | 15 |
| 2760 | 46 | 8.12 647 | 8.12 651 | 11.87 349 | 9.99 996 | 14 |
| 2820 | 47 | 8.13 581 | 8.13 585 | 11.86 415 | 9.99 996 | 13 |
| 2880 | 48 | 8.14 495 | 8.14 500 | 11.85 500 | 9.99 996 | 12 |
| 2940 | 49 | 8.15 391 | 8.15 395 | 11.84 605 | 9.99 996 | 11 |
| 3000 | 50 | 8.16 268 | 8.16 273 | 11.83 727 | 9.99 995 | 10 |
| 3060 | 51 | 8.17 128 | 8.17 133 | 11.82 867 | 9.99 995 | 9 |
| 3120 | 52 | 8.17 971 | 8.17 976 | 11.82 024 | 9.99 995 | 8 |
| 3180 | 53 | 8.18 798 | 8.18 804 | 11.81 196 | 9.99 995 | 7 |
| 3240 | 54 | 8.19 610 | 8.19 616 | 11.80 384 | 9.99 995 | 6 |
| 3300 | 55 | 8.20 407 | 8.20 413 | 11.79 587 | 9.99 994 | 5 |
| 3360 | 56 | 8.21 189 | 8.21 195 | 11.78 805 | 9.99 994 | 4 |
| 3420 | 57 | 8.21 958 | 8.21 964 | 11.78 036 | 9.99 994 | 3 |
| 3480 | 58 | 8.22 713 | 8.22 720 | 11.77 280 | 9.99 994 | 2 |
| 3540 | 59 | 8.23 456 | 8.23 462 | 11.76 538 | 9.99 994 | 1 |
| 3600 | 60 | 8.24 186 | 8.24 192 | 11.75 808 | 9.99 993 | 0 |

log sin x = s (x) + log x"
 log x" = log sin x - s (x)

| x" | s (x) | log sin x |
|------|----------|-----------|
| 0 | 4.68 557 | — ∞ |
| 2409 | 4.68 556 | 8.06 740 |
| 3417 | 4.68 555 | 8.21 920 |
| 3600 | | 8.24 186 |

log tang x = t (x) + log x"
 log x" = log tang x - t(x)

| x" | t (x) | log tang x |
|------|----------|------------|
| 0 | 4.68 557 | — ∞ |
| 200 | 4.68 558 | 6.98 660 |
| 1726 | 4.68 559 | 7.92 263 |
| 2432 | 4.68 560 | 8.07 156 |
| 2976 | 4.68 561 | 8.15 924 |
| 3434 | 4.68 562 | 8.22 142 |
| 3600 | | 8.24 192 |

| Sek. | ' | cos 89° | cot 89° | tang 89° | sin 89° | M |
|------|---|---------|---------|----------|---------|---|
|------|---|---------|---------|----------|---------|---|

| Sek. | M | sin 1° | tang 1° | cot 1° | cos 1° | ' |
|------|----|----------|----------|-----------|----------|----|
| 3600 | 0 | 8.24 186 | 8.24 192 | 11.75 808 | 9.99 993 | 60 |
| 3660 | 1 | 8.24 903 | 8.24 910 | 11.75 090 | 9.99 993 | 59 |
| 3720 | 2 | 8.25 609 | 8.25 616 | 11.74 384 | 9.99 993 | 58 |
| 3780 | 3 | 8.26 304 | 8.26 312 | 11.73 688 | 9.99 993 | 57 |
| 3840 | 4 | 8.26 988 | 8.26 996 | 11.73 004 | 9.99 992 | 56 |
| 3900 | 5 | 8.27 661 | 8.27 669 | 11.72 331 | 9.99 992 | 55 |
| 3960 | 6 | 8.28 324 | 8.28 332 | 11.71 668 | 9.99 992 | 54 |
| 4020 | 7 | 8.28 977 | 8.28 986 | 11.71 014 | 9.99 992 | 53 |
| 4080 | 8 | 8.29 621 | 8.29 629 | 11.70 371 | 9.99 992 | 52 |
| 4140 | 9 | 8.30 255 | 8.30 263 | 11.69 737 | 9.99 991 | 51 |
| 4200 | 10 | 8.30 879 | 8.30 888 | 11.69 112 | 9.99 991 | 50 |
| 4260 | 11 | 8.31 495 | 8.31 505 | 11.68 495 | 9.99 991 | 49 |
| 4320 | 12 | 8.32 103 | 8.32 112 | 11.67 888 | 9.99 990 | 48 |
| 4380 | 13 | 8.32 702 | 8.32 711 | 11.67 289 | 9.99 990 | 47 |
| 4440 | 14 | 8.33 292 | 8.33 302 | 11.66 698 | 9.99 990 | 46 |
| 4500 | 15 | 8.33 875 | 8.33 886 | 11.66 114 | 9.99 990 | 45 |
| 4560 | 16 | 8.34 450 | 8.34 461 | 11.65 539 | 9.99 989 | 44 |
| 4620 | 17 | 8.35 018 | 8.35 029 | 11.64 971 | 9.99 989 | 43 |
| 4680 | 18 | 8.35 578 | 8.35 590 | 11.64 410 | 9.99 989 | 42 |
| 4740 | 19 | 8.36 131 | 8.36 143 | 11.63 857 | 9.99 989 | 41 |
| 4800 | 20 | 8.36 678 | 8.36 689 | 11.63 311 | 9.99 988 | 40 |
| 4860 | 21 | 8.37 217 | 8.37 229 | 11.62 771 | 9.99 988 | 39 |
| 4920 | 22 | 8.37 750 | 8.37 762 | 11.62 238 | 9.99 988 | 38 |
| 4980 | 23 | 8.38 276 | 8.38 289 | 11.61 711 | 9.99 987 | 37 |
| 5040 | 24 | 8.38 796 | 8.38 809 | 11.61 191 | 9.99 987 | 36 |
| 5100 | 25 | 8.39 310 | 8.39 323 | 11.60 677 | 9.99 987 | 35 |
| 5160 | 26 | 8.39 818 | 8.39 832 | 11.60 168 | 9.99 986 | 34 |
| 5220 | 27 | 8.40 320 | 8.40 334 | 11.59 666 | 9.99 986 | 33 |
| 5280 | 28 | 8.40 816 | 8.40 830 | 11.59 170 | 9.99 986 | 32 |
| 5340 | 29 | 8.41 307 | 8.41 321 | 11.58 679 | 9.99 985 | 31 |
| 5400 | 30 | 8.41 792 | 8.41 807 | 11.58 193 | 9.99 985 | 30 |
| 5460 | 31 | 8.42 272 | 8.42 287 | 11.57 713 | 9.99 985 | 29 |
| 5520 | 32 | 8.42 746 | 8.42 762 | 11.57 238 | 9.99 984 | 28 |
| 5580 | 33 | 8.43 216 | 8.43 232 | 11.56 768 | 9.99 984 | 27 |
| 5640 | 34 | 8.43 680 | 8.43 696 | 11.56 304 | 9.99 984 | 26 |
| 5700 | 35 | 8.44 139 | 8.44 156 | 11.55 844 | 9.99 983 | 25 |
| 5760 | 36 | 8.44 594 | 8.44 611 | 11.55 389 | 9.99 983 | 24 |
| 5820 | 37 | 8.45 044 | 8.45 061 | 11.54 939 | 9.99 983 | 23 |
| 5880 | 38 | 8.45 489 | 8.45 507 | 11.54 493 | 9.99 982 | 22 |
| 5940 | 39 | 8.45 930 | 8.45 948 | 11.54 052 | 9.99 982 | 21 |
| 6000 | 40 | 8.46 366 | 8.46 385 | 11.53 615 | 9.99 982 | 20 |
| 6060 | 41 | 8.46 799 | 8.46 817 | 11.53 183 | 9.99 981 | 19 |
| 6120 | 42 | 8.47 226 | 8.47 245 | 11.52 755 | 9.99 981 | 18 |
| 6180 | 43 | 8.47 650 | 8.47 669 | 11.52 331 | 9.99 981 | 17 |
| 6240 | 44 | 8.48 069 | 8.48 089 | 11.51 911 | 9.99 980 | 16 |
| 6300 | 45 | 8.48 485 | 8.48 505 | 11.51 495 | 9.99 980 | 15 |
| 6360 | 46 | 8.48 896 | 8.48 917 | 11.51 083 | 9.99 979 | 14 |
| 6420 | 47 | 8.49 304 | 8.49 325 | 11.50 675 | 9.99 979 | 13 |
| 6480 | 48 | 8.49 708 | 8.49 729 | 11.50 271 | 9.99 979 | 12 |
| 6540 | 49 | 8.50 108 | 8.50 130 | 11.49 870 | 9.99 978 | 11 |
| 6600 | 50 | 8.50 504 | 8.50 527 | 11.49 473 | 9.99 978 | 10 |
| 6660 | 51 | 8.50 897 | 8.50 920 | 11.49 080 | 9.99 977 | 9 |
| 6720 | 52 | 8.51 287 | 8.51 310 | 11.48 690 | 9.99 977 | 8 |
| 6780 | 53 | 8.51 673 | 8.51 696 | 11.48 304 | 9.99 977 | 7 |
| 6840 | 54 | 8.52 055 | 8.52 079 | 11.47 921 | 9.99 976 | 6 |
| 6900 | 55 | 8.52 434 | 8.52 459 | 11.47 541 | 9.99 976 | 5 |
| 6960 | 56 | 8.52 810 | 8.52 835 | 11.47 165 | 9.99 975 | 4 |
| 7020 | 57 | 8.53 183 | 8.53 208 | 11.46 792 | 9.99 975 | 3 |
| 7080 | 58 | 8.53 552 | 8.53 578 | 11.46 422 | 9.99 974 | 2 |
| 7140 | 59 | 8.53 919 | 8.53 945 | 11.46 055 | 9.99 974 | 1 |
| 7200 | 60 | 8.54 282 | 8.54 308 | 11.45 692 | 9.99 974 | 0 |

| | | log sin x = s(x) + log x'' | |
|------|----------|----------------------------|-----|
| | | log x'' = log sin x - s(x) | |
| x'' | s(x) | log sin x | |
| 3600 | 4.68 555 | 8.24 | 186 |
| 4190 | 4.68 554 | 8.30 | 776 |
| 4840 | 4.68 553 | 8.37 | 038 |
| 5414 | 4.68 552 | 8.41 | 904 |
| 5932 | 4.68 551 | 8.45 | 872 |
| 6408 | 4.68 550 | 8.49 | 223 |
| 6851 | 4.68 549 | 8.52 | 125 |
| 7200 | | 8.54 | 282 |

| | | log tang x = t(x) + log x'' | |
|------|----------|-----------------------------|-----|
| | | log x'' = log tang x - t(x) | |
| x'' | t(x) | log tang x | |
| 3600 | 4.68 562 | 8.24 | 192 |
| 3838 | 4.68 563 | 8.26 | 973 |
| 4204 | 4.68 564 | 8.30 | 930 |
| 4540 | 4.68 565 | 8.34 | 270 |
| 4852 | 4.68 566 | 8.37 | 158 |
| 5146 | 4.68 567 | 8.39 | 713 |
| 5424 | 4.68 568 | 8.41 | 999 |
| 5689 | 4.68 569 | 8.44 | 072 |
| 5941 | 4.68 570 | 8.45 | 955 |
| 6184 | 4.68 571 | 8.47 | 697 |
| 6417 | 4.68 572 | 8.49 | 305 |
| 6642 | 4.68 573 | 8.50 | 802 |
| 6859 | 4.68 574 | 8.52 | 200 |
| 7070 | 4.68 575 | 8.53 | 516 |
| 7200 | | 8.54 | 308 |

| Sek. | ' | cos 88° | cot 88° | tang 88° | sin 88° | M |
|------|---|---------|---------|----------|---------|---|
|------|---|---------|---------|----------|---------|---|

| Sek. | M | sin 2° | tang 2° | cot 2° | cos 2° | ' | |
|-------|----|----------|----------|-----------|----------|----|----------------------------------|
| 7200 | 0 | 8.54 282 | 8.54 308 | 11.45 692 | 9.99 974 | 60 | log sin x = s (x) + log x'' |
| 7260 | 1 | 8.54 642 | 8.54 669 | 11.45 331 | 9.99 973 | 59 | log x'' = log sin x - s (x) |
| 7320 | 2 | 8.54 999 | 8.55 027 | 11.44 973 | 9.99 973 | 58 | x'' s (x) log sin x |
| 7380 | 3 | 8.55 354 | 8.55 382 | 11.44 618 | 9.99 972 | 57 | 7200 4.68 549 8.54 282 |
| 7440 | 4 | 8.55 705 | 8.55 734 | 11.44 266 | 9.99 972 | 56 | 7267 4.68 548 8.54 684 |
| 7500 | 5 | 8.56 054 | 8.56 083 | 11.43 917 | 9.99 971 | 55 | 7662 4.68 547 8.56 982 |
| 7560 | 6 | 8.56 400 | 8.56 429 | 11.43 571 | 9.99 971 | 54 | 8036 4.68 546 8.59 050 |
| 7620 | 7 | 8.56 743 | 8.56 773 | 11.43 227 | 9.99 970 | 53 | 8394 4.68 545 8.60 942 |
| 7680 | 8 | 8.57 084 | 8.57 114 | 11.42 886 | 9.99 970 | 52 | 8737 4.68 544 8.62 681 |
| 7740 | 9 | 8.57 421 | 8.57 452 | 11.42 548 | 9.99 969 | 51 | 9067 4.68 543 8.64 290 |
| 7800 | 10 | 8.57 757 | 8.57 788 | 11.42 212 | 9.99 969 | 50 | 9385 4.68 542 8.65 786 |
| 7860 | 11 | 8.58 089 | 8.58 121 | 11.41 879 | 9.99 968 | 49 | 9693 4.68 541 8.67 187 |
| 7920 | 12 | 8.58 419 | 8.58 451 | 11.41 549 | 9.99 968 | 48 | 9992 4.68 540 8.68 506 |
| 7980 | 13 | 8.58 747 | 8.58 779 | 11.41 221 | 9.99 967 | 47 | 10282 4.68 539 8.69 747 |
| 8040 | 14 | 8.59 072 | 8.59 105 | 11.40 895 | 9.99 967 | 46 | 10564 4.68 538 8.70 921 |
| 8100 | 15 | 8.59 395 | 8.59 428 | 11.40 572 | 9.99 967 | 45 | 10800 4.68 538 8.71 880 |
| 8160 | 16 | 8.59 715 | 8.59 749 | 11.40 251 | 9.99 966 | 44 | |
| 8220 | 17 | 8.60 033 | 8.60 068 | 11.39 932 | 9.99 966 | 43 | |
| 8280 | 18 | 8.60 349 | 8.60 384 | 11.39 616 | 9.99 965 | 42 | |
| 8340 | 19 | 8.60 662 | 8.60 698 | 11.39 302 | 9.99 964 | 41 | |
| 8400 | 20 | 8.60 973 | 8.61 009 | 11.38 991 | 9.99 964 | 40 | |
| 8460 | 21 | 8.61 282 | 8.61 319 | 11.38 681 | 9.99 963 | 39 | |
| 8520 | 22 | 8.61 589 | 8.61 626 | 11.38 374 | 9.99 963 | 38 | |
| 8580 | 23 | 8.61 894 | 8.61 931 | 11.38 069 | 9.99 962 | 37 | |
| 8640 | 24 | 8.62 196 | 8.62 234 | 11.37 766 | 9.99 962 | 36 | |
| 8700 | 25 | 8.62 497 | 8.62 535 | 11.37 465 | 9.99 961 | 35 | log tang x = t(x) + log tang x'' |
| 8760 | 26 | 8.62 795 | 8.62 834 | 11.37 166 | 9.99 961 | 34 | log x'' = log tang (x) - t(x) |
| 8820 | 27 | 8.63 091 | 8.63 131 | 11.36 869 | 9.99 960 | 33 | x'' t (x) log tang x |
| 8880 | 28 | 8.63 385 | 8.63 426 | 11.36 574 | 9.99 960 | 32 | 7200 4.68 575 8.54 308 |
| 8940 | 29 | 8.63 678 | 8.63 718 | 11.36 282 | 9.99 959 | 31 | 7275 4.68 576 8.54 759 |
| 9000 | 30 | 8.63 968 | 8.64 009 | 11.35 991 | 9.99 959 | 30 | 7474 4.68 577 8.55 932 |
| 9060 | 31 | 8.64 256 | 8.64 298 | 11.35 702 | 9.99 958 | 29 | 7668 4.68 578 8.57 046 |
| 9120 | 32 | 8.64 543 | 8.64 585 | 11.35 415 | 9.99 958 | 28 | 7857 4.68 579 8.58 104 |
| 9180 | 33 | 8.64 827 | 8.64 870 | 11.35 130 | 9.99 957 | 27 | 8042 4.68 580 8.59 116 |
| 9240 | 34 | 8.65 110 | 8.65 154 | 11.34 846 | 9.99 956 | 26 | 8222 4.68 581 8.60 078 |
| 9300 | 35 | 8.65 391 | 8.65 435 | 11.34 565 | 9.99 956 | 25 | 8399 4.68 582 8.61 004 |
| 9360 | 36 | 8.65 670 | 8.65 715 | 11.34 285 | 9.99 955 | 24 | 8572 4.68 583 8.61 891 |
| 9420 | 37 | 8.65 947 | 8.65 993 | 11.34 007 | 9.99 955 | 23 | 8742 4.68 584 8.62 745 |
| 9480 | 38 | 8.66 223 | 8.66 269 | 11.33 731 | 9.99 954 | 22 | 8908 4.68 585 8.63 563 |
| 9540 | 39 | 8.66 497 | 8.66 543 | 11.33 457 | 9.99 954 | 21 | 9071 4.68 586 8.64 351 |
| 9600 | 40 | 8.66 769 | 8.66 816 | 11.33 184 | 9.99 953 | 20 | 9232 4.68 587 8.65 116 |
| 9660 | 41 | 8.67 039 | 8.67 087 | 11.32 913 | 9.99 952 | 19 | 9390 4.68 588 8.65 854 |
| 9720 | 42 | 8.67 308 | 8.67 356 | 11.32 644 | 9.99 952 | 18 | 9545 4.68 589 8.66 566 |
| 9780 | 43 | 8.67 575 | 8.67 624 | 11.32 376 | 9.99 951 | 17 | 9697 4.68 590 8.67 253 |
| 9840 | 44 | 8.67 841 | 8.67 890 | 11.32 110 | 9.99 951 | 16 | 9847 4.68 591 8.67 921 |
| 9900 | 45 | 8.68 104 | 8.68 154 | 11.31 846 | 9.99 950 | 15 | 9995 4.68 592 8.68 570 |
| 9960 | 46 | 8.68 367 | 8.68 417 | 11.31 583 | 9.99 949 | 14 | 10141 4.68 593 8.69 201 |
| 10020 | 47 | 8.68 627 | 8.68 678 | 11.31 322 | 9.99 949 | 13 | 10285 4.68 594 8.69 814 |
| 10080 | 48 | 8.68 886 | 8.68 938 | 11.31 062 | 9.99 948 | 12 | 10427 4.68 595 8.70 410 |
| 10140 | 49 | 8.69 144 | 8.69 196 | 11.30 804 | 9.99 948 | 11 | 10566 4.68 596 8.70 987 |
| 10200 | 50 | 8.69 400 | 8.69 453 | 11.30 547 | 9.99 947 | 10 | 10704 4.68 597 8.71 551 |
| 10260 | 51 | 8.69 654 | 8.69 708 | 11.30 292 | 9.99 946 | 9 | 10800 4.68 597 8.71 940 |
| 10320 | 52 | 8.69 907 | 8.69 962 | 11.30 038 | 9.99 946 | 8 | |
| 10380 | 53 | 8.70 159 | 8.70 214 | 11.29 786 | 9.99 945 | 7 | |
| 10440 | 54 | 8.70 409 | 8.70 465 | 11.29 535 | 9.99 944 | 6 | |
| 10500 | 55 | 8.70 658 | 8.70 714 | 11.29 286 | 9.99 944 | 5 | |
| 10560 | 56 | 8.70 905 | 8.70 962 | 11.29 038 | 9.99 943 | 4 | |
| 10620 | 57 | 8.71 151 | 8.71 208 | 11.28 792 | 9.99 942 | 3 | |
| 10680 | 58 | 8.71 395 | 8.71 453 | 11.28 547 | 9.99 942 | 2 | |
| 10740 | 59 | 8.71 638 | 8.71 697 | 11.28 303 | 9.99 941 | 1 | |
| 10800 | 60 | 8.71 880 | 8.71 940 | 11.28 060 | 9.99 940 | 0 | |
| Sek. | ' | cos 87° | cot 87° | tang 87° | sin 87° | M | |

| M | sin 3° | tang 3° | cot 3° | cos 3° | ′ | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 8.71 880 | 8.71 940 | 11.28 060 | 9.99 940 | 60 | | | |
| 1 | 8.72 120 | 8.72 181 | 11.27 819 | 9.99 940 | 59 | | | |
| 2 | 8.72 359 | 8.72 420 | 11.27 580 | 9.99 939 | 58 | | | |
| 3 | 8.72 597 | 8.72 659 | 11.27 341 | 9.99 938 | 57 | | | |
| 4 | 8.72 834 | 8.72 896 | 11.27 104 | 9.99 938 | 56 | | | |
| 5 | 8.73 069 | 8.73 132 | 11.26 868 | 9.99 937 | 55 | | | |
| 6 | 8.73 303 | 8.73 366 | 11.26 634 | 9.99 936 | 54 | | | |
| 7 | 8.73 535 | 8.73 600 | 11.26 400 | 9.99 936 | 53 | | | |
| 8 | 8.73 767 | 8.73 832 | 11.26 168 | 9.99 935 | 52 | | | |
| 9 | 8.73 997 | 8.74 063 | 11.25 937 | 9.99 934 | 51 | | | |
| 10 | 8.74 226 | 8.74 292 | 11.25 708 | 9.99 934 | 50 | | | |
| 11 | 8.74 454 | 8.74 521 | 11.25 479 | 9.99 933 | 49 | | | |
| 12 | 8.74 680 | 8.74 748 | 11.25 252 | 9.99 932 | 48 | | | |
| 13 | 8.74 906 | 8.74 974 | 11.25 026 | 9.99 932 | 47 | | | |
| 14 | 8.75 130 | 8.75 199 | 11.24 801 | 9.99 931 | 46 | | | |
| 15 | 8.75 353 | 8.75 423 | 11.24 577 | 9.99 930 | 45 | | | |
| 16 | 8.75 575 | 8.75 645 | 11.24 355 | 9.99 929 | 44 | | | |
| 17 | 8.75 795 | 8.75 867 | 11.24 133 | 9.99 929 | 43 | | | |
| 18 | 8.76 015 | 8.76 087 | 11.23 913 | 9.99 928 | 42 | | | |
| 19 | 8.76 234 | 8.76 306 | 11.23 694 | 9.99 927 | 41 | | | |
| 20 | 8.76 451 | 8.76 525 | 11.23 475 | 9.99 926 | 40 | | | |
| 21 | 8.76 667 | 8.76 742 | 11.23 258 | 9.99 926 | 39 | | | |
| 22 | 8.76 883 | 8.76 958 | 11.23 042 | 9.99 925 | 38 | | | |
| 23 | 8.77 097 | 8.77 173 | 11.22 827 | 9.99 924 | 37 | | | |
| 24 | 8.77 310 | 8.77 387 | 11.22 613 | 9.99 923 | 36 | | | |
| 25 | 8.77 522 | 8.77 600 | 11.22 400 | 9.99 923 | 35 | | | |
| 26 | 8.77 733 | 8.77 811 | 11.22 189 | 9.99 922 | 34 | | | |
| 27 | 8.77 943 | 8.78 022 | 11.21 978 | 9.99 921 | 33 | | | |
| 28 | 8.78 152 | 8.78 232 | 11.21 768 | 9.99 920 | 32 | | | |
| 29 | 8.78 360 | 8.78 441 | 11.21 559 | 9.99 920 | 31 | | | |
| 30 | 8.78 568 | 8.78 649 | 11.21 351 | 9.99 919 | 30 | | | |
| 31 | 8.78 774 | 8.78 855 | 11.21 145 | 9.99 918 | 29 | | | |
| 32 | 8.78 979 | 8.79 061 | 11.20 939 | 9.99 917 | 28 | | | |
| 33 | 8.79 183 | 8.79 266 | 11.20 734 | 9.99 917 | 27 | | | |
| 34 | 8.79 386 | 8.79 470 | 11.20 530 | 9.99 916 | 26 | | | |
| 35 | 8.79 588 | 8.79 673 | 11.20 327 | 9.99 915 | 25 | | | |
| 36 | 8.79 789 | 8.79 875 | 11.20 125 | 9.99 914 | 24 | | | |
| 37 | 8.79 990 | 8.80 076 | 11.19 924 | 9.99 913 | 23 | | | |
| 38 | 8.80 189 | 8.80 277 | 11.19 723 | 9.99 913 | 22 | | | |
| 39 | 8.80 388 | 8.80 476 | 11.19 524 | 9.99 912 | 21 | | | |
| 40 | 8.80 585 | 8.80 674 | 11.19 326 | 9.99 911 | 20 | | | |
| 41 | 8.80 782 | 8.80 872 | 11.19 128 | 9.99 910 | 19 | | | |
| 42 | 8.80 978 | 8.81 068 | 11.18 932 | 9.99 909 | 18 | | | |
| 43 | 8.81 173 | 8.81 264 | 11.18 736 | 9.99 909 | 17 | | | |
| 44 | 8.81 367 | 8.81 459 | 11.18 541 | 9.99 908 | 16 | | | |
| 45 | 8.81 560 | 8.81 653 | 11.18 347 | 9.99 907 | 15 | | | |
| 46 | 8.81 752 | 8.81 846 | 11.18 154 | 9.99 906 | 14 | | | |
| 47 | 8.81 944 | 8.82 038 | 11.17 962 | 9.99 905 | 13 | | | |
| 48 | 8.82 134 | 8.82 230 | 11.17 770 | 9.99 904 | 12 | | | |
| 49 | 8.82 324 | 8.82 420 | 11.17 580 | 9.99 904 | 11 | | | |
| 50 | 8.82 513 | 8.82 610 | 11.17 390 | 9.99 903 | 10 | | | |
| 51 | 8.82 701 | 8.82 799 | 11.17 201 | 9.99 902 | 9 | | | |
| 52 | 8.82 888 | 8.82 987 | 11.17 013 | 9.99 901 | 8 | | | |
| 53 | 8.83 075 | 8.83 175 | 11.16 825 | 9.99 900 | 7 | | | |
| 54 | 8.83 261 | 8.83 361 | 11.16 639 | 9.99 899 | 6 | | | |
| 55 | 8.83 446 | 8.83 547 | 11.16 453 | 9.99 898 | 5 | | | |
| 56 | 8.83 630 | 8.83 732 | 11.16 268 | 9.99 898 | 4 | | | |
| 57 | 8.83 813 | 8.83 916 | 11.16 084 | 9.99 897 | 3 | | | |
| 58 | 8.83 996 | 8.84 100 | 11.15 900 | 9.99 896 | 2 | | | |
| 59 | 8.84 177 | 8.84 282 | 11.15 718 | 9.99 895 | 1 | | | |
| 60 | 8.84 358 | 8.84 464 | 11.15 536 | 9.99 894 | 0 | | | |
| | cos 86° | cot 86° | tang 86° | sin 86° | M | | | |

| | 241 | 240 | 239 |
|----|-------|-------|-------|
| 10 | 40.2 | 40.0 | 39.8 |
| 20 | 80.3 | 80.0 | 79.7 |
| 30 | 120.5 | 120.0 | 119.5 |
| 40 | 160.7 | 160.0 | 159.3 |
| 50 | 200.8 | 200.0 | 199.2 |
| 6 | 24.1 | 24.0 | 23.9 |
| 7 | 28.1 | 28.0 | 27.9 |
| 8 | 32.1 | 32.0 | 31.9 |
| 9 | 36.2 | 36.0 | 35.9 |

| | 238 | 237 | 236 |
|----|-------|-------|-------|
| 10 | 39.7 | 39.5 | 39.3 |
| 20 | 79.3 | 79.0 | 78.7 |
| 30 | 119.0 | 118.5 | 118.0 |
| 40 | 158.7 | 158.0 | 157.3 |
| 50 | 198.3 | 197.5 | 196.7 |
| 6 | 23.8 | 23.7 | 23.6 |
| 7 | 27.8 | 27.7 | 27.5 |
| 8 | 31.7 | 31.6 | 31.5 |
| 9 | 35.7 | 35.6 | 35.4 |

| | 235 | 234 | 232 |
|----|-------|-------|-------|
| 10 | 39.2 | 39.0 | 38.7 |
| 20 | 78.3 | 78.0 | 77.3 |
| 30 | 117.5 | 117.0 | 116.0 |
| 40 | 156.7 | 156.0 | 154.7 |
| 50 | 195.8 | 195.0 | 193.3 |
| 6 | 23.5 | 23.4 | 23.2 |
| 7 | 27.4 | 27.3 | 27.1 |
| 8 | 31.3 | 31.2 | 30.9 |
| 9 | 35.3 | 35.1 | 34.8 |

| | 231 | 230 | 229 |
|----|-------|-------|-------|
| 10 | 38.5 | 38.3 | 38.2 |
| 20 | 77.0 | 76.7 | 76.3 |
| 30 | 115.5 | 115.0 | 114.5 |
| 40 | 154.0 | 153.3 | 152.7 |
| 50 | 192.5 | 191.7 | 190.8 |
| 6 | 23.1 | 23.0 | 22.9 |
| 7 | 27.0 | 26.8 | 26.7 |
| 8 | 30.8 | 30.7 | 30.5 |
| 9 | 34.7 | 34.5 | 34.4 |

| | 228 | 227 | 226 |
|----|-------|-------|-------|
| 10 | 38.0 | 37.8 | 37.7 |
| 20 | 76.0 | 75.7 | 75.3 |
| 30 | 114.0 | 113.5 | 113.0 |
| 40 | 152.0 | 151.3 | 150.7 |
| 50 | 190.0 | 189.2 | 188.3 |
| 6 | 22.8 | 22.7 | 22.6 |
| 7 | 26.6 | 26.5 | 26.4 |
| 8 | 30.4 | 30.3 | 30.1 |
| 9 | 34.2 | 34.1 | 33.9 |

P. P.

| | 225 | 224 | 223 | 222 |
|----|-------|-------|-------|-------|
| 10 | 37.5 | 37.3 | 37.2 | 37.0 |
| 20 | 75.0 | 74.7 | 74.3 | 74.0 |
| 30 | 112.5 | 112.0 | 111.5 | 111.0 |
| 40 | 150.0 | 149.3 | 148.7 | 148.0 |
| 50 | 187.5 | 186.7 | 185.8 | 185.0 |
| 6 | 22.5 | 22.4 | 22.3 | 22.2 |
| 7 | 26.3 | 26.1 | 26.0 | 25.9 |
| 8 | 30.0 | 29.9 | 29.7 | 29.6 |
| 9 | 33.8 | 33.6 | 33.5 | 33.3 |

| | 220 | 219 | 217 | 216 |
|----|-------|-------|-------|-------|
| 10 | 36.7 | 36.5 | 36.2 | 36.0 |
| 20 | 73.3 | 73.0 | 72.3 | 72.0 |
| 30 | 110.0 | 109.5 | 108.5 | 108.0 |
| 40 | 146.7 | 146.0 | 144.7 | 144.0 |
| 50 | 183.3 | 182.5 | 180.8 | 180.0 |
| 6 | 22.0 | 21.9 | 21.7 | 21.6 |
| 7 | 25.7 | 25.6 | 25.3 | 25.2 |
| 8 | 29.3 | 29.2 | 28.9 | 28.8 |
| 9 | 33.0 | 32.9 | 32.6 | 32.4 |

| | 215 | 214 | 213 | 212 |
|----|-------|-------|-------|-------|
| 10 | 35.8 | 35.7 | 35.5 | 35.3 |
| 20 | 71.7 | 71.3 | 71.0 | 70.7 |
| 30 | 107.5 | 107.0 | 106.5 | 106.0 |
| 40 | 143.3 | 142.7 | 142.0 | 141.3 |
| 50 | 179.2 | 178.3 | 177.5 | 176.7 |
| 6 | 21.5 | 21.4 | 21.3 | 21.2 |
| 7 | 25.1 | 25.0 | 24.9 | 24.7 |
| 8 | 28.7 | 28.5 | 28.4 | 28.3 |
| 9 | 32.3 | 32.1 | 32.0 | 31.8 |

| | 211 | 210 | 209 | 208 |
|----|-------|-------|-------|-------|
| 10 | 35.2 | 35.0 | 34.8 | 34.7 |
| 20 | 70.3 | 70.0 | 69.7 | 69.3 |
| 30 | 105.5 | 105.0 | 104.5 | 104.0 |
| 40 | 140.7 | 140.0 | 139.3 | 138.7 |
| 50 | 175.8 | 175.0 | 174.2 | 173.3 |
| 6 | 21.1 | 21.0 | 20.9 | 20.8 |
| 7 | 24.6 | 24.5 | 24.4 | 24.3 |
| 8 | 28.1 | 28.0 | 27.9 | 27.7 |
| 9 | 31.7 | 31.5 | 31.4 | 31.2 |

| | 206 | 205 | 204 | 203 |
|----|-------|-------|-------|-------|
| 10 | 34.3 | 34.2 | 34.0 | 33.8 |
| 20 | 68.7 | 68.3 | 68.0 | 67.7 |
| 30 | 103.0 | 102.5 | 102.0 | 101.5 |
| 40 | 137.3 | 136.7 | 136.0 | 135.3 |
| 50 | 171.7 | 170.8 | 170.0 | 169.2 |
| 6 | 20.6 | 20.5 | 20.4 | 20.3 |
| 7 | 24.0 | 23.9 | 23.8 | 23.7 |
| 8 | 27.5 | 27.3 | 27.2 | 27.1 |
| 9 | 30.9 | 30.8 | 30.6 | 30.5 |

P. P.

| | 202 | 201 | 199 | 198 |
|----|-------|-------|-------|-------|
| 10 | 33.7 | 33.5 | 33.2 | 33.0 |
| 20 | 67.3 | 67.0 | 66.3 | 66.0 |
| 30 | 101.0 | 100.5 | 99.5 | 99.0 |
| 40 | 134.7 | 134.0 | 132.7 | 132.0 |
| 50 | 168.3 | 167.5 | 165.8 | 165.0 |
| 6 | 20.2 | 20.1 | 19.9 | 19.8 |
| 7 | 23.6 | 23.5 | 23.2 | 23.1 |
| 8 | 26.9 | 26.8 | 26.5 | 26.4 |
| 9 | 30.3 | 30.2 | 29.9 | 29.7 |

| | 197 | 196 | 195 | 194 |
|----|-------|-------|-------|-------|
| 10 | 32.8 | 32.7 | 32.5 | 32.3 |
| 20 | 65.7 | 65.3 | 65.0 | 64.7 |
| 30 | 98.5 | 98.0 | 97.5 | 97.0 |
| 40 | 131.3 | 130.7 | 130.0 | 129.3 |
| 50 | 164.2 | 163.3 | 162.5 | 161.7 |
| 6 | 19.7 | 19.6 | 19.5 | 19.4 |
| 7 | 23.0 | 22.9 | 22.8 | 22.6 |
| 8 | 26.3 | 26.1 | 26.0 | 25.9 |
| 9 | 29.6 | 29.4 | 29.3 | 29.1 |

| | 193 | 192 | 190 | 189 |
|----|-------|-------|-------|-------|
| 10 | 32.2 | 32.0 | 31.7 | 31.5 |
| 20 | 64.3 | 64.0 | 63.3 | 63.0 |
| 30 | 96.5 | 96.0 | 95.0 | 94.5 |
| 40 | 128.7 | 128.0 | 126.7 | 126.0 |
| 50 | 160.8 | 160.0 | 158.3 | 157.5 |
| 6 | 19.3 | 19.2 | 19.0 | 18.9 |
| 7 | 22.5 | 22.4 | 22.2 | 22.1 |
| 8 | 25.7 | 25.6 | 25.3 | 25.2 |
| 9 | 29.0 | 28.8 | 28.5 | 28.4 |

| | 188 | 187 | 186 | 185 |
|----|-------|-------|-------|-------|
| 10 | 31.3 | 31.2 | 31.0 | 30.8 |
| 20 | 62.7 | 62.3 | 62.0 | 61.7 |
| 30 | 94.0 | 93.5 | 93.0 | 92.5 |
| 40 | 125.3 | 124.7 | 124.0 | 123.3 |
| 50 | 156.7 | 155.8 | 155.0 | 154.2 |
| 6 | 18.8 | 18.7 | 18.6 | 18.5 |
| 7 | 21.9 | 21.8 | 21.7 | 21.6 |
| 8 | 25.1 | 24.9 | 24.8 | 24.7 |
| 9 | 28.2 | 28.1 | 27.9 | 27.8 |

| | 184 | 183 | 182 | 181 | 1 |
|----|-------|-------|-------|-------|-----|
| 10 | 30.7 | 30.5 | 30.3 | 30.2 | 0.2 |
| 20 | 61.3 | 61.0 | 60.7 | 60.3 | 0.3 |
| 30 | 92.0 | 91.5 | 91.0 | 90.5 | 0.5 |
| 40 | 122.7 | 122.0 | 121.3 | 120.7 | 0.7 |
| 50 | 153.3 | 152.5 | 151.7 | 150.8 | 0.8 |
| 6 | 18.4 | 18.3 | 18.2 | 18.1 | 0.1 |
| 7 | 21.5 | 21.4 | 21.2 | 21.1 | 0.1 |
| 8 | 24.5 | 24.4 | 24.3 | 24.1 | 0.1 |
| 9 | 27.6 | 27.5 | 27.3 | 27.2 | 0.2 |

| M | sin 4° | tang 4° | cot 4° | cos 4° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|------------|------------|------------|
| 0 | 8.84 358 | 8.84 464 | 11.15 536 | 9.99 894 | 60 | | | |
| 1 | 8.84 539 | 8.84 646 | 11.15 354 | 9.99 893 | 59 | | | |
| 2 | 8.84 718 | 8.84 826 | 11.15 174 | 9.99 892 | 58 | | | |
| 3 | 8.84 897 | 8.85 006 | 11.14 994 | 9.99 891 | 57 | | | |
| 4 | 8.85 075 | 8.85 185 | 11.14 815 | 9.99 891 | 56 | | | |
| 5 | 8.85 252 | 8.85 363 | 11.14 637 | 9.99 890 | 55 | | | |
| 6 | 8.85 429 | 8.85 540 | 11.14 460 | 9.99 889 | 54 | | | |
| 7 | 8.85 605 | 8.85 717 | 11.14 283 | 9.99 888 | 53 | | | |
| 8 | 8.85 780 | 8.85 893 | 11.14 107 | 9.99 887 | 52 | | | |
| 9 | 8.85 955 | 8.86 069 | 11.13 931 | 9.99 886 | 51 | | | |
| 10 | 8.86 128 | 8.86 243 | 11.13 757 | 9.99 885 | 50 | | | |
| 11 | 8.86 301 | 8.86 417 | 11.13 583 | 9.99 884 | 49 | | | |
| 12 | 8.86 474 | 8.86 591 | 11.13 409 | 9.99 883 | 48 | | | |
| 13 | 8.86 645 | 8.86 763 | 11.13 237 | 9.99 882 | 47 | | | |
| 14 | 8.86 816 | 8.86 935 | 11.13 065 | 9.99 881 | 46 | | | |
| 15 | 8.86 987 | 8.87 106 | 11.12 894 | 9.99 880 | 45 | | | |
| 16 | 8.87 156 | 8.87 277 | 11.12 723 | 9.99 879 | 44 | | | |
| 17 | 8.87 325 | 8.87 447 | 11.12 553 | 9.99 879 | 43 | | | |
| 18 | 8.87 494 | 8.87 616 | 11.12 384 | 9.99 878 | 42 | | | |
| 19 | 8.87 661 | 8.87 785 | 11.12 215 | 9.99 877 | 41 | | | |
| 20 | 8.87 829 | 8.87 953 | 11.12 047 | 9.99 876 | 40 | | | |
| 21 | 8.87 995 | 8.88 120 | 11.11 880 | 9.99 875 | 39 | | | |
| 22 | 8.88 161 | 8.88 287 | 11.11 713 | 9.99 874 | 38 | | | |
| 23 | 8.88 326 | 8.88 453 | 11.11 547 | 9.99 873 | 37 | | | |
| 24 | 8.88 490 | 8.88 618 | 11.11 382 | 9.99 872 | 36 | | | |
| 25 | 8.88 654 | 8.88 783 | 11.11 217 | 9.99 871 | 35 | | | |
| 26 | 8.88 817 | 8.88 948 | 11.11 052 | 9.99 870 | 34 | | | |
| 27 | 8.88 980 | 8.89 111 | 11.10 889 | 9.99 869 | 33 | | | |
| 28 | 8.89 142 | 8.89 274 | 11.10 726 | 9.99 868 | 32 | | | |
| 29 | 8.89 304 | 8.89 437 | 11.10 563 | 9.99 867 | 31 | | | |
| 30 | 8.89 464 | 8.89 598 | 11.10 402 | 9.99 866 | 30 | | | |
| 31 | 8.89 625 | 8.89 760 | 11.10 240 | 9.99 865 | 29 | | | |
| 32 | 8.89 784 | 8.89 920 | 11.10 080 | 9.99 864 | 28 | | | |
| 33 | 8.89 943 | 8.90 080 | 11.09 920 | 9.99 863 | 27 | | | |
| 34 | 8.90 102 | 8.90 240 | 11.09 760 | 9.99 862 | 26 | | | |
| 35 | 8.90 260 | 8.90 399 | 11.09 601 | 9.99 861 | 25 | | | |
| 36 | 8.90 417 | 8.90 557 | 11.09 443 | 9.99 860 | 24 | | | |
| 37 | 8.90 574 | 8.90 715 | 11.09 285 | 9.99 859 | 23 | | | |
| 38 | 8.90 730 | 8.90 872 | 11.09 128 | 9.99 858 | 22 | | | |
| 39 | 8.90 885 | 8.91 029 | 11.08 971 | 9.99 857 | 21 | | | |
| 40 | 8.91 040 | 8.91 185 | 11.08 815 | 9.99 856 | 20 | | | |
| 41 | 8.91 195 | 8.91 340 | 11.08 660 | 9.99 855 | 19 | | | |
| 42 | 8.91 349 | 8.91 495 | 11.08 505 | 9.99 854 | 18 | | | |
| 43 | 8.91 502 | 8.91 650 | 11.08 350 | 9.99 853 | 17 | | | |
| 44 | 8.91 655 | 8.91 803 | 11.08 197 | 9.99 852 | 16 | | | |
| 45 | 8.91 807 | 8.91 957 | 11.08 043 | 9.99 851 | 15 | | | |
| 46 | 8.91 959 | 8.92 110 | 11.07 890 | 9.99 850 | 14 | | | |
| 47 | 8.92 110 | 8.92 262 | 11.07 738 | 9.99 848 | 13 | | | |
| 48 | 8.92 261 | 8.92 414 | 11.07 586 | 9.99 847 | 12 | | | |
| 49 | 8.92 411 | 8.92 565 | 11.07 435 | 9.99 846 | 11 | | | |
| 50 | 8.92 561 | 8.92 716 | 11.07 284 | 9.99 845 | 10 | | | |
| 51 | 8.92 710 | 8.92 866 | 11.07 134 | 9.99 844 | 9 | | | |
| 52 | 8.92 859 | 8.93 016 | 11.06 984 | 9.99 843 | 8 | | | |
| 53 | 8.93 007 | 8.93 165 | 11.06 835 | 9.99 842 | 7 | | | |
| 54 | 8.93 154 | 8.93 313 | 11.06 687 | 9.99 841 | 6 | | | |
| 55 | 8.93 301 | 8.93 462 | 11.06 538 | 9.99 840 | 5 | | | |
| 56 | 8.93 448 | 8.93 609 | 11.06 391 | 9.99 839 | 4 | | | |
| 57 | 8.93 594 | 8.93 756 | 11.06 244 | 9.99 838 | 3 | | | |
| 58 | 8.93 740 | 8.93 903 | 11.06 097 | 9.99 837 | 2 | | | |
| 59 | 8.93 885 | 8.94 049 | 11.05 951 | 9.99 836 | 1 | | | |
| 60 | 8.94 030 | 8.94 195 | 11.05 805 | 9.99 834 | 0 | | | |
| | | | | | | 182 | 181 | 180 |
| | | | | | 10 | 30.3 | 30.2 | 30.0 |
| | | | | | 20 | 60.7 | 60.3 | 60.0 |
| | | | | | 30 | 91.0 | 90.5 | 90.0 |
| | | | | | 40 | 121.3 | 120.7 | 120.0 |
| | | | | | 50 | 151.7 | 150.8 | 150.0 |
| | | | | | 6 | 18.2 | 18.1 | 18.0 |
| | | | | | 7 | 21.2 | 21.0 | 21.0 |
| | | | | | 8 | 24.3 | 24.1 | 24.0 |
| | | | | | 9 | 27.3 | 27.2 | 27.0 |
| | | | | | | 179 | 178 | 177 |
| | | | | | 10 | 29.8 | 29.7 | 29.5 |
| | | | | | 20 | 59.7 | 59.3 | 59.0 |
| | | | | | 30 | 89.5 | 89.0 | 88.5 |
| | | | | | 40 | 119.3 | 118.7 | 118.0 |
| | | | | | 50 | 149.2 | 148.3 | 147.5 |
| | | | | | 6 | 17.9 | 17.8 | 17.7 |
| | | | | | 7 | 20.9 | 20.8 | 20.7 |
| | | | | | 8 | 23.9 | 23.7 | 23.6 |
| | | | | | 9 | 26.9 | 26.7 | 26.6 |
| | | | | | | 176 | 175 | 174 |
| | | | | | 10 | 29.3 | 29.2 | 29.0 |
| | | | | | 20 | 58.7 | 58.3 | 58.0 |
| | | | | | 30 | 88.0 | 87.5 | 87.0 |
| | | | | | 40 | 117.3 | 116.7 | 116.0 |
| | | | | | 50 | 146.7 | 145.8 | 145.0 |
| | | | | | 6 | 17.6 | 17.5 | 17.4 |
| | | | | | 7 | 20.5 | 20.4 | 20.3 |
| | | | | | 8 | 23.5 | 23.3 | 23.2 |
| | | | | | 9 | 26.4 | 26.3 | 26.1 |
| | | | | | | 173 | 172 | 171 |
| | | | | | 10 | 28.8 | 28.7 | 28.5 |
| | | | | | 20 | 57.7 | 57.3 | 57.0 |
| | | | | | 30 | 86.5 | 86.0 | 85.5 |
| | | | | | 40 | 115.3 | 114.7 | 114.0 |
| | | | | | 50 | 144.2 | 143.3 | 142.5 |
| | | | | | 6 | 17.3 | 17.2 | 17.1 |
| | | | | | 7 | 20.2 | 20.1 | 20.0 |
| | | | | | 8 | 23.1 | 22.9 | 22.8 |
| | | | | | 9 | 26.0 | 25.8 | 25.7 |
| | cos 85° | cot 85° | tang 85° | sin 85° | M | | | |

P. P.

| | 170 | 169 | 168 | 167 |
|----|-------|-------|-------|-------|
| 10 | 28.3 | 28.2 | 28.0 | 27.8 |
| 20 | 56.7 | 56.3 | 56.0 | 55.7 |
| 30 | 85.0 | 84.5 | 84.0 | 83.5 |
| 40 | 113.3 | 112.7 | 112.0 | 111.3 |
| 50 | 141.7 | 140.8 | 140.0 | 139.2 |
| 6 | 17.0 | 16.9 | 16.8 | 16.7 |
| 7 | 19.8 | 19.7 | 19.6 | 19.5 |
| 8 | 22.7 | 22.5 | 22.4 | 22.3 |
| 9 | 25.5 | 25.4 | 25.2 | 25.1 |

| | 166 | 165 | 164 | 163 |
|----|-------|-------|-------|-------|
| 10 | 27.7 | 27.5 | 27.3 | 27.2 |
| 20 | 55.3 | 55.0 | 54.7 | 54.3 |
| 30 | 83.0 | 82.5 | 82.0 | 81.5 |
| 40 | 110.7 | 110.0 | 109.3 | 108.7 |
| 50 | 138.3 | 137.5 | 136.7 | 135.8 |
| 6 | 16.6 | 16.5 | 16.4 | 16.3 |
| 7 | 19.4 | 19.3 | 19.1 | 19.0 |
| 8 | 22.1 | 22.0 | 21.9 | 21.7 |
| 9 | 24.9 | 24.8 | 24.6 | 24.5 |

| | 162 | 161 | 160 | 159 |
|----|-------|-------|-------|-------|
| 10 | 27.0 | 26.8 | 26.7 | 26.5 |
| 20 | 54.0 | 53.7 | 53.3 | 53.0 |
| 30 | 81.0 | 80.5 | 80.0 | 79.5 |
| 40 | 108.0 | 107.3 | 106.7 | 106.0 |
| 50 | 135.0 | 134.2 | 133.3 | 132.5 |
| 6 | 16.2 | 16.1 | 16.0 | 15.9 |
| 7 | 18.9 | 18.8 | 18.7 | 18.6 |
| 8 | 21.6 | 21.5 | 21.3 | 21.2 |
| 9 | 24.3 | 24.2 | 24.0 | 23.9 |

| | 158 | 157 | 156 | 155 |
|----|-------|-------|-------|-------|
| 10 | 26.3 | 26.2 | 26.0 | 25.8 |
| 20 | 52.7 | 52.3 | 52.0 | 51.7 |
| 30 | 79.0 | 78.5 | 78.0 | 77.5 |
| 40 | 105.3 | 104.7 | 104.0 | 103.3 |
| 50 | 131.7 | 130.8 | 130.0 | 129.2 |
| 6 | 15.8 | 15.7 | 15.6 | 15.5 |
| 7 | 18.4 | 18.3 | 18.2 | 18.1 |
| 8 | 21.1 | 20.9 | 20.8 | 20.7 |
| 9 | 23.7 | 23.6 | 23.4 | 23.3 |

P. P.

| | 154 | 153 | 152 | 151 |
|----|-------|-------|-------|-------|
| 10 | 25.7 | 25.5 | 25.3 | 25.2 |
| 20 | 51.3 | 51.0 | 50.7 | 50.3 |
| 30 | 77.0 | 76.5 | 76.0 | 75.5 |
| 40 | 102.7 | 102.0 | 101.3 | 100.7 |
| 50 | 128.3 | 127.5 | 126.7 | 125.8 |
| 6 | 15.4 | 15.3 | 15.2 | 15.1 |
| 7 | 18.0 | 17.9 | 17.7 | 17.6 |
| 8 | 20.5 | 20.4 | 20.3 | 20.1 |
| 9 | 23.1 | 23.0 | 22.8 | 22.7 |

| | 150 | 149 | 148 |
|----|-------|-------|-------|
| 10 | 25.0 | 24.8 | 24.7 |
| 20 | 50.0 | 49.7 | 49.3 |
| 30 | 75.0 | 74.5 | 74.0 |
| 40 | 100.0 | 99.3 | 98.7 |
| 50 | 125.0 | 124.2 | 123.3 |
| 6 | 15.0 | 14.9 | 14.8 |
| 7 | 17.5 | 17.4 | 17.3 |
| 8 | 20.0 | 19.9 | 19.7 |
| 9 | 22.5 | 22.4 | 22.2 |

| | 147 | 146 | 145 |
|----|-------|-------|-------|
| 10 | 24.5 | 24.3 | 24.2 |
| 20 | 49.0 | 48.7 | 48.3 |
| 30 | 73.5 | 73.0 | 72.5 |
| 40 | 98.0 | 97.3 | 96.7 |
| 50 | 122.5 | 121.7 | 120.8 |
| 6 | 14.7 | 14.6 | 14.5 |
| 7 | 17.2 | 17.0 | 16.9 |
| 8 | 19.6 | 19.5 | 19.3 |
| 9 | 22.1 | 21.9 | 21.8 |

| | 1 | 2 |
|----|-----|-----|
| 10 | 0.2 | 0.3 |
| 20 | 0.3 | 0.7 |
| 30 | 0.5 | 1.0 |
| 40 | 0.7 | 1.3 |
| 50 | 0.8 | 1.7 |
| 6 | 0.1 | 0.2 |
| 7 | 0.1 | 0.2 |
| 8 | 0.1 | 0.3 |
| 9 | 0.2 | 0.3 |

| M | sin 5° | tang 5° | cot 5° | cos 5° | ' | P. P. | | | | | |
|-----------|----------|----------|-----------|----------|-----------|-------|------------|------------|------------|------------|------------|
| 0 | 8.94 030 | 8.94 195 | 11.05 805 | 9.99 834 | 60 | | 145 | 144 | 143 | 142 | 141 |
| 1 | 8.94 174 | 8.94 340 | 11.05 660 | 9.99 833 | 59 | 10 | 24.2 | 24.0 | 23.8 | 23.7 | 23.5 |
| 2 | 8.94 317 | 8.94 485 | 11.05 515 | 9.99 832 | 58 | 20 | 48.3 | 48.0 | 47.7 | 47.3 | 47.0 |
| 3 | 8.94 461 | 8.94 630 | 11.05 370 | 9.99 831 | 57 | 30 | 72.5 | 72.0 | 71.5 | 71.0 | 70.5 |
| 4 | 8.94 603 | 8.94 773 | 11.05 227 | 9.99 830 | 56 | 40 | 96.7 | 96.0 | 95.3 | 94.7 | 94.0 |
| 5 | 8.94 746 | 8.94 917 | 11.05 083 | 9.99 829 | 55 | 50 | 120.8 | 120.0 | 119.2 | 118.3 | 117.5 |
| 6 | 8.94 887 | 8.95 060 | 11.04 940 | 9.99 828 | 54 | 6 | 14.5 | 14.4 | 14.3 | 14.2 | 14.1 |
| 7 | 8.95 029 | 8.95 202 | 11.04 798 | 9.99 827 | 53 | 7 | 16.9 | 16.8 | 16.7 | 16.6 | 16.5 |
| 8 | 8.95 170 | 8.95 344 | 11.04 656 | 9.99 825 | 52 | 8 | 19.3 | 19.2 | 19.1 | 18.9 | 18.8 |
| 9 | 8.95 310 | 8.95 486 | 11.04 514 | 9.99 824 | 51 | 9 | 21.8 | 21.6 | 21.5 | 21.3 | 21.2 |
| 10 | 8.95 450 | 8.95 627 | 11.04 373 | 9.99 823 | 50 | | 140 | 139 | 138 | 137 | 136 |
| 11 | 8.95 589 | 8.95 767 | 11.04 233 | 9.99 822 | 49 | 10 | 23.3 | 23.2 | 23.0 | 22.8 | 22.7 |
| 12 | 8.95 728 | 8.95 908 | 11.04 092 | 9.99 821 | 48 | 20 | 46.7 | 46.3 | 46.0 | 45.7 | 45.3 |
| 13 | 8.95 867 | 8.96 047 | 11.03 953 | 9.99 820 | 47 | 30 | 70.0 | 69.5 | 69.0 | 68.5 | 68.0 |
| 14 | 8.96 005 | 8.96 187 | 11.03 813 | 9.99 819 | 46 | 40 | 93.3 | 92.7 | 92.0 | 91.3 | 90.7 |
| 15 | 8.96 143 | 8.96 325 | 11.03 675 | 9.99 817 | 45 | 50 | 116.7 | 115.8 | 115.0 | 114.2 | 113.3 |
| 16 | 8.96 280 | 8.96 464 | 11.03 536 | 9.99 816 | 44 | 6 | 14.0 | 13.9 | 13.8 | 13.7 | 13.6 |
| 17 | 8.96 417 | 8.96 602 | 11.03 398 | 9.99 815 | 43 | 7 | 16.3 | 16.2 | 16.1 | 16.0 | 15.9 |
| 18 | 8.96 553 | 8.96 739 | 11.03 261 | 9.99 814 | 42 | 8 | 18.7 | 18.5 | 18.4 | 18.3 | 18.1 |
| 19 | 8.96 689 | 8.96 877 | 11.03 123 | 9.99 813 | 41 | 9 | 21.0 | 20.9 | 20.7 | 20.6 | 20.4 |
| 20 | 8.96 825 | 8.97 013 | 11.02 987 | 9.99 812 | 40 | | 135 | 134 | 133 | 132 | 131 |
| 21 | 8.96 960 | 8.97 150 | 11.02 850 | 9.99 810 | 39 | 10 | 22.5 | 22.3 | 22.2 | 22.0 | 21.8 |
| 22 | 8.97 095 | 8.97 285 | 11.02 715 | 9.99 809 | 38 | 20 | 45.0 | 44.7 | 44.3 | 44.0 | 43.7 |
| 23 | 8.97 229 | 8.97 421 | 11.02 579 | 9.99 808 | 37 | 30 | 67.5 | 67.0 | 66.5 | 66.0 | 65.5 |
| 24 | 8.97 363 | 8.97 556 | 11.02 444 | 9.99 807 | 36 | 40 | 90.0 | 89.3 | 88.7 | 88.0 | 87.3 |
| 25 | 8.97 496 | 8.97 691 | 11.02 309 | 9.99 806 | 35 | 50 | 112.5 | 111.7 | 110.8 | 110.0 | 109.2 |
| 26 | 8.97 629 | 8.97 825 | 11.02 175 | 9.99 804 | 34 | 6 | 13.5 | 13.4 | 13.3 | 13.2 | 13.1 |
| 27 | 8.97 762 | 8.97 959 | 11.02 041 | 9.99 803 | 33 | 7 | 15.8 | 15.6 | 15.5 | 15.4 | 15.3 |
| 28 | 8.97 894 | 8.98 092 | 11.01 908 | 9.99 802 | 32 | 8 | 18.0 | 17.9 | 17.7 | 17.6 | 17.5 |
| 29 | 8.98 026 | 8.98 225 | 11.01 775 | 9.99 801 | 31 | 9 | 20.3 | 20.1 | 20.0 | 19.8 | 19.7 |
| 30 | 8.98 157 | 8.98 358 | 11.01 642 | 9.99 800 | 30 | | 130 | 129 | 128 | 127 | 126 |
| 31 | 8.98 288 | 8.98 490 | 11.01 510 | 9.99 798 | 29 | 10 | 21.7 | 21.5 | 21.3 | 21.2 | 21.0 |
| 32 | 8.98 419 | 8.98 622 | 11.01 378 | 9.99 797 | 28 | 20 | 43.3 | 43.0 | 42.7 | 42.3 | 42.0 |
| 33 | 8.98 549 | 8.98 753 | 11.01 247 | 9.99 796 | 27 | 30 | 65.0 | 64.5 | 64.0 | 63.5 | 63.0 |
| 34 | 8.98 679 | 8.98 884 | 11.01 116 | 9.99 795 | 26 | 40 | 86.7 | 86.0 | 85.3 | 84.7 | 84.0 |
| 35 | 8.98 808 | 8.99 015 | 11.00 985 | 9.99 793 | 25 | 50 | 108.3 | 107.5 | 106.7 | 105.8 | 105.0 |
| 36 | 8.98 937 | 8.99 145 | 11.00 855 | 9.99 792 | 24 | 6 | 13.0 | 12.9 | 12.8 | 12.7 | 12.6 |
| 37 | 8.99 066 | 8.99 275 | 11.00 725 | 9.99 791 | 23 | 7 | 15.2 | 15.1 | 14.9 | 14.8 | 14.7 |
| 38 | 8.99 194 | 8.99 405 | 11.00 595 | 9.99 790 | 22 | 8 | 17.3 | 17.2 | 17.1 | 16.9 | 16.8 |
| 39 | 8.99 322 | 8.99 534 | 11.00 466 | 9.99 788 | 21 | 9 | 19.5 | 19.4 | 19.2 | 19.1 | 18.9 |
| 40 | 8.99 450 | 8.99 662 | 11.00 338 | 9.99 787 | 20 | | 125 | 124 | 123 | 122 | |
| 41 | 8.99 577 | 8.99 791 | 11.00 209 | 9.99 786 | 19 | 10 | 20.8 | 20.7 | 20.5 | 20.3 | |
| 42 | 8.99 704 | 8.99 919 | 11.00 081 | 9.99 785 | 18 | 20 | 41.7 | 41.3 | 41.0 | 40.7 | |
| 43 | 8.99 830 | 9.00 046 | 10.99 954 | 9.99 783 | 17 | 30 | 62.5 | 62.0 | 61.5 | 61.0 | |
| 44 | 8.99 956 | 9.00 174 | 10.99 826 | 9.99 782 | 16 | 40 | 83.3 | 82.7 | 82.0 | 81.3 | |
| 45 | 9.00 082 | 9.00 301 | 10.99 699 | 9.99 781 | 15 | 50 | 104.2 | 103.3 | 102.5 | 101.7 | |
| 46 | 9.00 207 | 9.00 427 | 10.99 573 | 9.99 780 | 14 | 6 | 12.5 | 12.4 | 12.3 | 12.2 | |
| 47 | 9.00 332 | 9.00 553 | 10.99 447 | 9.99 778 | 13 | 7 | 14.6 | 14.5 | 14.4 | 14.2 | |
| 48 | 9.00 456 | 9.00 679 | 10.99 321 | 9.99 777 | 12 | 8 | 16.7 | 16.5 | 16.4 | 16.3 | |
| 49 | 9.00 581 | 9.00 805 | 10.99 195 | 9.99 776 | 11 | 9 | 18.8 | 18.6 | 18.5 | 18.3 | |
| 50 | 9.00 704 | 9.00 930 | 10.99 070 | 9.99 775 | 10 | | 121 | 120 | 1 | 2 | |
| 51 | 9.00 828 | 9.01 055 | 10.98 945 | 9.99 773 | 9 | 10 | 20.2 | 20.0 | 0.2 | 0.3 | |
| 52 | 9.00 951 | 9.01 179 | 10.98 821 | 9.99 772 | 8 | 20 | 40.3 | 40.0 | 0.3 | 0.7 | |
| 53 | 9.01 074 | 9.01 303 | 10.98 697 | 9.99 771 | 7 | 30 | 60.5 | 60.0 | 0.5 | 1.0 | |
| 54 | 9.01 196 | 9.01 427 | 10.98 573 | 9.99 769 | 6 | 40 | 80.7 | 80.0 | 0.7 | 1.3 | |
| 55 | 9.01 318 | 9.01 550 | 10.98 450 | 9.99 768 | 5 | 50 | 100.8 | 100.0 | 0.8 | 1.7 | |
| 56 | 9.01 440 | 9.01 673 | 10.98 327 | 9.99 767 | 4 | 6 | 12.1 | 12.0 | 0.1 | 0.2 | |
| 57 | 9.01 561 | 9.01 796 | 10.98 204 | 9.99 765 | 3 | 7 | 14.1 | 14.0 | 0.1 | 0.2 | |
| 58 | 9.01 682 | 9.01 918 | 10.98 082 | 9.99 764 | 2 | 8 | 16.1 | 16.0 | 0.1 | 0.3 | |
| 59 | 9.01 803 | 9.02 040 | 10.97 960 | 9.99 763 | 1 | 9 | 18.2 | 18.0 | 0.2 | 0.3 | |
| 60 | 9.01 923 | 9.02 162 | 10.97 838 | 9.99 761 | 0 | | | | | | |
| ' | cos 84° | cot 84° | tang 84° | sin 84° | M | | | | | | |

| M | sin 6° | tang 6° | cot 6° | cos 6° | ' | P. P. | | | | |
|----|----------|----------|-----------|----------|----|-------|--|--|--|--|
| 0 | 9.01 923 | 9.02 162 | 10.97 838 | 9.99 761 | 60 | | | | | |
| 1 | 9.02 043 | 9.02 283 | 10.97 717 | 9.99 760 | 59 | | | | | |
| 2 | 9.02 163 | 9.02 404 | 10.97 596 | 9.99 759 | 58 | | | | | |
| 3 | 9.02 283 | 9.02 525 | 10.97 475 | 9.99 757 | 57 | | | | | |
| 4 | 9.02 402 | 9.02 645 | 10.97 355 | 9.99 756 | 56 | | | | | |
| 5 | 9.02 520 | 9.02 766 | 10.97 234 | 9.99 755 | 55 | | | | | |
| 6 | 9.02 639 | 9.02 885 | 10.97 115 | 9.99 753 | 54 | | | | | |
| 7 | 9.02 757 | 9.03 005 | 10.96 995 | 9.99 752 | 53 | | | | | |
| 8 | 9.02 874 | 9.03 124 | 10.96 876 | 9.99 751 | 52 | | | | | |
| 9 | 9.02 992 | 9.03 242 | 10.96 758 | 9.99 749 | 51 | | | | | |
| 10 | 9.03 109 | 9.03 361 | 10.96 639 | 9.99 748 | 50 | | | | | |
| 11 | 9.03 226 | 9.03 479 | 10.96 521 | 9.99 747 | 49 | | | | | |
| 12 | 9.03 342 | 9.03 597 | 10.96 403 | 9.99 745 | 48 | | | | | |
| 13 | 9.03 458 | 9.03 714 | 10.96 286 | 9.99 744 | 47 | | | | | |
| 14 | 9.03 574 | 9.03 832 | 10.96 168 | 9.99 742 | 46 | | | | | |
| 15 | 9.03 690 | 9.03 948 | 10.96 052 | 9.99 741 | 45 | | | | | |
| 16 | 9.03 805 | 9.04 065 | 10.95 935 | 9.99 740 | 44 | | | | | |
| 17 | 9.03 920 | 9.04 181 | 10.95 819 | 9.99 738 | 43 | | | | | |
| 18 | 9.04 034 | 9.04 297 | 10.95 703 | 9.99 737 | 42 | | | | | |
| 19 | 9.04 149 | 9.04 413 | 10.95 587 | 9.99 736 | 41 | | | | | |
| 20 | 9.04 262 | 9.04 528 | 10.95 472 | 9.99 734 | 40 | | | | | |
| 21 | 9.04 376 | 9.04 643 | 10.95 357 | 9.99 733 | 39 | | | | | |
| 22 | 9.04 490 | 9.04 758 | 10.95 242 | 9.99 731 | 38 | | | | | |
| 23 | 9.04 603 | 9.04 873 | 10.95 127 | 9.99 730 | 37 | | | | | |
| 24 | 9.04 715 | 9.04 987 | 10.95 013 | 9.99 728 | 36 | | | | | |
| 25 | 9.04 828 | 9.05 101 | 10.94 899 | 9.99 727 | 35 | | | | | |
| 26 | 9.04 940 | 9.05 214 | 10.94 786 | 9.99 726 | 34 | | | | | |
| 27 | 9.05 052 | 9.05 328 | 10.94 672 | 9.99 724 | 33 | | | | | |
| 28 | 9.05 164 | 9.05 441 | 10.94 559 | 9.99 723 | 32 | | | | | |
| 29 | 9.05 275 | 9.05 553 | 10.94 447 | 9.99 721 | 31 | | | | | |
| 30 | 9.05 386 | 9.05 666 | 10.94 334 | 9.99 720 | 30 | | | | | |
| 31 | 9.05 497 | 9.05 778 | 10.94 222 | 9.99 718 | 29 | | | | | |
| 32 | 9.05 607 | 9.05 890 | 10.94 110 | 9.99 717 | 28 | | | | | |
| 33 | 9.05 717 | 9.06 002 | 10.93 998 | 9.99 716 | 27 | | | | | |
| 34 | 9.05 827 | 9.06 113 | 10.93 887 | 9.99 714 | 26 | | | | | |
| 35 | 9.05 937 | 9.06 224 | 10.93 776 | 9.99 713 | 25 | | | | | |
| 36 | 9.06 046 | 9.06 335 | 10.93 665 | 9.99 711 | 24 | | | | | |
| 37 | 9.06 155 | 9.06 445 | 10.93 555 | 9.99 710 | 23 | | | | | |
| 38 | 9.06 264 | 9.06 556 | 10.93 444 | 9.99 708 | 22 | | | | | |
| 39 | 9.06 372 | 9.06 666 | 10.93 334 | 9.99 707 | 21 | | | | | |
| 40 | 9.06 481 | 9.06 775 | 10.93 225 | 9.99 705 | 20 | | | | | |
| 41 | 9.06 589 | 9.06 885 | 10.93 115 | 9.99 704 | 19 | | | | | |
| 42 | 9.06 696 | 9.06 994 | 10.93 006 | 9.99 702 | 18 | | | | | |
| 43 | 9.06 804 | 9.07 103 | 10.92 897 | 9.99 701 | 17 | | | | | |
| 44 | 9.06 911 | 9.07 211 | 10.92 789 | 9.99 699 | 16 | | | | | |
| 45 | 9.07 018 | 9.07 320 | 10.92 680 | 9.99 698 | 15 | | | | | |
| 46 | 9.07 124 | 9.07 428 | 10.92 572 | 9.99 696 | 14 | | | | | |
| 47 | 9.07 231 | 9.07 536 | 10.92 464 | 9.99 695 | 13 | | | | | |
| 48 | 9.07 337 | 9.07 643 | 10.92 357 | 9.99 693 | 12 | | | | | |
| 49 | 9.07 442 | 9.07 751 | 10.92 249 | 9.99 692 | 11 | | | | | |
| 50 | 9.07 548 | 9.07 858 | 10.92 142 | 9.99 690 | 10 | | | | | |
| 51 | 9.07 653 | 9.07 964 | 10.92 036 | 9.99 689 | 9 | | | | | |
| 52 | 9.07 758 | 9.08 071 | 10.91 929 | 9.99 687 | 8 | | | | | |
| 53 | 9.07 863 | 9.08 177 | 10.91 823 | 9.99 686 | 7 | | | | | |
| 54 | 9.07 968 | 9.08 283 | 10.91 717 | 9.99 684 | 6 | | | | | |
| 55 | 9.08 072 | 9.08 389 | 10.91 611 | 9.99 683 | 5 | | | | | |
| 56 | 9.08 176 | 9.08 495 | 10.91 505 | 9.99 681 | 4 | | | | | |
| 57 | 9.08 280 | 9.08 600 | 10.91 400 | 9.99 680 | 3 | | | | | |
| 58 | 9.08 383 | 9.08 705 | 10.91 295 | 9.99 678 | 2 | | | | | |
| 59 | 9.08 486 | 9.08 810 | 10.91 190 | 9.99 677 | 1 | | | | | |
| 60 | 9.08 589 | 9.08 914 | 10.91 086 | 9.99 675 | 0 | | | | | |
| | cos 83° | cot 83° | tang 83° | sin 83° | M | | | | | |

| | 121 | 120 | 119 | 118 |
|----|-------|-------|------|------|
| 10 | 20.2 | 20.0 | 19.8 | 19.7 |
| 20 | 40.3 | 40.0 | 39.7 | 39.3 |
| 30 | 60.5 | 60.0 | 59.5 | 59.0 |
| 40 | 80.7 | 80.0 | 79.3 | 78.7 |
| 50 | 100.8 | 100.0 | 99.2 | 98.3 |
| 6 | 12.1 | 12.0 | 11.9 | 11.8 |
| 7 | 14.1 | 14.0 | 13.9 | 13.8 |
| 8 | 16.1 | 16.0 | 15.9 | 15.7 |
| 9 | 18.2 | 18.0 | 17.9 | 17.7 |

| | 117 | 116 | 115 | 114 |
|----|------|------|------|------|
| 10 | 19.5 | 19.3 | 19.2 | 19.0 |
| 20 | 39.0 | 38.7 | 38.3 | 38.0 |
| 30 | 58.5 | 58.0 | 57.5 | 57.0 |
| 40 | 78.0 | 77.3 | 76.7 | 76.0 |
| 50 | 97.5 | 96.7 | 95.8 | 95.0 |
| 6 | 11.7 | 11.6 | 11.5 | 11.4 |
| 7 | 13.7 | 13.5 | 13.4 | 13.3 |
| 8 | 15.6 | 15.5 | 15.3 | 15.2 |
| 9 | 17.6 | 17.4 | 17.3 | 17.1 |

| | 113 | 112 | 111 | 110 |
|----|------|------|------|------|
| 10 | 18.8 | 18.7 | 18.5 | 18.3 |
| 20 | 37.7 | 37.3 | 37.0 | 36.7 |
| 30 | 56.5 | 56.0 | 55.5 | 55.0 |
| 40 | 75.3 | 74.7 | 74.0 | 73.3 |
| 50 | 94.2 | 93.3 | 92.5 | 91.7 |
| 6 | 11.3 | 11.2 | 11.1 | 11.0 |
| 7 | 13.2 | 13.1 | 13.0 | 12.8 |
| 8 | 15.1 | 14.9 | 14.8 | 14.7 |
| 9 | 17.0 | 16.8 | 16.7 | 16.5 |

| | 109 | 108 | 107 | 106 |
|----|------|------|------|------|
| 10 | 18.2 | 18.0 | 17.8 | 17.7 |
| 20 | 36.3 | 36.0 | 35.7 | 35.3 |
| 30 | 54.5 | 54.0 | 53.5 | 53.0 |
| 40 | 72.7 | 72.0 | 71.3 | 70.7 |
| 50 | 90.8 | 90.0 | 89.2 | 88.3 |
| 6 | 10.9 | 10.8 | 10.7 | 10.6 |
| 7 | 12.7 | 12.6 | 12.5 | 12.4 |
| 8 | 14.5 | 14.4 | 14.3 | 14.1 |
| 9 | 16.4 | 16.2 | 16.1 | 15.9 |

| | 105 | 104 | 103 |
|----|------|------|------|
| 10 | 17.5 | 17.3 | 17.2 |
| 20 | 35.0 | 34.7 | 34.3 |
| 30 | 52.5 | 52.0 | 51.5 |
| 40 | 70.0 | 69.3 | 68.7 |
| 50 | 87.5 | 86.7 | 85.8 |
| 6 | 10.5 | 10.4 | 10.3 |
| 7 | 12.3 | 12.1 | 12.0 |
| 9 | 14.0 | 13.9 | 13.7 |
| 9 | 15.8 | 15.6 | 15.5 |

| | 1 | 2 |
|----|-----|-----|
| 10 | 0.2 | 0.3 |
| 20 | 0.3 | 0.7 |
| 30 | 0.5 | 1.0 |
| 40 | 0.7 | 1.3 |
| 50 | 0.8 | 1.7 |
| 6 | 0.1 | 0.2 |
| 7 | 0.1 | 0.2 |
| 8 | 0.1 | 0.3 |
| 9 | 0.2 | 0.3 |

| M | sin 8° | tang 8° | cot 8° | cos 8° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.14 356 | 9.14 780 | 10.85 220 | 9.99 575 | 60 | | | |
| 1 | 9.14 445 | 9.14 872 | 10.85 128 | 9.99 574 | 59 | | | |
| 2 | 9.14 535 | 9.14 963 | 10.85 037 | 9.99 572 | 58 | | | |
| 3 | 9.14 624 | 9.15 054 | 10.84 946 | 9.99 570 | 57 | | | |
| 4 | 9.14 714 | 9.15 145 | 10.84 855 | 9.99 568 | 56 | | | |
| 5 | 9.14 803 | 9.15 236 | 10.84 764 | 9.99 566 | 55 | | | |
| 6 | 9.14 891 | 9.15 327 | 10.84 673 | 9.99 565 | 54 | | | |
| 7 | 9.14 980 | 9.15 417 | 10.84 583 | 9.99 563 | 53 | | | |
| 8 | 9.15 069 | 9.15 508 | 10.84 492 | 9.99 561 | 52 | | | |
| 9 | 9.15 157 | 9.15 598 | 10.84 402 | 9.99 559 | 51 | | | |
| 10 | 9.15 245 | 9.15 688 | 10.84 312 | 9.99 557 | 50 | | | |
| 11 | 9.15 333 | 9.15 777 | 10.84 223 | 9.99 556 | 49 | | | |
| 12 | 9.15 421 | 9.15 867 | 10.84 133 | 9.99 554 | 48 | | | |
| 13 | 9.15 508 | 9.15 956 | 10.84 044 | 9.99 552 | 47 | | | |
| 14 | 9.15 596 | 9.16 046 | 10.83 954 | 9.99 550 | 46 | | | |
| 15 | 9.15 683 | 9.16 135 | 10.83 865 | 9.99 548 | 45 | | | |
| 16 | 9.15 770 | 9.16 224 | 10.83 776 | 9.99 546 | 44 | | | |
| 17 | 9.15 857 | 9.16 312 | 10.83 688 | 9.99 545 | 43 | | | |
| 18 | 9.15 944 | 9.16 401 | 10.83 599 | 9.99 543 | 42 | | | |
| 19 | 9.16 030 | 9.16 489 | 10.83 511 | 9.99 541 | 41 | | | |
| 20 | 9.16 116 | 9.16 577 | 10.83 423 | 9.99 539 | 40 | | | |
| 21 | 9.16 203 | 9.16 665 | 10.83 335 | 9.99 537 | 39 | | | |
| 22 | 9.16 289 | 9.16 753 | 10.83 247 | 9.99 535 | 38 | | | |
| 23 | 9.16 374 | 9.16 841 | 10.83 159 | 9.99 533 | 37 | | | |
| 24 | 9.16 460 | 9.16 928 | 10.83 072 | 9.99 532 | 36 | | | |
| 25 | 9.16 545 | 9.17 016 | 10.82 984 | 9.99 530 | 35 | | | |
| 26 | 9.16 631 | 9.17 103 | 10.82 897 | 9.99 528 | 34 | | | |
| 27 | 9.16 716 | 9.17 190 | 10.82 810 | 9.99 526 | 33 | | | |
| 28 | 9.16 801 | 9.17 277 | 10.82 723 | 9.99 524 | 32 | | | |
| 29 | 9.16 886 | 9.17 363 | 10.82 637 | 9.99 522 | 31 | | | |
| 30 | 9.16 970 | 9.17 450 | 10.82 550 | 9.99 520 | 30 | | | |
| 31 | 9.17 055 | 9.17 536 | 10.82 464 | 9.99 518 | 29 | | | |
| 32 | 9.17 139 | 9.17 622 | 10.82 378 | 9.99 517 | 28 | | | |
| 33 | 9.17 223 | 9.17 708 | 10.82 292 | 9.99 515 | 27 | | | |
| 34 | 9.17 307 | 9.17 794 | 10.82 206 | 9.99 513 | 26 | | | |
| 35 | 9.17 391 | 9.17 880 | 10.82 120 | 9.99 511 | 25 | | | |
| 36 | 9.17 474 | 9.17 965 | 10.82 035 | 9.99 509 | 24 | | | |
| 37 | 9.17 558 | 9.18 051 | 10.81 949 | 9.99 507 | 23 | | | |
| 38 | 9.17 641 | 9.18 136 | 10.81 864 | 9.99 505 | 22 | | | |
| 39 | 9.17 724 | 9.18 221 | 10.81 779 | 9.99 503 | 21 | | | |
| 40 | 9.17 807 | 9.18 306 | 10.81 694 | 9.99 501 | 20 | | | |
| 41 | 9.17 890 | 9.18 391 | 10.81 609 | 9.99 499 | 19 | | | |
| 42 | 9.17 973 | 9.18 475 | 10.81 525 | 9.99 497 | 18 | | | |
| 43 | 9.18 055 | 9.18 560 | 10.81 440 | 9.99 495 | 17 | | | |
| 44 | 9.18 137 | 9.18 644 | 10.81 356 | 9.99 494 | 16 | | | |
| 45 | 9.18 220 | 9.18 728 | 10.81 272 | 9.99 492 | 15 | | | |
| 46 | 9.18 302 | 9.18 812 | 10.81 188 | 9.99 490 | 14 | | | |
| 47 | 9.18 383 | 9.18 896 | 10.81 104 | 9.99 488 | 13 | | | |
| 48 | 9.18 465 | 9.18 979 | 10.81 021 | 9.99 486 | 12 | | | |
| 49 | 9.18 547 | 9.19 063 | 10.80 937 | 9.99 484 | 11 | | | |
| 50 | 9.18 628 | 9.19 146 | 10.80 854 | 9.99 482 | 10 | | | |
| 51 | 9.18 709 | 9.19 229 | 10.80 771 | 9.99 480 | 9 | | | |
| 52 | 9.18 790 | 9.19 312 | 10.80 688 | 9.99 478 | 8 | | | |
| 53 | 9.18 871 | 9.19 395 | 10.80 605 | 9.99 476 | 7 | | | |
| 54 | 9.18 952 | 9.19 478 | 10.80 522 | 9.99 474 | 6 | | | |
| 55 | 9.19 033 | 9.19 561 | 10.80 439 | 9.99 472 | 5 | | | |
| 56 | 9.19 113 | 9.19 643 | 10.80 357 | 9.99 470 | 4 | | | |
| 57 | 9.19 193 | 9.19 725 | 10.80 275 | 9.99 468 | 3 | | | |
| 58 | 9.19 273 | 9.19 807 | 10.80 193 | 9.99 466 | 2 | | | |
| 59 | 9.19 353 | 9.19 889 | 10.80 111 | 9.99 464 | 1 | | | |
| 60 | 9.19 433 | 9.19 971 | 10.80 029 | 9.99 462 | 0 | | | |
| | cos 81° | cot 81° | tang 81° | sin 81° | M | | | |

| | 92 | 91 | 90 |
|----|------|------|------|
| 10 | 15.3 | 15.2 | 15.0 |
| 20 | 30.7 | 30.3 | 30.0 |
| 30 | 46.0 | 45.5 | 45.0 |
| 40 | 61.3 | 60.7 | 60.0 |
| 50 | 76.7 | 75.8 | 75.0 |
| 6 | 9.2 | 9.1 | 9.0 |
| 7 | 10.7 | 10.6 | 10.5 |
| 8 | 12.3 | 12.1 | 12.0 |
| 9 | 13.8 | 13.7 | 13.5 |
| | 89 | 88 | 87 |
| 10 | 14.8 | 14.7 | 14.5 |
| 20 | 29.7 | 29.3 | 29.0 |
| 30 | 44.5 | 44.0 | 43.5 |
| 40 | 59.3 | 58.7 | 58.0 |
| 50 | 74.2 | 73.3 | 72.5 |
| 6 | 8.9 | 8.8 | 8.7 |
| 7 | 10.4 | 10.3 | 10.2 |
| 8 | 11.9 | 11.7 | 11.6 |
| 9 | 13.4 | 13.2 | 13.1 |
| | 86 | 85 | 84 |
| 10 | 14.3 | 14.2 | 14.0 |
| 20 | 28.7 | 28.3 | 28.0 |
| 30 | 43.0 | 42.5 | 42.0 |
| 40 | 57.3 | 56.7 | 56.0 |
| 50 | 71.7 | 70.8 | 70.0 |
| 6 | 8.6 | 8.5 | 8.4 |
| 7 | 10.0 | 9.9 | 9.8 |
| 8 | 11.5 | 11.3 | 11.2 |
| 9 | 12.9 | 12.8 | 12.6 |
| | 83 | 82 | |
| 10 | 13.8 | 13.7 | |
| 20 | 27.7 | 27.3 | |
| 30 | 41.5 | 41.0 | |
| 40 | 55.3 | 54.7 | |
| 50 | 69.2 | 68.3 | |
| 6 | 8.3 | 8.2 | |
| 7 | 9.7 | 9.6 | |
| 8 | 11.1 | 10.9 | |
| 9 | 12.5 | 12.3 | |
| | 81 | 80 | |
| 10 | 13.5 | 13.3 | |
| 20 | 27.0 | 26.7 | |
| 30 | 40.5 | 40.0 | |
| 40 | 54.0 | 53.3 | |
| 50 | 67.5 | 66.7 | |
| 6 | 8.1 | 8.0 | |
| 7 | 9.5 | 9.3 | |
| 8 | 10.8 | 10.7 | |
| 9 | 12.2 | 12.0 | |
| | 1 | 2 | |
| 10 | 0.2 | 0.3 | |
| 20 | 0.3 | 0.7 | |
| 30 | 0.5 | 1.0 | |
| 40 | 0.7 | 1.3 | |
| 50 | 0.8 | 1.7 | |
| 6 | 0.1 | 0.2 | |
| 7 | 0.1 | 0.2 | |
| 8 | 0.1 | 0.3 | |
| 9 | 0.2 | 0.3 | |

| M | sin 9° | tang 9° | cot 9° | cos 9° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.19 433 | 9.19 971 | 10.80 029 | 9.99 462 | 60 | | | |
| 1 | 9.19 513 | 9.20 053 | 10.79 947 | 9.99 460 | 59 | | | |
| 2 | 9.19 592 | 9.20 134 | 10.79 866 | 9.99 458 | 58 | | | |
| 3 | 9.19 672 | 9.20 216 | 10.79 784 | 9.99 456 | 57 | | | |
| 4 | 9.19 751 | 9.20 297 | 10.79 703 | 9.99 554 | 56 | | | |
| 5 | 9.19 830 | 9.20 378 | 10.79 622 | 9.99 452 | 55 | | | |
| 6 | 9.19 909 | 9.20 459 | 10.79 541 | 9.99 450 | 54 | | | |
| 7 | 9.19 988 | 9.20 540 | 10.79 460 | 9.99 448 | 53 | | | |
| 8 | 9.20 067 | 9.20 621 | 10.79 379 | 9.99 446 | 52 | | | |
| 9 | 9.20 145 | 9.20 701 | 10.79 299 | 9.99 444 | 51 | | | |
| 10 | 9.20 223 | 9.20 782 | 10.79 218 | 9.99 442 | 50 | | | |
| 11 | 9.20 302 | 9.20 862 | 10.79 138 | 9.99 440 | 49 | | | |
| 12 | 9.20 380 | 9.20 942 | 10.79 058 | 9.99 438 | 48 | | | |
| 13 | 9.20 458 | 9.21 022 | 10.78 978 | 9.99 436 | 47 | | | |
| 14 | 9.20 535 | 9.21 102 | 10.78 898 | 9.99 434 | 46 | | | |
| 15 | 9.20 613 | 9.21 182 | 10.78 818 | 9.99 432 | 45 | | | |
| 16 | 9.20 691 | 9.21 261 | 10.78 739 | 9.99 429 | 44 | | | |
| 17 | 9.20 768 | 9.21 341 | 10.78 659 | 9.99 427 | 43 | | | |
| 18 | 9.20 845 | 9.21 420 | 10.78 580 | 9.99 425 | 42 | | | |
| 19 | 9.20 922 | 9.21 499 | 10.78 501 | 9.99 423 | 41 | | | |
| 20 | 9.20 999 | 9.21 578 | 10.78 422 | 9.99 421 | 40 | | | |
| 21 | 9.21 076 | 9.21 657 | 10.78 343 | 9.99 419 | 39 | | | |
| 22 | 9.21 153 | 9.21 736 | 10.78 264 | 9.99 417 | 38 | | | |
| 23 | 9.21 229 | 9.21 814 | 10.78 186 | 9.99 415 | 37 | | | |
| 24 | 9.21 306 | 9.21 893 | 10.78 107 | 9.99 413 | 36 | | | |
| 25 | 9.21 382 | 9.21 971 | 10.78 029 | 9.99 411 | 35 | | | |
| 26 | 9.21 458 | 9.22 049 | 10.77 951 | 9.99 409 | 34 | | | |
| 27 | 9.21 534 | 9.22 127 | 10.77 873 | 9.99 407 | 33 | | | |
| 28 | 9.21 610 | 9.22 205 | 10.77 795 | 9.99 404 | 32 | | | |
| 29 | 9.21 685 | 9.22 283 | 10.77 717 | 9.99 402 | 31 | | | |
| 30 | 9.21 761 | 9.22 361 | 10.77 639 | 9.99 400 | 30 | | | |
| 31 | 9.21 836 | 9.22 438 | 10.77 562 | 9.99 398 | 29 | | | |
| 32 | 9.21 912 | 9.22 516 | 10.77 484 | 9.99 396 | 28 | | | |
| 33 | 9.21 987 | 9.22 593 | 10.77 407 | 9.99 394 | 27 | | | |
| 34 | 9.22 062 | 9.22 670 | 10.77 330 | 9.99 392 | 26 | | | |
| 35 | 9.22 137 | 9.22 747 | 10.77 253 | 9.99 390 | 25 | | | |
| 36 | 9.22 211 | 9.22 824 | 10.77 176 | 9.99 388 | 24 | | | |
| 37 | 9.22 286 | 9.22 901 | 10.77 099 | 9.99 385 | 23 | | | |
| 38 | 9.22 361 | 9.22 977 | 10.77 023 | 9.99 383 | 22 | | | |
| 39 | 9.22 435 | 9.23 054 | 10.76 946 | 9.99 381 | 21 | | | |
| 40 | 9.22 509 | 9.23 130 | 10.76 870 | 9.99 379 | 20 | | | |
| 41 | 9.22 583 | 9.23 206 | 10.76 794 | 9.99 377 | 19 | | | |
| 42 | 9.22 657 | 9.23 283 | 10.76 717 | 9.99 375 | 18 | | | |
| 43 | 9.22 731 | 9.23 359 | 10.76 641 | 9.99 372 | 17 | | | |
| 44 | 9.22 805 | 9.23 435 | 10.76 565 | 9.99 370 | 16 | | | |
| 45 | 9.22 878 | 9.23 510 | 10.76 490 | 9.99 368 | 15 | | | |
| 46 | 9.22 952 | 9.23 586 | 10.76 414 | 9.99 366 | 14 | | | |
| 47 | 9.23 025 | 9.23 661 | 10.76 339 | 9.99 364 | 13 | | | |
| 48 | 9.23 098 | 9.23 737 | 10.76 263 | 9.99 362 | 12 | | | |
| 49 | 9.23 171 | 9.23 812 | 10.76 188 | 9.99 359 | 11 | | | |
| 50 | 9.23 244 | 9.23 887 | 10.76 113 | 9.99 357 | 10 | | | |
| 51 | 9.23 317 | 9.23 962 | 10.76 038 | 9.99 355 | 9 | | | |
| 52 | 9.23 390 | 9.24 037 | 10.75 963 | 9.99 353 | 8 | | | |
| 53 | 9.23 462 | 9.24 112 | 10.75 888 | 9.99 351 | 7 | | | |
| 54 | 9.23 535 | 9.24 186 | 10.75 814 | 9.99 348 | 6 | | | |
| 55 | 9.23 607 | 9.24 261 | 10.75 739 | 9.99 346 | 5 | | | |
| 56 | 9.23 679 | 9.24 335 | 10.75 665 | 9.99 344 | 4 | | | |
| 57 | 9.23 752 | 9.24 410 | 10.75 590 | 9.99 342 | 3 | | | |
| 58 | 9.23 823 | 9.24 484 | 10.75 516 | 9.99 340 | 2 | | | |
| 59 | 9.23 895 | 9.24 558 | 10.75 442 | 9.99 337 | 1 | | | |
| 60 | 9.23 967 | 9.24 632 | 10.75 368 | 9.99 335 | 0 | | | |
| | cos 80° | cot 80° | tang 80° | sin 80° | M | | | |

| | 82 | 81 | 80 |
|----|------|------|------|
| 10 | 13.7 | 13.5 | 13.3 |
| 20 | 27.3 | 27.0 | 26.7 |
| 30 | 41.0 | 40.5 | 40.0 |
| 40 | 54.7 | 54.0 | 53.3 |
| 50 | 68.3 | 67.5 | 66.7 |
| 6 | 8.2 | 8.1 | 8.0 |
| 7 | 9.6 | 9.5 | 9.3 |
| 8 | 10.9 | 10.8 | 10.7 |
| 9 | 12.3 | 12.2 | 12.0 |

| | 79 | 78 | 77 |
|----|------|------|------|
| 10 | 13.2 | 13.0 | 12.8 |
| 20 | 26.3 | 26.0 | 25.7 |
| 30 | 39.5 | 39.0 | 38.5 |
| 40 | 52.7 | 52.0 | 51.3 |
| 50 | 65.8 | 65.0 | 64.2 |
| 6 | 7.9 | 7.8 | 7.7 |
| 7 | 9.2 | 9.1 | 9.0 |
| 8 | 10.5 | 10.4 | 10.3 |
| 9 | 11.9 | 11.7 | 11.6 |

| | 76 | 75 |
|----|------|------|
| 10 | 12.7 | 12.5 |
| 20 | 25.3 | 25.0 |
| 30 | 38.0 | 37.5 |
| 40 | 50.7 | 50.0 |
| 50 | 63.3 | 62.5 |
| 6 | 7.6 | 7.5 |
| 7 | 8.9 | 8.8 |
| 8 | 10.1 | 10.0 |
| 9 | 11.4 | 11.3 |

| | 74 | 73 |
|----|------|------|
| 10 | 12.3 | 12.2 |
| 20 | 24.7 | 24.3 |
| 30 | 37.0 | 36.5 |
| 40 | 49.3 | 48.7 |
| 50 | 61.7 | 60.8 |
| 6 | 7.4 | 7.3 |
| 7 | 8.6 | 8.5 |
| 8 | 9.9 | 9.7 |
| 9 | 11.1 | 11.0 |

| | 72 | 71 |
|----|------|------|
| 10 | 12.0 | 11.8 |
| 20 | 24.0 | 23.7 |
| 30 | 36.0 | 35.5 |
| 40 | 48.0 | 47.3 |
| 50 | 60.0 | 59.2 |
| 6 | 7.2 | 7.1 |
| 7 | 8.4 | 8.3 |
| 8 | 9.6 | 9.5 |
| 9 | 10.8 | 10.7 |

| | 2 | 3 |
|----|-----|-----|
| 10 | 0.3 | 0.5 |
| 20 | 0.7 | 1.0 |
| 30 | 1.0 | 1.5 |
| 40 | 1.3 | 2.0 |
| 50 | 1.7 | 2.5 |
| 6 | 0.2 | 0.3 |
| 7 | 0.2 | 0.4 |
| 8 | 0.3 | 0.4 |
| 9 | 0.3 | 0.5 |

| M | sin 10° | tang 10° | cot 10° | cos 10° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.23 967 | 9.24 632 | 10.75 368 | 9.99 335 | 60 | | | |
| 1 | 9.24 039 | 9.24 706 | 10.75 294 | 9.99 333 | 59 | | | |
| 2 | 9.24 110 | 9.24 779 | 10.75 221 | 9.99 331 | 58 | | | |
| 3 | 9.24 181 | 9.24 853 | 10.75 147 | 9.99 328 | 57 | | | |
| 4 | 9.24 253 | 9.24 926 | 10.75 074 | 9.99 326 | 56 | | | |
| 5 | 9.24 324 | 9.25 000 | 10.75 000 | 9.99 324 | 55 | | | |
| 6 | 9.24 395 | 9.25 073 | 10.74 927 | 9.99 322 | 54 | | | |
| 7 | 9.24 466 | 9.25 146 | 10.74 854 | 9.99 319 | 53 | | | |
| 8 | 9.24 536 | 9.25 219 | 10.74 781 | 9.99 317 | 52 | | | |
| 9 | 9.24 607 | 9.25 292 | 10.74 708 | 9.99 315 | 51 | | | |
| 10 | 9.24 677 | 9.25 365 | 10.74 635 | 9.99 313 | 50 | | | |
| 11 | 9.24 748 | 9.25 437 | 10.74 563 | 9.99 310 | 49 | | | |
| 12 | 9.24 818 | 9.25 510 | 10.74 490 | 9.99 308 | 48 | | | |
| 13 | 9.24 888 | 9.25 582 | 10.74 418 | 9.99 306 | 47 | | | |
| 14 | 9.24 958 | 9.25 655 | 10.74 345 | 9.99 304 | 46 | | | |
| 15 | 9.25 028 | 9.25 727 | 10.74 273 | 9.99 301 | 45 | | | |
| 16 | 9.25 098 | 9.25 799 | 10.74 201 | 9.99 299 | 44 | | | |
| 17 | 9.25 168 | 9.25 871 | 10.74 129 | 9.99 297 | 43 | | | |
| 18 | 9.25 237 | 9.25 943 | 10.74 057 | 9.99 294 | 42 | | | |
| 19 | 9.25 307 | 9.26 015 | 10.73 985 | 9.99 292 | 41 | | | |
| 20 | 9.25 376 | 9.26 086 | 10.73 914 | 9.99 290 | 40 | | | |
| 21 | 9.25 445 | 9.26 158 | 10.73 842 | 9.99 288 | 39 | | | |
| 22 | 9.25 514 | 9.26 229 | 10.73 771 | 9.99 285 | 38 | | | |
| 23 | 9.25 583 | 9.26 301 | 10.73 699 | 9.99 283 | 37 | | | |
| 24 | 9.25 652 | 9.26 372 | 10.73 628 | 9.99 281 | 36 | | | |
| 25 | 9.25 721 | 9.26 443 | 10.73 557 | 9.99 278 | 35 | | | |
| 26 | 9.25 790 | 9.26 514 | 10.73 486 | 9.99 276 | 34 | | | |
| 27 | 9.25 858 | 9.26 585 | 10.73 415 | 9.99 274 | 33 | | | |
| 28 | 9.25 927 | 9.26 655 | 10.73 345 | 9.99 271 | 32 | | | |
| 29 | 9.25 995 | 9.26 726 | 10.73 274 | 9.99 269 | 31 | | | |
| 30 | 9.26 063 | 9.26 797 | 10.73 203 | 9.99 267 | 30 | | | |
| 31 | 9.26 131 | 9.26 867 | 10.73 133 | 9.99 264 | 29 | | | |
| 32 | 9.26 199 | 9.26 937 | 10.73 063 | 9.99 262 | 28 | | | |
| 33 | 9.26 267 | 9.27 008 | 10.72 992 | 9.99 260 | 27 | | | |
| 34 | 9.26 335 | 9.27 078 | 10.72 922 | 9.99 257 | 26 | | | |
| 35 | 9.26 403 | 9.27 148 | 10.72 852 | 9.99 255 | 25 | | | |
| 36 | 9.26 470 | 9.27 218 | 10.72 782 | 9.99 252 | 24 | | | |
| 37 | 9.26 538 | 9.27 288 | 10.72 712 | 9.99 250 | 23 | | | |
| 38 | 9.26 605 | 9.27 357 | 10.72 643 | 9.99 248 | 22 | | | |
| 39 | 9.26 672 | 9.27 427 | 10.72 573 | 9.99 245 | 21 | | | |
| 40 | 9.26 739 | 9.27 496 | 10.72 504 | 9.99 243 | 20 | | | |
| 41 | 9.26 806 | 9.27 566 | 10.72 434 | 9.99 241 | 19 | | | |
| 42 | 9.26 873 | 9.27 635 | 10.72 365 | 9.99 238 | 18 | | | |
| 43 | 9.26 940 | 9.27 704 | 10.72 296 | 9.99 236 | 17 | | | |
| 44 | 9.27 007 | 9.27 773 | 10.72 227 | 9.99 233 | 16 | | | |
| 45 | 9.27 073 | 9.27 842 | 10.72 158 | 9.99 231 | 15 | | | |
| 46 | 9.27 140 | 9.27 911 | 10.72 089 | 9.99 229 | 14 | | | |
| 47 | 9.27 206 | 9.27 980 | 10.72 020 | 9.99 226 | 13 | | | |
| 48 | 9.27 273 | 9.28 049 | 10.71 951 | 9.99 224 | 12 | | | |
| 49 | 9.27 339 | 9.28 117 | 10.71 883 | 9.99 221 | 11 | | | |
| 50 | 9.27 405 | 9.28 186 | 10.71 814 | 9.99 219 | 10 | | | |
| 51 | 9.27 471 | 9.28 254 | 10.71 746 | 9.99 217 | 9 | | | |
| 52 | 9.27 537 | 9.28 323 | 10.71 677 | 9.99 214 | 8 | | | |
| 53 | 9.27 602 | 9.28 391 | 10.71 609 | 9.99 212 | 7 | | | |
| 54 | 9.27 668 | 9.28 459 | 10.71 541 | 9.99 209 | 6 | | | |
| 55 | 9.27 734 | 9.28 527 | 10.71 473 | 9.99 207 | 5 | | | |
| 56 | 9.27 799 | 9.28 595 | 10.71 405 | 9.99 204 | 4 | | | |
| 57 | 9.27 864 | 9.28 662 | 10.71 338 | 9.99 202 | 3 | | | |
| 58 | 9.27 930 | 9.28 730 | 10.71 270 | 9.99 200 | 2 | | | |
| 59 | 9.27 995 | 9.28 798 | 10.71 202 | 9.99 197 | 1 | | | |
| 60 | 9.28 060 | 9.28 865 | 10.71 135 | 9.99 195 | 0 | | | |
| | cos 79° | cot 79° | tang 79° | sin 79° | M | | | |

| | 74 | 73 | 72 |
|----|------|------|------|
| 10 | 12.3 | 12.2 | 12.0 |
| 20 | 24.7 | 24.3 | 24.0 |
| 30 | 37.0 | 36.5 | 36.0 |
| 40 | 49.3 | 48.7 | 48.0 |
| 50 | 61.7 | 60.8 | 60.0 |
| 6 | 7.4 | 7.3 | 7.2 |
| 7 | 8.6 | 8.5 | 8.4 |
| 8 | 9.9 | 9.7 | 9.6 |
| 9 | 11.1 | 11.0 | 10.8 |

| | 71 | 70 | 69 |
|----|------|------|------|
| 10 | 11.8 | 11.7 | 11.5 |
| 20 | 23.7 | 23.3 | 23.0 |
| 30 | 35.5 | 35.0 | 34.5 |
| 40 | 47.3 | 46.7 | 46.0 |
| 50 | 59.2 | 58.3 | 57.5 |
| 6 | 7.1 | 7.0 | 6.9 |
| 7 | 8.3 | 8.2 | 8.1 |
| 8 | 9.5 | 9.3 | 9.2 |
| 9 | 10.7 | 10.5 | 10.4 |

| | 68 | 67 |
|----|------|------|
| 10 | 11.3 | 11.2 |
| 20 | 22.7 | 22.3 |
| 30 | 34.0 | 33.5 |
| 40 | 45.3 | 44.7 |
| 50 | 56.7 | 55.8 |
| 6 | 6.8 | 6.7 |
| 7 | 7.9 | 7.8 |
| 8 | 9.1 | 8.9 |
| 9 | 10.2 | 10.1 |

| | 66 | 65 |
|----|------|------|
| 10 | 11.0 | 10.8 |
| 20 | 22.0 | 21.7 |
| 30 | 33.0 | 32.5 |
| 40 | 44.0 | 43.3 |
| 50 | 55.0 | 54.2 |
| 6 | 6.6 | 6.5 |
| 7 | 7.7 | 7.6 |
| 8 | 8.8 | 8.7 |
| 9 | 9.9 | 9.8 |

| | 2 | 3 |
|----|-----|-----|
| 10 | 0.3 | 0.5 |
| 20 | 0.7 | 1.0 |
| 30 | 1.0 | 1.5 |
| 40 | 1.3 | 2.0 |
| 50 | 1.7 | 2.5 |
| 6 | 0.2 | 0.3 |
| 7 | 0.2 | 0.4 |
| 8 | 0.3 | 0.4 |
| 9 | 0.3 | 0.5 |

| M | sin 11° | tang 11° | cot 11° | cos 11° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.28 060 | 9.28 865 | 10.71 135 | 9.99 195 | 60 | | | |
| 1 | 9.28 125 | 9.28 933 | 10.71 067 | 9.99 192 | 59 | | | |
| 2 | 9.28 190 | 9.29 000 | 10.71 000 | 9.99 190 | 58 | | | |
| 3 | 9.28 254 | 9.29 067 | 10.70 933 | 9.99 187 | 57 | | | |
| 4 | 9.28 319 | 9.29 134 | 10.70 866 | 9.99 185 | 56 | | | |
| 5 | 9.28 384 | 9.29 201 | 10.70 799 | 9.99 182 | 55 | | | |
| 6 | 9.28 448 | 9.29 268 | 10.70 732 | 9.99 180 | 54 | | | |
| 7 | 9.28 512 | 9.29 335 | 10.70 665 | 9.99 177 | 53 | | | |
| 8 | 9.28 577 | 9.29 402 | 10.70 598 | 9.99 175 | 52 | | | |
| 9 | 9.28 641 | 9.29 468 | 10.70 532 | 9.99 172 | 51 | | | |
| 10 | 9.28 705 | 9.29 535 | 10.70 465 | 9.99 170 | 50 | | | |
| 11 | 9.28 769 | 9.29 601 | 10.70 399 | 9.99 167 | 49 | | | |
| 12 | 9.28 833 | 9.29 668 | 10.70 332 | 9.99 165 | 48 | | | |
| 13 | 9.28 896 | 9.29 734 | 10.70 266 | 9.99 162 | 47 | | | |
| 14 | 9.28 960 | 9.29 800 | 10.70 200 | 9.99 160 | 46 | | | |
| 15 | 9.29 024 | 9.29 866 | 10.70 134 | 9.99 157 | 45 | | | |
| 16 | 9.29 087 | 9.29 932 | 10.70 068 | 9.99 155 | 44 | | | |
| 17 | 9.29 150 | 9.29 998 | 10.70 002 | 9.99 152 | 43 | | | |
| 18 | 9.29 214 | 9.30 064 | 10.69 936 | 9.99 150 | 42 | | | |
| 19 | 9.29 277 | 9.30 130 | 10.69 870 | 9.99 147 | 41 | | | |
| 20 | 9.29 340 | 9.30 195 | 10.69 805 | 9.99 145 | 40 | | | |
| 21 | 9.29 403 | 9.30 261 | 10.69 739 | 9.99 142 | 39 | | | |
| 22 | 9.29 466 | 9.30 326 | 10.69 674 | 9.99 140 | 38 | | | |
| 23 | 9.29 529 | 9.30 391 | 10.69 609 | 9.99 137 | 37 | | | |
| 24 | 9.29 591 | 9.30 457 | 10.69 543 | 9.99 135 | 36 | | | |
| 25 | 9.29 654 | 9.30 522 | 10.69 478 | 9.99 132 | 35 | | | |
| 26 | 9.29 716 | 9.30 587 | 10.69 413 | 9.99 130 | 34 | | | |
| 27 | 9.29 779 | 9.30 652 | 10.69 348 | 9.99 127 | 33 | | | |
| 28 | 9.29 841 | 9.30 717 | 10.69 283 | 9.99 124 | 32 | | | |
| 29 | 9.29 903 | 9.30 782 | 10.69 218 | 9.99 122 | 31 | | | |
| 30 | 9.29 966 | 9.30 846 | 10.69 154 | 9.99 119 | 30 | | | |
| 31 | 9.30 028 | 9.30 911 | 10.69 089 | 9.99 117 | 29 | | | |
| 32 | 9.30 090 | 9.30 975 | 10.69 025 | 9.99 114 | 28 | | | |
| 33 | 9.30 151 | 9.31 040 | 10.68 960 | 9.99 112 | 27 | | | |
| 34 | 9.30 213 | 9.31 104 | 10.68 896 | 9.99 109 | 26 | | | |
| 35 | 9.30 275 | 9.31 168 | 10.68 832 | 9.99 106 | 25 | | | |
| 36 | 9.30 336 | 9.31 233 | 10.68 767 | 9.99 104 | 24 | | | |
| 37 | 9.30 398 | 9.31 297 | 10.68 703 | 9.99 101 | 23 | | | |
| 38 | 9.30 459 | 9.31 361 | 10.68 639 | 9.99 099 | 22 | | | |
| 39 | 9.30 521 | 9.31 425 | 10.68 575 | 9.99 096 | 21 | | | |
| 40 | 9.30 582 | 9.31 489 | 10.68 511 | 9.99 093 | 20 | | | |
| 41 | 9.30 643 | 9.31 552 | 10.68 448 | 9.99 091 | 19 | | | |
| 42 | 9.30 704 | 9.31 616 | 10.68 384 | 9.99 088 | 18 | | | |
| 43 | 9.30 765 | 9.31 679 | 10.68 321 | 9.99 086 | 17 | | | |
| 44 | 9.30 826 | 9.31 743 | 10.68 257 | 9.99 083 | 16 | | | |
| 45 | 9.30 887 | 9.31 806 | 10.68 194 | 9.99 080 | 15 | | | |
| 46 | 9.30 947 | 9.31 870 | 10.68 130 | 9.99 078 | 14 | | | |
| 47 | 9.31 008 | 9.31 933 | 10.68 067 | 9.99 075 | 13 | | | |
| 48 | 9.31 068 | 9.31 996 | 10.68 004 | 9.99 072 | 12 | | | |
| 49 | 9.31 129 | 9.32 059 | 10.67 941 | 9.99 070 | 11 | | | |
| 50 | 9.31 189 | 9.32 122 | 10.67 878 | 9.99 067 | 10 | | | |
| 51 | 9.31 250 | 9.32 185 | 10.67 815 | 9.99 064 | 9 | | | |
| 52 | 9.31 310 | 9.32 248 | 10.67 752 | 9.99 062 | 8 | | | |
| 53 | 9.31 370 | 9.32 311 | 10.67 689 | 9.99 059 | 7 | | | |
| 54 | 9.31 430 | 9.32 373 | 10.67 627 | 9.99 056 | 6 | | | |
| 55 | 9.31 490 | 9.32 436 | 10.67 564 | 9.99 054 | 5 | | | |
| 56 | 9.31 549 | 9.32 498 | 10.67 502 | 9.99 051 | 4 | | | |
| 57 | 9.31 609 | 9.32 561 | 10.67 439 | 9.99 048 | 3 | | | |
| 58 | 9.31 669 | 9.32 623 | 10.67 377 | 9.99 046 | 2 | | | |
| 59 | 9.31 728 | 9.32 685 | 10.67 315 | 9.99 043 | 1 | | | |
| 60 | 9.31 788 | 9.32 747 | 10.67 253 | 9.99 040 | 0 | | | |
| ' | cos 78° | cot 78° | tang 78° | sin 78° | M | | | |

| | 68 | 67 | 66 |
|----|------|------|------|
| 10 | 11.3 | 11.2 | 11.0 |
| 20 | 22.7 | 22.3 | 22.0 |
| 30 | 34.0 | 33.5 | 33.0 |
| 40 | 45.3 | 44.7 | 44.0 |
| 50 | 56.7 | 55.8 | 55.0 |
| 6 | 6.8 | 6.7 | 6.6 |
| 7 | 7.9 | 7.8 | 7.7 |
| 8 | 9.1 | 8.9 | 8.8 |
| 9 | 10.2 | 10.1 | 9.9 |

| | 65 | 64 | 63 |
|----|------|------|------|
| 10 | 10.8 | 10.7 | 10.5 |
| 20 | 21.7 | 21.3 | 21.0 |
| 30 | 32.5 | 32.0 | 31.5 |
| 40 | 43.3 | 42.7 | 42.0 |
| 50 | 54.2 | 53.3 | 52.5 |
| 6 | 6.5 | 6.4 | 6.3 |
| 7 | 7.6 | 7.5 | 7.4 |
| 8 | 8.7 | 8.5 | 8.4 |
| 9 | 9.8 | 9.6 | 9.5 |

| | 62 | 61 |
|----|------|------|
| 10 | 10.3 | 10.2 |
| 20 | 20.7 | 20.3 |
| 30 | 31.0 | 30.5 |
| 40 | 41.3 | 40.7 |
| 50 | 51.7 | 50.8 |
| 6 | 6.2 | 6.1 |
| 7 | 7.2 | 7.1 |
| 8 | 8.3 | 8.1 |
| 9 | 9.3 | 9.2 |

| | 60 | 59 |
|----|------|------|
| 10 | 10.0 | 9.8 |
| 20 | 20.0 | 19.7 |
| 30 | 30.0 | 29.5 |
| 40 | 40.0 | 39.3 |
| 50 | 50.0 | 49.2 |
| 6 | 6.0 | 5.9 |
| 7 | 7.0 | 6.9 |
| 8 | 8.0 | 7.9 |
| 9 | 9.0 | 8.9 |

*

| | 2 | 3 |
|----|-----|-----|
| 10 | 0.3 | 0.5 |
| 20 | 0.7 | 1.0 |
| 30 | 1.0 | 1.5 |
| 40 | 1.3 | 2.0 |
| 50 | 1.7 | 2.5 |
| 6 | 0.2 | 0.3 |
| 7 | 0.2 | 0.4 |
| 8 | 0.3 | 0.4 |
| 9 | 0.3 | 0.5 |

| M | sin 12° | tang 12° | cot 12° | cos 12° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.31 788 | 9.32 747 | 10.67 253 | 9.99 040 | 60 | | | |
| 1 | 9.31 847 | 9.32 810 | 10.67 190 | 9.99 038 | 59 | | | |
| 2 | 9.31 907 | 9.32 872 | 10.67 128 | 9.99 035 | 58 | | | |
| 3 | 9.31 966 | 9.32 933 | 10.67 067 | 9.99 032 | 57 | | | |
| 4 | 9.32 025 | 9.32 995 | 10.67 005 | 9.99 030 | 56 | | | |
| 5 | 9.32 084 | 9.33 057 | 10.66 943 | 9.99 027 | 55 | | | |
| 6 | 9.32 143 | 9.33 119 | 10.66 881 | 9.99 024 | 54 | | | |
| 7 | 9.32 202 | 9.33 180 | 10.66 820 | 9.99 022 | 53 | | | |
| 8 | 9.32 261 | 9.33 242 | 10.66 758 | 9.99 019 | 52 | | | |
| 9 | 9.32 319 | 9.33 303 | 10.66 697 | 9.99 016 | 51 | | | |
| 10 | 9.32 378 | 9.33 365 | 10.66 635 | 9.99 013 | 50 | | | |
| 11 | 9.32 437 | 9.33 426 | 10.66 574 | 9.99 011 | 49 | | | |
| 12 | 9.32 495 | 9.33 487 | 10.66 513 | 9.99 008 | 48 | | | |
| 13 | 9.32 553 | 9.33 548 | 10.66 452 | 9.99 005 | 47 | | | |
| 14 | 9.32 612 | 9.33 609 | 10.66 391 | 9.99 002 | 46 | | | |
| 15 | 9.32 670 | 9.33 670 | 10.66 330 | 9.99 000 | 45 | | | |
| 16 | 9.32 728 | 9.33 731 | 10.66 269 | 9.98 997 | 44 | | | |
| 17 | 9.32 786 | 9.33 792 | 10.66 208 | 9.98 994 | 43 | | | |
| 18 | 9.32 844 | 9.33 853 | 10.66 147 | 9.98 991 | 42 | | | |
| 19 | 9.32 902 | 9.33 913 | 10.66 087 | 9.98 989 | 41 | | | |
| 20 | 9.32 960 | 9.33 974 | 10.66 026 | 9.98 986 | 40 | | | |
| 21 | 9.33 018 | 9.34 034 | 10.65 966 | 9.98 983 | 39 | | | |
| 22 | 9.33 075 | 9.34 095 | 10.65 905 | 9.98 980 | 38 | | | |
| 23 | 9.33 133 | 9.34 155 | 10.65 845 | 9.98 978 | 37 | | | |
| 24 | 9.33 190 | 9.34 215 | 10.65 785 | 9.98 975 | 36 | | | |
| 25 | 9.33 248 | 9.34 276 | 10.65 724 | 9.98 972 | 35 | | | |
| 26 | 9.33 305 | 9.34 336 | 10.65 664 | 9.98 969 | 34 | | | |
| 27 | 9.33 362 | 9.34 396 | 10.65 604 | 9.98 967 | 33 | | | |
| 28 | 9.33 420 | 9.34 456 | 10.65 544 | 9.98 964 | 32 | | | |
| 29 | 9.33 477 | 9.34 516 | 10.65 484 | 9.98 961 | 31 | | | |
| 30 | 9.33 534 | 9.34 576 | 10.65 424 | 9.98 958 | 30 | | | |
| 31 | 9.33 591 | 9.34 635 | 10.65 365 | 9.98 955 | 29 | | | |
| 32 | 9.33 647 | 9.34 695 | 10.65 305 | 9.98 953 | 28 | | | |
| 33 | 9.33 704 | 9.34 755 | 10.65 245 | 9.98 950 | 27 | | | |
| 34 | 9.33 761 | 9.34 814 | 10.65 186 | 9.98 947 | 26 | | | |
| 35 | 9.33 818 | 9.34 874 | 10.65 126 | 9.98 944 | 25 | | | |
| 36 | 9.33 874 | 9.34 933 | 10.65 067 | 9.98 941 | 24 | | | |
| 37 | 9.33 931 | 9.34 992 | 10.65 008 | 9.98 938 | 23 | | | |
| 38 | 9.33 987 | 9.35 051 | 10.64 949 | 9.98 936 | 22 | | | |
| 39 | 9.34 043 | 9.35 111 | 10.64 889 | 9.98 933 | 21 | | | |
| 40 | 9.34 100 | 9.35 170 | 10.64 830 | 9.98 930 | 20 | | | |
| 41 | 9.34 156 | 9.35 229 | 10.64 771 | 9.98 927 | 19 | | | |
| 42 | 9.34 212 | 9.35 288 | 10.64 712 | 9.98 924 | 18 | | | |
| 43 | 9.34 268 | 9.35 347 | 10.64 653 | 9.98 921 | 17 | | | |
| 44 | 9.34 324 | 9.35 405 | 10.64 595 | 9.98 919 | 16 | | | |
| 45 | 9.34 380 | 9.35 464 | 10.64 536 | 9.98 916 | 15 | | | |
| 46 | 9.34 436 | 9.35 523 | 10.64 477 | 9.98 913 | 14 | | | |
| 47 | 9.34 491 | 9.35 581 | 10.64 419 | 9.98 910 | 13 | | | |
| 48 | 9.34 547 | 9.35 640 | 10.64 360 | 9.98 907 | 12 | | | |
| 49 | 9.34 602 | 9.35 698 | 10.64 302 | 9.98 904 | 11 | | | |
| 50 | 9.34 658 | 9.35 757 | 10.64 243 | 9.98 901 | 10 | | | |
| 51 | 9.34 713 | 9.35 815 | 10.64 185 | 9.98 898 | 9 | | | |
| 52 | 9.34 769 | 9.35 873 | 10.64 127 | 9.98 896 | 8 | | | |
| 53 | 9.34 824 | 9.35 931 | 10.64 069 | 9.98 893 | 7 | | | |
| 54 | 9.34 879 | 9.35 989 | 10.64 011 | 9.98 890 | 6 | | | |
| 55 | 9.34 934 | 9.36 047 | 10.63 953 | 9.98 887 | 5 | | | |
| 56 | 9.34 989 | 9.36 105 | 10.63 895 | 9.98 884 | 4 | | | |
| 57 | 9.35 044 | 9.36 163 | 10.63 837 | 9.98 881 | 3 | | | |
| 58 | 9.35 099 | 9.36 221 | 10.63 779 | 9.98 878 | 2 | | | |
| 59 | 9.35 154 | 9.36 279 | 10.63 721 | 9.98 875 | 1 | | | |
| 60 | 9.35 209 | 9.36 336 | 10.63 664 | 9.98 872 | 0 | | | |
| | cos 77° | cot 77° | tang 77° | sin 77° | ' | | | |

| | 63 | 62 | 61 |
|----|------|------|------|
| 10 | 10.5 | 10.3 | 10.2 |
| 20 | 21.0 | 20.7 | 20.3 |
| 30 | 31.5 | 31.0 | 30.5 |
| 40 | 42.0 | 41.3 | 40.7 |
| 50 | 52.5 | 51.7 | 50.8 |
| 6 | 6.3 | 6.2 | 6.1 |
| 7 | 7.4 | 7.2 | 7.1 |
| 8 | 8.4 | 8.3 | 8.1 |
| 9 | 9.5 | 9.3 | 9.2 |

| | 60 | 59 |
|----|------|------|
| 10 | 10.0 | 9.8 |
| 20 | 20.0 | 19.7 |
| 30 | 30.0 | 29.5 |
| 40 | 40.0 | 39.3 |
| 50 | 50.0 | 49.2 |
| 6 | 6.0 | 5.9 |
| 7 | 7.0 | 6.9 |
| 8 | 8.0 | 7.9 |
| 9 | 9.0 | 8.9 |

| | 58 | 57 |
|----|------|------|
| 10 | 9.7 | 9.5 |
| 20 | 19.3 | 19.0 |
| 30 | 29.0 | 28.5 |
| 40 | 38.7 | 38.0 |
| 50 | 48.3 | 47.5 |
| 6 | 5.8 | 5.7 |
| 7 | 6.8 | 6.7 |
| 8 | 7.7 | 7.6 |
| 9 | 8.7 | 8.6 |

| | 56 | 55 |
|----|------|------|
| 10 | 9.3 | 9.2 |
| 20 | 18.7 | 18.3 |
| 30 | 28.0 | 27.5 |
| 40 | 37.3 | 36.7 |
| 50 | 46.7 | 45.8 |
| 6 | 5.6 | 5.5 |
| 7 | 6.5 | 6.4 |
| 8 | 7.5 | 7.3 |
| 9 | 8.4 | 8.3 |

| | 2 | 3 |
|----|-----|-----|
| 10 | 0.3 | 0.5 |
| 20 | 0.7 | 1.0 |
| 30 | 1.0 | 1.5 |
| 40 | 1.3 | 2.0 |
| 50 | 1.7 | 2.5 |
| 6 | 0.2 | 0.3 |
| 7 | 0.2 | 0.4 |
| 8 | 0.3 | 0.4 |
| 9 | 0.3 | 0.5 |

| M | sin 13° | tang 13° | cot 13° | cos 13° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|------|------|
| 0 | 9.35 209 | 9.36 336 | 10.63 664 | 9.98 872 | 60 | | | |
| 1 | 9.35 263 | 9.36 394 | 10.63 606 | 9.98 869 | 59 | | | |
| 2 | 9.35 318 | 9.36 452 | 10.63 548 | 9.98 867 | 58 | | 58 | 57 |
| 3 | 9.35 373 | 9.36 509 | 10.63 491 | 9.98 864 | 57 | 10 | 9.7 | 9.5 |
| 4 | 9.35 427 | 9.36 566 | 10.63 434 | 9.98 861 | 56 | 20 | 19.3 | 19.0 |
| 5 | 9.35 481 | 9.36 624 | 10.63 376 | 9.98 858 | 55 | 30 | 29.0 | 28.5 |
| 6 | 9.35 536 | 9.36 681 | 10.63 319 | 9.98 855 | 54 | 40 | 38.7 | 38.0 |
| 7 | 9.35 590 | 9.36 738 | 10.63 262 | 9.98 852 | 53 | 50 | 48.3 | 47.5 |
| 8 | 9.35 644 | 9.36 795 | 10.63 205 | 9.98 849 | 52 | 6 | 5.8 | 5.7 |
| 9 | 9.35 698 | 9.36 852 | 10.63 148 | 9.98 846 | 51 | 7 | 6.8 | 6.7 |
| 10 | 9.35 752 | 9.36 909 | 10.63 091 | 9.98 843 | 50 | 8 | 7.7 | 7.6 |
| 11 | 9.35 806 | 9.36 966 | 10.63 034 | 9.98 840 | 49 | 9 | 8.7 | 8.6 |
| 12 | 9.35 860 | 9.37 023 | 10.62 977 | 9.98 837 | 48 | | | |
| 13 | 9.35 914 | 9.37 080 | 10.62 920 | 9.98 834 | 47 | | 56 | 55 |
| 14 | 9.35 968 | 9.37 137 | 10.62 863 | 9.98 831 | 46 | 10 | 9.3 | 9.2 |
| 15 | 9.36 022 | 9.37 193 | 10.62 807 | 9.98 828 | 45 | 20 | 18.7 | 18.3 |
| 16 | 9.36 075 | 9.37 250 | 10.62 750 | 9.98 825 | 44 | 30 | 28.0 | 27.5 |
| 17 | 9.36 129 | 9.37 306 | 10.62 694 | 9.98 822 | 43 | 40 | 37.3 | 36.7 |
| 18 | 9.36 182 | 9.37 363 | 10.62 637 | 9.98 819 | 42 | 50 | 46.7 | 45.8 |
| 19 | 9.36 236 | 9.37 419 | 10.62 581 | 9.98 816 | 41 | 6 | 5.6 | 5.5 |
| 20 | 9.36 289 | 9.37 476 | 10.62 524 | 9.98 813 | 40 | 7 | 6.5 | 6.4 |
| 21 | 9.36 342 | 9.37 532 | 10.62 468 | 9.98 810 | 39 | 8 | 7.5 | 7.3 |
| 22 | 9.36 395 | 9.37 588 | 10.62 412 | 9.98 807 | 38 | 9 | 8.4 | 8.3 |
| 23 | 9.36 449 | 9.37 644 | 10.62 356 | 9.98 804 | 37 | | | |
| 24 | 9.36 502 | 9.37 700 | 10.62 300 | 9.98 801 | 36 | | 54 | 53 |
| 25 | 9.36 555 | 9.37 756 | 10.62 244 | 9.98 798 | 35 | 10 | 9.0 | 8.8 |
| 26 | 9.36 608 | 9.37 812 | 10.62 188 | 9.98 795 | 34 | 20 | 18.0 | 17.7 |
| 27 | 9.36 660 | 9.37 868 | 10.62 132 | 9.98 792 | 33 | 30 | 27.0 | 26.5 |
| 28 | 9.36 713 | 9.37 924 | 10.62 076 | 9.98 789 | 32 | 40 | 36.0 | 35.3 |
| 29 | 9.36 766 | 9.37 980 | 10.62 020 | 9.98 786 | 31 | 50 | 45.0 | 44.2 |
| 30 | 9.36 819 | 9.38 035 | 10.61 965 | 9.98 783 | 30 | 6 | 5.4 | 5.3 |
| 31 | 9.36 871 | 9.38 091 | 10.61 909 | 9.98 780 | 29 | 7 | 6.3 | 6.2 |
| 32 | 9.36 924 | 9.38 147 | 10.61 853 | 9.98 777 | 28 | 8 | 7.2 | 7.1 |
| 33 | 9.36 976 | 9.38 202 | 10.61 798 | 9.98 774 | 27 | 9 | 8.1 | 8.0 |
| 34 | 9.37 028 | 9.38 257 | 10.61 743 | 9.98 771 | 26 | | | |
| 35 | 9.37 081 | 9.38 313 | 10.61 687 | 9.98 768 | 25 | | 52 | 51 |
| 36 | 9.37 133 | 9.38 368 | 10.61 632 | 9.98 765 | 24 | 10 | 8.7 | 8.5 |
| 37 | 9.37 185 | 9.38 423 | 10.61 577 | 9.98 762 | 23 | 20 | 17.3 | 17.0 |
| 38 | 9.37 237 | 9.38 479 | 10.61 521 | 9.98 759 | 22 | 30 | 26.0 | 25.5 |
| 39 | 9.37 289 | 9.38 534 | 10.61 466 | 9.98 756 | 21 | 40 | 34.7 | 34.0 |
| 40 | 9.37 341 | 9.38 589 | 10.61 411 | 9.98 753 | 20 | 50 | 43.3 | 42.5 |
| 41 | 9.37 393 | 9.38 644 | 10.61 356 | 9.98 750 | 19 | 6 | 5.2 | 5.1 |
| 42 | 9.37 445 | 9.38 699 | 10.61 301 | 9.98 746 | 18 | 7 | 6.1 | 6.0 |
| 43 | 9.37 497 | 9.38 754 | 10.61 246 | 9.98 743 | 17 | 8 | 6.9 | 6.8 |
| 44 | 9.37 549 | 9.38 808 | 10.61 192 | 9.98 740 | 16 | 9 | 7.8 | 7.7 |
| 45 | 9.37 600 | 9.38 863 | 10.61 137 | 9.98 737 | 15 | | | |
| 46 | 9.37 652 | 9.38 918 | 10.61 082 | 9.98 734 | 14 | | | |
| 47 | 9.37 703 | 9.38 972 | 10.61 028 | 9.98 731 | 13 | | | |
| 48 | 9.37 755 | 9.39 027 | 10.60 973 | 9.98 728 | 12 | | | |
| 49 | 9.37 806 | 9.39 082 | 10.60 918 | 9.98 725 | 11 | | | |
| 50 | 9.37 858 | 9.39 136 | 10.60 864 | 9.98 722 | 10 | | | |
| 51 | 9.37 909 | 9.39 190 | 10.60 810 | 9.98 719 | 9 | | 2 | 3 |
| 52 | 9.37 960 | 9.39 245 | 10.60 755 | 9.98 715 | 8 | 10 | 0.3 | 0.5 |
| 53 | 9.38 011 | 9.39 299 | 10.60 701 | 9.98 712 | 7 | 20 | 0.7 | 1.0 |
| 54 | 9.38 062 | 9.39 353 | 10.60 647 | 9.98 709 | 6 | 30 | 1.0 | 1.5 |
| 55 | 9.38 113 | 9.39 407 | 10.60 593 | 9.98 706 | 5 | 40 | 1.3 | 2.0 |
| 56 | 9.38 164 | 9.39 461 | 10.60 539 | 9.98 703 | 4 | 50 | 1.7 | 2.5 |
| 57 | 9.38 215 | 9.39 515 | 10.60 485 | 9.98 700 | 3 | 6 | 2.0 | 3.0 |
| 58 | 9.38 266 | 9.39 569 | 10.60 431 | 9.98 697 | 2 | 7 | 2.0 | 3.0 |
| 59 | 9.38 317 | 9.39 623 | 10.60 377 | 9.98 694 | 1 | 8 | 2.0 | 3.0 |
| 60 | 9.38 368 | 9.39 677 | 10.60 323 | 9.98 690 | 0 | 9 | 2.0 | 3.0 |
| | cos 76° | cot 76° | tang 76° | sin 76° | M | | | |

*

| M | sin 14° | tang 14° | cot 14° | cos 14° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|--|
| 0 | 9.38 368 | 9.39 677 | 10.60 323 | 9.98 690 | 60 | | |
| 1 | 9.38 418 | 9.39 731 | 10.60 269 | 9.98 687 | 59 | | |
| 2 | 9.38 469 | 9.39 785 | 10.60 215 | 9.98 684 | 58 | | |
| 3 | 9.38 519 | 9.39 838 | 10.60 162 | 9.98 681 | 57 | | |
| 4 | 9.38 570 | 9.39 892 | 10.60 108 | 9.98 678 | 56 | | |
| 5 | 9.38 620 | 9.39 945 | 10.60 055 | 9.98 675 | 55 | | |
| 6 | 9.38 670 | 9.39 999 | 10.60 001 | 9.98 671 | 54 | | |
| 7 | 9.38 721 | 9.40 052 | 10.59 948 | 9.98 668 | 53 | | |
| 8 | 9.38 771 | 9.40 106 | 10.59 894 | 9.98 665 | 52 | | |
| 9 | 9.38 821 | 9.40 159 | 10.59 841 | 9.98 662 | 51 | | |
| 10 | 9.38 871 | 9.40 212 | 10.59 788 | 9.98 659 | 50 | | |
| 11 | 9.38 921 | 9.40 266 | 10.59 734 | 9.98 656 | 49 | | |
| 12 | 9.38 971 | 9.40 319 | 10.59 681 | 9.98 652 | 48 | | |
| 13 | 9.39 021 | 9.40 372 | 10.59 628 | 9.98 649 | 47 | | |
| 14 | 9.39 071 | 9.40 425 | 10.59 575 | 9.98 646 | 46 | | |
| 15 | 9.39 121 | 9.40 478 | 10.59 522 | 9.98 643 | 45 | | |
| 16 | 9.39 170 | 9.40 531 | 10.59 469 | 9.98 640 | 44 | | |
| 17 | 9.39 220 | 9.40 584 | 10.59 416 | 9.98 636 | 43 | | |
| 18 | 9.39 270 | 9.40 636 | 10.59 364 | 9.98 633 | 42 | | |
| 19 | 9.39 319 | 9.40 689 | 10.59 311 | 9.98 630 | 41 | | |
| 20 | 9.39 369 | 9.40 742 | 10.59 258 | 9.98 627 | 40 | | |
| 21 | 9.39 418 | 9.40 795 | 10.59 205 | 9.98 623 | 39 | | |
| 22 | 9.39 467 | 9.40 847 | 10.59 153 | 9.98 620 | 38 | | |
| 23 | 9.39 517 | 9.40 900 | 10.59 100 | 9.98 617 | 37 | | |
| 24 | 9.39 566 | 9.40 952 | 10.59 048 | 9.98 614 | 36 | | |
| 25 | 9.39 615 | 9.41 005 | 10.58 995 | 9.98 610 | 35 | | |
| 26 | 9.39 664 | 9.41 057 | 10.58 943 | 9.98 607 | 34 | | |
| 27 | 9.39 713 | 9.41 109 | 10.58 891 | 9.98 604 | 33 | | |
| 28 | 9.39 762 | 9.41 161 | 10.58 839 | 9.98 601 | 32 | | |
| 29 | 9.39 811 | 9.41 214 | 10.58 786 | 9.98 597 | 31 | | |
| 30 | 9.39 860 | 9.41 266 | 10.58 734 | 9.98 594 | 30 | | |
| 31 | 9.39 909 | 9.41 318 | 10.58 682 | 9.98 591 | 29 | | |
| 32 | 9.39 958 | 9.41 370 | 10.58 630 | 9.98 588 | 28 | | |
| 33 | 9.40 006 | 9.41 422 | 10.58 578 | 9.98 584 | 27 | | |
| 34 | 9.40 055 | 9.41 474 | 10.58 526 | 9.98 581 | 26 | | |
| 35 | 9.40 103 | 9.41 526 | 10.58 474 | 9.98 578 | 25 | | |
| 36 | 9.40 152 | 9.41 578 | 10.58 422 | 9.98 574 | 24 | | |
| 37 | 9.40 200 | 9.41 629 | 10.58 371 | 9.98 571 | 23 | | |
| 38 | 9.40 249 | 9.41 681 | 10.58 319 | 9.98 568 | 22 | | |
| 39 | 9.40 297 | 9.41 733 | 10.58 267 | 9.98 565 | 21 | | |
| 40 | 9.40 346 | 9.41 784 | 10.58 216 | 9.98 561 | 20 | | |
| 41 | 9.40 394 | 9.41 836 | 10.58 164 | 9.98 558 | 19 | | |
| 42 | 9.40 442 | 9.41 887 | 10.58 113 | 9.98 555 | 18 | | |
| 43 | 9.40 490 | 9.41 939 | 10.58 061 | 9.98 551 | 17 | | |
| 44 | 9.40 538 | 9.41 990 | 10.58 010 | 9.98 548 | 16 | | |
| 45 | 9.40 586 | 9.42 041 | 10.57 959 | 9.98 545 | 15 | | |
| 46 | 9.40 634 | 9.42 093 | 10.57 907 | 9.98 541 | 14 | | |
| 47 | 9.40 682 | 9.42 144 | 10.57 856 | 9.98 538 | 13 | | |
| 48 | 9.40 730 | 9.42 195 | 10.57 805 | 9.98 535 | 12 | | |
| 49 | 9.40 778 | 9.42 246 | 10.57 754 | 9.98 531 | 11 | | |
| 50 | 9.40 825 | 9.42 297 | 10.57 703 | 9.98 528 | 10 | | |
| 51 | 9.40 873 | 9.42 348 | 10.57 652 | 9.98 525 | 9 | | |
| 52 | 9.40 921 | 9.42 399 | 10.57 601 | 9.98 521 | 8 | | |
| 53 | 9.40 968 | 9.42 450 | 10.57 550 | 9.98 518 | 7 | | |
| 54 | 9.41 016 | 9.42 501 | 10.57 499 | 9.98 515 | 6 | | |
| 55 | 9.41 063 | 9.42 552 | 10.57 448 | 9.98 511 | 5 | | |
| 56 | 9.41 111 | 9.42 603 | 10.57 397 | 9.98 508 | 4 | | |
| 57 | 9.41 158 | 9.42 653 | 10.57 347 | 9.98 505 | 3 | | |
| 58 | 9.41 205 | 9.42 704 | 10.57 296 | 9.98 501 | 2 | | |
| 59 | 9.41 252 | 9.42 755 | 10.57 245 | 9.98 498 | 1 | | |
| 60 | 9.41 300 | 9.42 805 | 10.57 195 | 9.98 494 | 0 | | |
| | cos 75° | cot 75° | tang 75° | sin 75° | M | | |

| | 54 | 53 |
|----|------|------|
| 10 | 9.0 | 8.8 |
| 20 | 18.0 | 17.7 |
| 30 | 27.0 | 26.5 |
| 40 | 36.0 | 35.3 |
| 50 | 45.0 | 44.2 |
| 6 | 5.4 | 5.3 |
| 7 | 6.3 | 6.2 |
| 8 | 7.2 | 7.1 |
| 9 | 8.1 | 8.0 |

| | 52 | 51 |
|----|------|------|
| 10 | 8.7 | 8.5 |
| 20 | 17.3 | 17.0 |
| 30 | 26.0 | 25.5 |
| 40 | 34.7 | 34.0 |
| 50 | 43.3 | 42.5 |
| 6 | 5.2 | 5.1 |
| 7 | 6.1 | 6.0 |
| 8 | 6.9 | 6.8 |
| 9 | 7.8 | 7.7 |

| | 50 | 49 |
|----|------|------|
| 10 | 8.3 | 8.2 |
| 20 | 16.7 | 16.3 |
| 30 | 25.0 | 24.5 |
| 40 | 33.3 | 32.7 |
| 50 | 41.7 | 40.8 |
| 6 | 5.0 | 4.9 |
| 7 | 5.8 | 5.7 |
| 8 | 6.7 | 6.5 |
| 9 | 7.5 | 7.4 |

| | 48 | 47 |
|----|------|------|
| 10 | 8.0 | 7.8 |
| 20 | 16.0 | 15.7 |
| 30 | 24.0 | 23.5 |
| 40 | 32.0 | 31.3 |
| 50 | 40.0 | 39.2 |
| 6 | 4.8 | 4.7 |
| 7 | 5.6 | 5.5 |
| 8 | 6.4 | 6.3 |
| 9 | 7.2 | 7.1 |

| | 3 | 4 |
|----|-----|-----|
| 10 | 0.5 | 0.7 |
| 20 | 1.0 | 1.3 |
| 30 | 1.5 | 2.0 |
| 40 | 2.0 | 2.7 |
| 50 | 2.5 | 3.3 |
| 6 | 0.3 | 0.4 |
| 7 | 0.4 | 0.5 |
| 8 | 0.4 | 0.5 |
| 9 | 0.5 | 0.6 |

| M | sin 15° | tang. 15° | cot 15° | cos 15° | ' | P. P. | |
|----|----------|-----------|-----------|----------|----|-------|--|
| 0 | 9.41 300 | 9.42 805 | 10.57 195 | 9.98 494 | 60 | | |
| 1 | 9.41 347 | 9.42 856 | 10.57 144 | 9.98 491 | 59 | | |
| 2 | 9.41 394 | 9.42 906 | 10.57 094 | 9.98 488 | 58 | | |
| 3 | 9.41 441 | 9.42 957 | 10.57 043 | 9.98 484 | 57 | | |
| 4 | 9.41 488 | 9.43 007 | 10.56 993 | 9.98 481 | 56 | | |
| 5 | 9.41 535 | 9.43 057 | 10.56 943 | 9.98 477 | 55 | | |
| 6 | 9.41 582 | 9.43 108 | 10.56 892 | 9.98 474 | 54 | | |
| 7 | 9.41 628 | 9.43 158 | 10.56 842 | 9.98 471 | 53 | | |
| 8 | 9.41 675 | 9.43 208 | 10.56 792 | 9.98 467 | 52 | | |
| 9 | 9.41 722 | 9.43 258 | 10.56 742 | 9.98 464 | 51 | | |
| 10 | 9.41 768 | 9.43 308 | 10.56 692 | 9.98 460 | 50 | | |
| 11 | 9.41 815 | 9.43 358 | 10.56 642 | 9.98 457 | 49 | | |
| 12 | 9.41 861 | 9.43 408 | 10.56 592 | 9.98 453 | 48 | | |
| 13 | 9.41 908 | 9.43 458 | 10.56 542 | 9.98 450 | 47 | | |
| 14 | 9.41 954 | 9.43 508 | 10.56 492 | 9.98 447 | 46 | | |
| 15 | 9.42 001 | 9.43 558 | 10.56 442 | 9.98 443 | 45 | | |
| 16 | 9.42 047 | 9.43 607 | 10.56 393 | 9.98 440 | 44 | | |
| 17 | 9.42 093 | 9.43 657 | 10.56 343 | 9.98 436 | 43 | | |
| 18 | 9.42 140 | 9.43 707 | 10.56 293 | 9.98 433 | 42 | | |
| 19 | 9.42 186 | 9.43 756 | 10.56 244 | 9.98 429 | 41 | | |
| 20 | 9.42 232 | 9.43 806 | 10.56 194 | 9.98 426 | 40 | | |
| 21 | 9.42 278 | 9.43 855 | 10.56 145 | 9.98 422 | 39 | | |
| 22 | 9.42 324 | 9.43 905 | 10.56 095 | 9.98 419 | 38 | | |
| 23 | 9.42 370 | 9.43 954 | 10.56 046 | 9.98 415 | 37 | | |
| 24 | 9.42 416 | 9.44 004 | 10.55 996 | 9.98 412 | 36 | | |
| 25 | 9.42 461 | 9.44 053 | 10.55 947 | 9.98 409 | 35 | | |
| 26 | 9.42 507 | 9.44 102 | 10.55 898 | 9.98 405 | 34 | | |
| 27 | 9.42 553 | 9.44 151 | 10.55 849 | 9.98 402 | 33 | | |
| 28 | 9.42 599 | 9.44 201 | 10.55 799 | 9.98 398 | 32 | | |
| 29 | 9.42 644 | 9.44 250 | 10.55 750 | 9.98 395 | 31 | | |
| 30 | 9.42 690 | 9.44 299 | 10.55 701 | 9.98 391 | 30 | | |
| 31 | 9.42 735 | 9.44 348 | 10.55 652 | 9.98 388 | 29 | | |
| 32 | 9.42 781 | 9.44 397 | 10.55 603 | 9.98 384 | 28 | | |
| 33 | 9.42 826 | 9.44 446 | 10.55 554 | 9.98 381 | 27 | | |
| 34 | 9.42 872 | 9.44 495 | 10.55 505 | 9.98 377 | 26 | | |
| 35 | 9.42 917 | 9.44 544 | 10.55 456 | 9.98 373 | 25 | | |
| 36 | 9.42 962 | 9.44 592 | 10.55 408 | 9.98 370 | 24 | | |
| 37 | 9.43 008 | 9.44 641 | 10.55 359 | 9.98 366 | 23 | | |
| 38 | 9.43 053 | 9.44 690 | 10.55 310 | 9.98 363 | 22 | | |
| 39 | 9.43 098 | 9.44 738 | 10.55 262 | 9.98 359 | 21 | | |
| 40 | 9.43 143 | 9.44 787 | 10.55 213 | 9.98 356 | 20 | | |
| 41 | 9.43 188 | 9.44 836 | 10.55 164 | 9.98 352 | 19 | | |
| 42 | 9.43 233 | 9.44 884 | 10.55 116 | 9.98 349 | 18 | | |
| 43 | 9.43 278 | 9.44 933 | 10.55 067 | 9.98 345 | 17 | | |
| 44 | 9.43 323 | 9.44 981 | 10.55 019 | 9.98 342 | 16 | | |
| 45 | 9.43 367 | 9.45 029 | 10.54 971 | 9.98 338 | 15 | | |
| 46 | 9.43 412 | 9.45 078 | 10.54 922 | 9.98 334 | 14 | | |
| 47 | 9.43 457 | 9.45 126 | 10.54 874 | 9.98 331 | 13 | | |
| 48 | 9.43 502 | 9.45 174 | 10.54 826 | 9.98 327 | 12 | | |
| 49 | 9.43 546 | 9.45 222 | 10.54 778 | 9.98 324 | 11 | | |
| 50 | 9.43 591 | 9.45 271 | 10.54 729 | 9.98 320 | 10 | | |
| 51 | 9.43 635 | 9.45 319 | 10.54 681 | 9.98 317 | 9 | | |
| 52 | 9.43 680 | 9.45 367 | 10.54 633 | 9.98 313 | 8 | | |
| 53 | 9.43 724 | 9.45 415 | 10.54 585 | 9.98 309 | 7 | | |
| 54 | 9.43 769 | 9.45 463 | 10.54 537 | 9.98 306 | 6 | | |
| 55 | 9.43 813 | 9.45 511 | 10.54 489 | 9.98 302 | 5 | | |
| 56 | 9.43 857 | 9.45 559 | 10.54 441 | 9.98 299 | 4 | | |
| 57 | 9.43 901 | 9.45 606 | 10.54 394 | 9.98 295 | 3 | | |
| 58 | 9.43 946 | 9.45 654 | 10.54 346 | 9.98 291 | 2 | | |
| 59 | 9.43 990 | 9.45 702 | 10.54 298 | 9.98 288 | 1 | | |
| 60 | 9.44 034 | 9.45 750 | 10.54 250 | 9.98 284 | 0 | | |
| ' | cos 74° | cot 74° | tang 74° | sin 74° | M | | |

| | 51 | 50 |
|----|------|------|
| 10 | 8.5 | 8.3 |
| 20 | 17.0 | 16.7 |
| 30 | 25.5 | 25.0 |
| 40 | 34.0 | 33.3 |
| 50 | 42.5 | 41.7 |
| 6 | 5.1 | 5.0 |
| 7 | 6.0 | 5.8 |
| 8 | 6.8 | 6.7 |
| 9 | 7.7 | 7.5 |

| | 49 | 48 |
|----|------|------|
| 10 | 8.2 | 8.0 |
| 20 | 16.3 | 16.0 |
| 30 | 24.5 | 24.0 |
| 40 | 32.7 | 32.0 |
| 50 | 40.8 | 40.0 |
| 6 | 4.9 | 4.8 |
| 7 | 5.7 | 5.6 |
| 8 | 6.5 | 6.4 |
| 9 | 7.4 | 7.2 |

| | 47 | 46 |
|----|------|------|
| 10 | 7.8 | 7.7 |
| 20 | 15.7 | 15.3 |
| 30 | 23.5 | 23.0 |
| 40 | 31.3 | 30.7 |
| 50 | 39.2 | 38.3 |
| 6 | 4.7 | 4.6 |
| 7 | 5.5 | 5.4 |
| 8 | 6.3 | 6.1 |
| 9 | 7.1 | 6.9 |

| | 45 | 44 |
|----|------|------|
| 10 | 7.5 | 7.3 |
| 20 | 15.0 | 14.7 |
| 30 | 22.5 | 22.0 |
| 40 | 30.0 | 29.3 |
| 50 | 37.5 | 36.7 |
| 6 | 4.5 | 4.4 |
| 7 | 5.3 | 5.1 |
| 8 | 6.0 | 5.9 |
| 9 | 6.8 | 6.6 |

| | 3 | 4 |
|----|-----|-----|
| 10 | 0.5 | 0.7 |
| 20 | 1.0 | 1.3 |
| 30 | 1.5 | 2.0 |
| 40 | 2.0 | 2.7 |
| 50 | 2.5 | 3.3 |
| 6 | 0.3 | 0.4 |
| 7 | 0.4 | 0.5 |
| 8 | 0.4 | 0.5 |
| 9 | 0.5 | 0.6 |

| M | sin 16° | tang 16° | cot 16° | cos 16° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|--|
| 0 | 9.44 034 | 9.45 750 | 10.54 250 | 9.98 284 | 60 | | |
| 1 | 9.44 078 | 9.45 797 | 10.54 203 | 9.98 281 | 59 | | |
| 2 | 9.44 122 | 9.45 845 | 10.54 155 | 9.98 277 | 58 | | |
| 3 | 9.44 166 | 9.45 892 | 10.54 108 | 9.98 273 | 57 | | |
| 4 | 9.44 210 | 9.45 940 | 10.54 060 | 9.98 270 | 56 | | |
| 5 | 9.44 253 | 9.45 987 | 10.54 013 | 9.98 266 | 55 | | |
| 6 | 9.44 297 | 9.46 035 | 10.53 965 | 9.98 262 | 54 | | |
| 7 | 9.44 341 | 9.46 082 | 10.53 918 | 9.98 259 | 53 | | |
| 8 | 9.44 385 | 9.46 130 | 10.63 870 | 9.98 255 | 52 | | |
| 9 | 9.44 428 | 9.46 177 | 10.53 823 | 9.98 251 | 51 | | |
| 10 | 9.44 472 | 9.46 224 | 10.53 776 | 9.98 248 | 50 | | |
| 11 | 9.44 516 | 9.46 271 | 10.53 729 | 9.98 244 | 49 | | |
| 12 | 9.44 559 | 9.46 319 | 10.53 681 | 9.98 240 | 48 | | |
| 13 | 9.44 602 | 9.46 366 | 10.53 634 | 9.98 237 | 47 | | |
| 14 | 9.44 646 | 9.46 413 | 10.53 587 | 9.98 233 | 46 | | |
| 15 | 9.44 689 | 9.46 460 | 10.53 540 | 9.98 229 | 45 | | |
| 16 | 9.44 733 | 9.46 507 | 10.53 493 | 9.98 226 | 44 | | |
| 17 | 9.44 776 | 9.46 554 | 10.53 446 | 9.98 222 | 43 | | |
| 18 | 9.44 819 | 9.46 601 | 10.53 399 | 9.98 218 | 42 | | |
| 19 | 9.44 862 | 9.46 648 | 10.53 352 | 9.98 215 | 41 | | |
| 20 | 9.44 905 | 9.46 694 | 10.53 306 | 9.98 211 | 40 | | |
| 21 | 9.44 948 | 9.46 741 | 10.53 259 | 9.98 207 | 39 | | |
| 22 | 9.44 992 | 9.46 788 | 10.53 212 | 9.98 204 | 38 | | |
| 23 | 9.45 035 | 9.46 835 | 10.53 165 | 9.98 200 | 37 | | |
| 24 | 9.45 077 | 9.46 881 | 10.53 119 | 9.98 196 | 36 | | |
| 25 | 9.45 120 | 9.46 928 | 10.53 072 | 9.98 192 | 35 | | |
| 26 | 9.45 163 | 9.46 975 | 10.53 025 | 9.98 189 | 34 | | |
| 27 | 9.45 206 | 9.47 021 | 10.52 979 | 9.98 185 | 33 | | |
| 28 | 9.45 249 | 9.47 068 | 10.52 932 | 9.98 181 | 32 | | |
| 29 | 9.45 292 | 9.47 114 | 10.52 886 | 9.98 177 | 31 | | |
| 30 | 9.45 334 | 9.47 160 | 10.52 840 | 9.98 174 | 30 | | |
| 31 | 9.45 377 | 9.47 207 | 10.52 793 | 9.98 170 | 29 | | |
| 32 | 9.45 419 | 9.47 253 | 10.52 747 | 9.98 166 | 28 | | |
| 33 | 9.45 462 | 9.47 299 | 10.52 701 | 9.98 162 | 27 | | |
| 34 | 9.45 504 | 9.47 346 | 10.52 654 | 9.98 159 | 26 | | |
| 35 | 9.45 547 | 9.47 392 | 10.52 608 | 9.98 155 | 25 | | |
| 36 | 9.45 589 | 9.47 438 | 10.52 562 | 9.98 151 | 24 | | |
| 37 | 9.45 632 | 9.47 484 | 10.52 516 | 9.98 147 | 23 | | |
| 38 | 9.45 674 | 9.47 530 | 10.52 470 | 9.98 144 | 22 | | |
| 39 | 9.45 716 | 9.47 576 | 10.52 424 | 9.98 140 | 21 | | |
| 40 | 9.45 758 | 9.47 622 | 10.52 378 | 9.98 136 | 20 | | |
| 41 | 9.45 801 | 9.47 668 | 10.52 332 | 9.98 132 | 19 | | |
| 42 | 9.45 843 | 9.47 714 | 10.52 286 | 9.98 129 | 18 | | |
| 43 | 9.45 885 | 9.47 760 | 10.52 240 | 9.98 125 | 17 | | |
| 44 | 9.45 927 | 9.47 806 | 10.52 194 | 9.98 121 | 16 | | |
| 45 | 9.45 969 | 9.47 852 | 10.52 148 | 9.98 117 | 15 | | |
| 46 | 9.46 011 | 9.47 897 | 10.52 103 | 9.98 113 | 14 | | |
| 47 | 9.46 053 | 9.47 943 | 10.52 057 | 9.98 110 | 13 | | |
| 48 | 9.46 095 | 9.47 989 | 10.52 011 | 9.98 106 | 12 | | |
| 49 | 9.46 136 | 9.48 035 | 10.51 965 | 9.98 102 | 11 | | |
| 50 | 9.46 178 | 9.48 080 | 10.51 920 | 9.98 098 | 10 | | |
| 51 | 9.46 220 | 9.48 126 | 10.51 874 | 9.98 094 | 9 | | |
| 52 | 9.46 262 | 9.48 171 | 10.51 829 | 9.98 090 | 8 | | |
| 53 | 9.46 303 | 9.48 217 | 10.51 783 | 9.98 087 | 7 | | |
| 54 | 9.46 345 | 9.48 262 | 10.51 738 | 9.98 083 | 6 | | |
| 55 | 9.46 386 | 9.48 307 | 10.51 693 | 9.98 079 | 5 | | |
| 56 | 9.46 428 | 9.48 353 | 10.51 647 | 9.98 075 | 4 | | |
| 57 | 9.46 469 | 9.48 398 | 10.51 602 | 9.98 071 | 3 | | |
| 58 | 9.46 511 | 9.48 443 | 10.51 557 | 9.98 067 | 2 | | |
| 59 | 9.46 552 | 9.48 489 | 10.51 511 | 9.98 063 | 1 | | |
| 60 | 9.46 594 | 9.48 534 | 10.51 466 | 9.98 060 | 0 | | |
| | cos 73° | cot 73° | tang 73° | sin 73° | M | | |

| | 48 | 47 |
|----|------|------|
| 10 | 8.0 | 7.8 |
| 20 | 16.0 | 15.7 |
| 30 | 24.0 | 23.5 |
| 40 | 32.0 | 31.3 |
| 50 | 40.0 | 39.2 |
| 6 | 4.8 | 4.7 |
| 7 | 5.6 | 5.5 |
| 8 | 6.4 | 6.3 |
| 9 | 7.2 | 7.1 |

| | 46 | 45 |
|----|------|------|
| 10 | 7.7 | 7.5 |
| 20 | 15.3 | 15.0 |
| 30 | 23.0 | 22.5 |
| 40 | 30.7 | 30.0 |
| 50 | 38.3 | 37.5 |
| 6 | 4.6 | 4.5 |
| 7 | 5.4 | 5.3 |
| 8 | 6.1 | 6.0 |
| 9 | 6.9 | 6.8 |

| | 44 | 43 |
|----|------|------|
| 10 | 7.3 | 7.2 |
| 20 | 14.7 | 14.3 |
| 30 | 22.0 | 21.5 |
| 40 | 29.3 | 28.7 |
| 50 | 36.7 | 35.8 |
| 6 | 4.4 | 4.3 |
| 7 | 5.1 | 5.0 |
| 8 | 5.9 | 5.7 |
| 9 | 6.6 | 6.5 |

| | 42 | 41 |
|----|------|------|
| 10 | 7.0 | 6.8 |
| 20 | 14.0 | 13.7 |
| 30 | 21.0 | 20.5 |
| 40 | 28.0 | 27.3 |
| 50 | 35.0 | 34.2 |
| 6 | 4.2 | 4.1 |
| 7 | 4.9 | 4.8 |
| 8 | 5.6 | 5.5 |
| 9 | 6.3 | 6.2 |

| | 3 | 4 |
|----|-----|-----|
| 10 | 0.5 | 0.7 |
| 20 | 1.0 | 1.3 |
| 30 | 1.5 | 2.0 |
| 40 | 2.0 | 2.7 |
| 50 | 2.5 | 3.3 |
| 6 | 0.3 | 0.4 |
| 7 | 0.4 | 0.5 |
| 8 | 0.4 | 0.5 |
| 9 | 0.5 | 0.6 |

| M | sin 17° | tang 17° | cot 17° | cos 17° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.46 594 | 9.48 534 | 10.51 466 | 9.98 060 | 60 | | | |
| 1 | 9.46 635 | 9.48 579 | 10.51 421 | 9.98 056 | 59 | | | |
| 2 | 9.46 676 | 9.48 624 | 10.51 376 | 9.98 052 | 58 | | | |
| 3 | 9.46 717 | 9.48 669 | 10.51 331 | 9.98 048 | 57 | | | |
| 4 | 9.46 758 | 9.48 714 | 10.51 286 | 9.98 044 | 56 | | | |
| 5 | 9.46 800 | 9.48 759 | 10.51 241 | 9.98 040 | 55 | | | |
| 6 | 9.46 841 | 9.48 804 | 10.51 196 | 9.98 036 | 54 | | | |
| 7 | 9.46 882 | 9.48 849 | 10.51 151 | 9.98 032 | 53 | | | |
| 8 | 9.46 923 | 9.48 894 | 10.51 106 | 9.98 029 | 52 | | | |
| 9 | 9.46 964 | 9.48 939 | 10.51 061 | 9.98 025 | 51 | | | |
| 10 | 9.47 005 | 9.48 984 | 10.51 016 | 9.98 021 | 50 | | | |
| 11 | 9.47 045 | 9.49 029 | 10.50 971 | 9.98 017 | 49 | | | |
| 12 | 9.47 086 | 9.49 073 | 10.50 927 | 9.98 013 | 48 | | | |
| 13 | 9.47 127 | 9.49 118 | 10.50 882 | 9.98 009 | 47 | | | |
| 14 | 9.47 168 | 9.49 163 | 10.50 837 | 9.98 005 | 46 | | | |
| 15 | 9.47 209 | 9.49 207 | 10.50 793 | 9.98 001 | 45 | | | |
| 16 | 9.47 249 | 9.49 252 | 10.50 748 | 9.97 997 | 44 | | | |
| 17 | 9.47 290 | 9.49 296 | 10.50 704 | 9.97 993 | 43 | | | |
| 18 | 9.47 330 | 9.49 341 | 10.50 659 | 9.97 989 | 42 | | | |
| 19 | 9.47 371 | 9.49 385 | 10.50 615 | 9.97 986 | 41 | | | |
| 20 | 9.47 411 | 9.49 430 | 10.50 570 | 9.97 982 | 40 | | | |
| 21 | 9.47 452 | 9.49 474 | 10.50 526 | 9.97 978 | 39 | | | |
| 22 | 9.47 492 | 9.49 519 | 10.50 481 | 9.97 974 | 38 | | | |
| 23 | 9.47 533 | 9.49 563 | 10.50 437 | 9.97 970 | 37 | | | |
| 24 | 9.47 573 | 9.49 607 | 10.50 393 | 9.97 966 | 36 | | | |
| 25 | 9.47 613 | 9.49 652 | 10.50 348 | 9.97 962 | 35 | | | |
| 26 | 9.47 654 | 9.49 696 | 10.50 304 | 9.97 958 | 34 | | | |
| 27 | 9.47 694 | 9.49 740 | 10.50 260 | 9.97 954 | 33 | | | |
| 28 | 9.47 734 | 9.49 784 | 10.50 216 | 9.97 950 | 32 | | | |
| 29 | 9.47 774 | 9.49 828 | 10.50 172 | 9.97 946 | 31 | | | |
| 30 | 9.47 814 | 9.49 872 | 10.50 128 | 9.97 942 | 30 | | | |
| 31 | 9.47 854 | 9.49 916 | 10.50 084 | 9.97 938 | 29 | | | |
| 32 | 9.47 894 | 9.49 960 | 10.50 040 | 9.97 934 | 28 | | | |
| 33 | 9.47 934 | 9.50 004 | 10.49 996 | 9.97 930 | 27 | | | |
| 34 | 9.47 974 | 9.50 048 | 10.49 952 | 9.97 926 | 26 | | | |
| 35 | 9.48 014 | 9.50 092 | 10.49 908 | 9.97 922 | 25 | | | |
| 36 | 9.48 054 | 9.50 136 | 10.49 864 | 9.97 918 | 24 | | | |
| 37 | 9.48 094 | 9.50 180 | 10.49 820 | 9.97 914 | 23 | | | |
| 38 | 9.48 133 | 9.50 223 | 10.49 777 | 9.97 910 | 22 | | | |
| 39 | 9.48 173 | 9.50 267 | 10.49 733 | 9.97 906 | 21 | | | |
| 40 | 9.48 213 | 9.50 311 | 10.49 689 | 9.97 902 | 20 | | | |
| 41 | 9.48 252 | 9.50 355 | 10.49 645 | 9.97 898 | 19 | | | |
| 42 | 9.48 292 | 9.50 398 | 10.49 602 | 9.97 894 | 18 | | | |
| 43 | 9.48 332 | 9.50 442 | 10.49 558 | 9.97 890 | 17 | | | |
| 44 | 9.48 371 | 9.50 485 | 10.49 515 | 9.97 886 | 16 | | | |
| 45 | 9.48 411 | 9.50 529 | 10.49 471 | 9.97 882 | 15 | | | |
| 46 | 9.48 450 | 9.50 572 | 10.49 428 | 9.97 878 | 14 | | | |
| 47 | 9.48 490 | 9.50 616 | 10.49 384 | 9.97 874 | 13 | | | |
| 48 | 9.48 529 | 9.50 659 | 10.49 341 | 9.97 870 | 12 | | | |
| 49 | 9.48 568 | 9.50 703 | 10.49 297 | 9.97 866 | 11 | | | |
| 50 | 9.48 607 | 9.50 746 | 10.49 254 | 9.97 861 | 10 | | | |
| 51 | 9.48 647 | 9.50 789 | 10.49 211 | 9.97 857 | 9 | | | |
| 52 | 9.48 686 | 9.50 833 | 10.49 167 | 9.97 853 | 8 | | | |
| 53 | 9.48 725 | 9.50 876 | 10.49 124 | 9.97 849 | 7 | | | |
| 54 | 9.48 764 | 9.50 919 | 10.49 081 | 9.97 845 | 6 | | | |
| 55 | 9.48 803 | 9.50 962 | 10.49 038 | 9.97 841 | 5 | | | |
| 56 | 9.48 842 | 9.51 005 | 10.48 995 | 9.97 837 | 4 | | | |
| 57 | 9.48 881 | 9.51 048 | 10.48 952 | 9.97 833 | 3 | | | |
| 58 | 9.48 920 | 9.51 092 | 10.48 908 | 9.97 829 | 2 | | | |
| 59 | 9.48 959 | 9.51 135 | 10.48 865 | 9.97 825 | 1 | | | |
| 60 | 9.48 998 | 9.51 178 | 10.48 822 | 9.97 821 | 0 | | | |
| | cos 72° | cot 72° | tang 72° | sin 72° | M | | | |

| | 45 | 44 | 43 |
|----|------|------|------|
| 10 | 7.5 | 7.3 | 7.2 |
| 20 | 15.0 | 14.7 | 14.3 |
| 30 | 22.5 | 22.0 | 21.5 |
| 40 | 30.0 | 29.3 | 28.7 |
| 50 | 37.5 | 36.7 | 35.8 |
| 6 | 4.5 | 4.4 | 4.3 |
| 7 | 5.3 | 5.1 | 5.0 |
| 8 | 6.0 | 5.9 | 5.7 |
| 9 | 6.8 | 6.6 | 6.5 |

| | 42 | 41 |
|----|------|------|
| 10 | 7.0 | 6.8 |
| 20 | 14.0 | 13.7 |
| 30 | 21.0 | 20.5 |
| 40 | 28.0 | 27.3 |
| 50 | 35.0 | 34.2 |
| 6 | 4.2 | 4.1 |
| 7 | 4.9 | 4.8 |
| 8 | 5.6 | 5.5 |
| 9 | 6.3 | 6.2 |

| | 40 | 39 |
|----|------|------|
| 10 | 6.7 | 6.5 |
| 20 | 13.3 | 13.0 |
| 30 | 20.0 | 19.5 |
| 40 | 26.7 | 26.0 |
| 50 | 33.3 | 32.5 |
| 6 | 4.0 | 3.9 |
| 7 | 4.7 | 4.6 |
| 8 | 5.3 | 5.2 |
| 9 | 6.0 | 5.9 |

| | 3 | 4 | 5 |
|----|-----|-----|-----|
| 10 | 0.5 | 0.7 | 0.8 |
| 20 | 1.0 | 1.3 | 1.7 |
| 38 | 1.5 | 2.0 | 2.5 |
| 40 | 2.0 | 2.7 | 3.3 |
| 50 | 2.5 | 3.3 | 4.2 |
| 6 | 0.3 | 0.4 | 0.5 |
| 7 | 0.4 | 0.5 | 0.6 |
| 8 | 0.4 | 0.5 | 0.7 |
| 9 | 0.5 | 0.6 | 0.8 |

| M | sin 18° | tang 18° | cot 18° | cos 18° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.48 998 | 9.51 178 | 10.48 822 | 9.97 821 | 60 | | | |
| 1 | 9.49 037 | 9.51 221 | 10.48 779 | 9.97 817 | 59 | | | |
| 2 | 9.49 076 | 9.51 264 | 10.48 736 | 9.97 812 | 58 | | | |
| 3 | 9.49 115 | 9.51 306 | 10.48 694 | 9.97 808 | 57 | | | |
| 4 | 9.49 153 | 9.51 349 | 10.48 651 | 9.97 804 | 56 | | | |
| 5 | 9.49 192 | 9.51 392 | 10.48 608 | 9.97 800 | 55 | | | |
| 6 | 9.49 231 | 9.51 435 | 10.48 565 | 9.97 796 | 54 | | | |
| 7 | 9.49 269 | 9.51 478 | 10.48 522 | 9.97 792 | 53 | | | |
| 8 | 9.49 308 | 9.51 520 | 10.48 480 | 9.97 788 | 52 | | | |
| 9 | 9.49 347 | 9.51 563 | 10.48 437 | 9.97 784 | 51 | | | |
| 10 | 9.49 385 | 9.51 606 | 10.48 394 | 9.97 779 | 50 | | | |
| 11 | 9.49 424 | 9.51 648 | 10.48 352 | 9.97 775 | 49 | | | |
| 12 | 9.49 462 | 9.51 691 | 10.48 309 | 9.97 771 | 48 | | | |
| 13 | 9.49 500 | 9.51 734 | 10.48 266 | 9.97 767 | 47 | | | |
| 14 | 9.49 539 | 9.51 776 | 10.48 224 | 9.97 763 | 46 | | | |
| 15 | 9.49 577 | 9.51 819 | 10.48 181 | 9.97 759 | 45 | | | |
| 16 | 9.49 615 | 9.51 861 | 10.48 139 | 9.97 754 | 44 | | | |
| 17 | 9.49 654 | 9.51 903 | 10.48 097 | 9.97 750 | 43 | | | |
| 18 | 9.49 692 | 9.51 946 | 10.48 054 | 9.97 746 | 42 | | | |
| 19 | 9.49 730 | 9.51 988 | 10.48 012 | 9.97 742 | 41 | | | |
| 20 | 9.49 768 | 9.52 031 | 10.47 969 | 9.97 738 | 40 | | | |
| 21 | 9.49 806 | 9.52 073 | 10.47 927 | 9.97 734 | 39 | | | |
| 22 | 9.49 844 | 9.52 115 | 10.47 885 | 9.97 729 | 38 | | | |
| 23 | 9.49 882 | 9.52 157 | 10.47 843 | 9.97 725 | 37 | | | |
| 24 | 9.49 920 | 9.52 200 | 10.47 800 | 9.97 721 | 36 | | | |
| 25 | 9.49 958 | 9.52 242 | 10.47 758 | 9.97 717 | 35 | | | |
| 26 | 9.49 996 | 9.52 284 | 10.47 716 | 9.97 713 | 34 | | | |
| 27 | 9.50 034 | 9.52 326 | 10.47 674 | 9.97 708 | 33 | | | |
| 28 | 9.50 072 | 9.52 368 | 10.47 632 | 9.97 704 | 32 | | | |
| 29 | 9.50 110 | 9.52 410 | 10.47 590 | 9.97 700 | 31 | | | |
| 30 | 9.50 148 | 9.52 452 | 10.47 548 | 9.97 696 | 30 | | | |
| 31 | 9.50 185 | 9.52 494 | 10.47 506 | 9.97 691 | 29 | | | |
| 32 | 9.50 223 | 9.52 536 | 10.47 464 | 9.97 687 | 28 | | | |
| 33 | 9.50 261 | 9.52 578 | 10.47 422 | 9.97 683 | 27 | | | |
| 34 | 9.50 298 | 9.52 620 | 10.47 380 | 9.97 679 | 26 | | | |
| 35 | 9.50 336 | 9.52 661 | 10.47 339 | 9.97 674 | 25 | | | |
| 36 | 9.50 374 | 9.52 703 | 10.47 297 | 9.97 670 | 24 | | | |
| 37 | 9.50 411 | 9.52 745 | 10.47 255 | 9.97 666 | 23 | | | |
| 38 | 9.50 449 | 9.52 787 | 10.47 213 | 9.97 662 | 22 | | | |
| 39 | 9.50 486 | 9.52 829 | 10.47 171 | 9.97 657 | 21 | | | |
| 40 | 9.50 523 | 9.52 870 | 10.47 130 | 9.97 653 | 20 | | | |
| 41 | 9.50 561 | 9.52 912 | 10.47 088 | 9.97 649 | 19 | | | |
| 42 | 9.50 598 | 9.52 953 | 10.47 047 | 9.97 645 | 18 | | | |
| 43 | 9.50 635 | 9.52 995 | 10.47 005 | 9.97 640 | 17 | | | |
| 44 | 9.50 673 | 9.53 037 | 10.46 963 | 9.97 636 | 16 | | | |
| 45 | 9.50 710 | 9.53 078 | 10.46 922 | 9.97 632 | 15 | | | |
| 46 | 9.50 747 | 9.53 120 | 10.46 880 | 9.97 628 | 14 | | | |
| 47 | 9.50 784 | 9.53 161 | 10.46 839 | 9.97 623 | 13 | | | |
| 48 | 9.50 821 | 9.53 202 | 10.46 798 | 9.97 619 | 12 | | | |
| 49 | 9.50 858 | 9.53 244 | 10.46 756 | 9.97 615 | 11 | | | |
| 50 | 9.50 896 | 9.53 285 | 10.46 715 | 9.97 610 | 10 | | | |
| 51 | 9.50 933 | 9.53 327 | 10.46 673 | 9.97 606 | 9 | | | |
| 52 | 9.50 970 | 9.53 368 | 10.46 632 | 9.97 602 | 8 | | | |
| 53 | 9.51 007 | 9.53 409 | 10.46 591 | 9.97 597 | 7 | | | |
| 54 | 9.51 043 | 9.53 450 | 10.46 550 | 9.97 593 | 6 | | | |
| 55 | 9.51 080 | 9.53 492 | 10.46 508 | 9.97 589 | 5 | | | |
| 56 | 9.51 117 | 9.53 533 | 10.46 467 | 9.97 584 | 4 | | | |
| 57 | 9.51 154 | 9.53 574 | 10.46 426 | 9.97 580 | 3 | | | |
| 58 | 9.51 191 | 9.53 615 | 10.46 385 | 9.97 576 | 2 | | | |
| 59 | 9.51 227 | 9.53 656 | 10.46 344 | 9.97 571 | 1 | | | |
| 60 | 9.51 264 | 9.53 697 | 10.46 303 | 9.97 567 | 0 | | | |
| ' | cos 71° | cot 71° | tang 71° | sin 71° | M | | | |

| | 43 | 42 | 41 |
|----|------|------|------|
| 10 | 7.2 | 7.0 | 6.8 |
| 20 | 14.3 | 14.0 | 13.7 |
| 30 | 21.5 | 21.0 | 20.5 |
| 40 | 28.7 | 28.0 | 27.3 |
| 50 | 35.8 | 35.0 | 34.2 |
| 6 | 4.3 | 4.2 | 4.1 |
| 7 | 5.0 | 4.9 | 4.8 |
| 8 | 5.7 | 5.6 | 5.5 |
| 9 | 6.5 | 6.3 | 6.2 |

| | 39 | 38 |
|----|------|------|
| 10 | 6.5 | 6.3 |
| 20 | 13.0 | 12.7 |
| 30 | 19.5 | 19.0 |
| 40 | 26.0 | 25.3 |
| 50 | 32.5 | 31.7 |
| 6 | 3.9 | 3.8 |
| 7 | 4.6 | 4.5 |
| 8 | 5.2 | 5.1 |
| 9 | 5.9 | 5.7 |

| | 37 | 36 |
|----|------|------|
| 10 | 6.2 | 6.0 |
| 20 | 12.3 | 12.0 |
| 30 | 18.5 | 18.0 |
| 40 | 24.7 | 24.0 |
| 50 | 30.8 | 30.0 |
| 6 | 3.7 | 3.6 |
| 7 | 4.3 | 4.2 |
| 8 | 4.9 | 4.8 |
| 9 | 5.6 | 5.4 |

| | 4 | 5 |
|----|-----|-----|
| 10 | 0.7 | 0.8 |
| 20 | 1.3 | 1.7 |
| 30 | 2.0 | 2.5 |
| 40 | 2.7 | 3.3 |
| 50 | 3.3 | 4.2 |
| 6 | 0.4 | 0.5 |
| 7 | 0.5 | 0.6 |
| 8 | 0.5 | 0.7 |
| 9 | 0.6 | 0.8 |

| M | sin 19° | tang 19° | cot 19° | cos 19° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.51 264 | 9.53 697 | 10.46 303 | 9.97 567 | 60 | | | |
| 1 | 9.51 301 | 9.53 738 | 10.46 262 | 9.97 563 | 59 | | | |
| 2 | 9.51 338 | 9.53 779 | 10.46 221 | 9.97 558 | 58 | | | |
| 3 | 9.51 374 | 9.53 820 | 10.46 180 | 9.97 554 | 57 | | | |
| 4 | 9.51 411 | 9.53 861 | 10.46 139 | 9.97 550 | 56 | | | |
| 5 | 9.51 447 | 9.53 902 | 10.46 098 | 9.97 545 | 55 | | | |
| 6 | 9.51 484 | 9.53 943 | 10.46 057 | 9.97 541 | 54 | | | |
| 7 | 9.51 520 | 9.53 984 | 10.46 016 | 9.97 536 | 53 | | | |
| 8 | 9.51 557 | 9.54 025 | 10.45 975 | 9.97 532 | 52 | | | |
| 9 | 9.51 593 | 9.54 065 | 10.45 935 | 9.97 528 | 51 | | | |
| 10 | 9.51 629 | 9.54 106 | 10.45 894 | 9.97 523 | 50 | | | |
| 11 | 9.51 666 | 9.54 147 | 10.45 853 | 9.97 519 | 49 | | | |
| 12 | 9.51 702 | 9.54 187 | 10.45 813 | 9.97 515 | 48 | | | |
| 13 | 9.51 738 | 9.54 228 | 10.45 772 | 9.97 510 | 47 | | | |
| 14 | 9.51 774 | 9.54 269 | 10.45 731 | 9.97 506 | 46 | | | |
| 15 | 9.51 811 | 9.54 309 | 10.45 691 | 9.97 501 | 45 | | | |
| 16 | 9.51 847 | 9.54 350 | 10.45 650 | 9.97 497 | 44 | | | |
| 17 | 9.51 883 | 9.54 390 | 10.45 610 | 9.97 492 | 43 | | | |
| 18 | 9.51 919 | 9.54 431 | 10.45 569 | 9.97 488 | 42 | | | |
| 19 | 9.51 955 | 9.54 471 | 10.45 529 | 9.97 484 | 41 | | | |
| 20 | 9.51 991 | 9.54 512 | 10.45 488 | 9.97 479 | 40 | | | |
| 21 | 9.52 027 | 9.54 552 | 10.45 448 | 9.97 475 | 39 | | | |
| 22 | 9.52 063 | 9.54 593 | 10.45 407 | 9.97 470 | 38 | | | |
| 23 | 9.52 099 | 9.54 633 | 10.45 367 | 9.97 466 | 37 | | | |
| 24 | 9.52 135 | 9.54 673 | 10.45 327 | 9.97 461 | 36 | | | |
| 25 | 9.52 171 | 9.54 714 | 10.45 286 | 9.97 457 | 35 | | | |
| 26 | 9.52 207 | 9.54 754 | 10.45 246 | 9.97 453 | 34 | | | |
| 27 | 9.52 242 | 9.54 794 | 10.45 206 | 9.97 448 | 33 | | | |
| 28 | 9.52 278 | 9.54 835 | 10.45 165 | 9.97 444 | 32 | | | |
| 29 | 9.52 314 | 9.54 875 | 10.45 125 | 9.97 439 | 31 | | | |
| 30 | 9.52 350 | 9.54 915 | 10.45 085 | 9.97 435 | 30 | | | |
| 31 | 9.52 385 | 9.54 955 | 10.45 045 | 9.97 430 | 29 | | | |
| 32 | 9.52 421 | 9.54 995 | 10.45 005 | 9.97 426 | 28 | | | |
| 33 | 9.52 456 | 9.55 035 | 10.44 965 | 9.97 421 | 27 | | | |
| 34 | 9.52 492 | 9.55 075 | 10.44 925 | 9.97 417 | 26 | | | |
| 35 | 9.52 527 | 9.55 115 | 10.44 885 | 9.97 412 | 25 | | | |
| 36 | 9.52 563 | 9.55 155 | 10.44 845 | 9.97 408 | 24 | | | |
| 37 | 9.52 598 | 9.55 195 | 10.44 805 | 9.97 403 | 23 | | | |
| 38 | 9.52 634 | 9.55 235 | 10.44 765 | 9.97 399 | 22 | | | |
| 39 | 9.52 669 | 9.55 275 | 10.44 725 | 9.97 394 | 21 | | | |
| 40 | 9.52 705 | 9.55 315 | 10.44 685 | 9.97 390 | 20 | | | |
| 41 | 9.52 740 | 9.55 355 | 10.44 645 | 9.97 385 | 19 | | | |
| 42 | 9.52 775 | 9.55 395 | 10.44 605 | 9.97 381 | 18 | | | |
| 43 | 9.52 811 | 9.55 434 | 10.44 566 | 9.97 376 | 17 | | | |
| 44 | 9.52 846 | 9.55 474 | 10.44 526 | 9.97 372 | 16 | | | |
| 45 | 9.52 881 | 9.55 514 | 10.44 486 | 9.97 367 | 15 | | | |
| 46 | 9.52 916 | 9.55 554 | 10.44 446 | 9.97 363 | 14 | | | |
| 47 | 9.52 951 | 9.55 593 | 10.44 407 | 9.97 358 | 13 | | | |
| 48 | 9.52 986 | 9.55 633 | 10.44 367 | 9.97 353 | 12 | | | |
| 49 | 9.53 021 | 9.55 673 | 10.44 327 | 9.97 349 | 11 | | | |
| 50 | 9.53 056 | 9.55 712 | 10.44 288 | 9.97 344 | 10 | | | |
| 51 | 9.53 092 | 9.55 752 | 10.44 248 | 9.97 340 | 9 | | | |
| 52 | 9.53 126 | 9.55 791 | 10.44 209 | 9.97 335 | 8 | | | |
| 53 | 9.53 161 | 9.55 831 | 10.44 169 | 9.97 331 | 7 | | | |
| 54 | 9.53 196 | 9.55 870 | 10.44 130 | 9.97 326 | 6 | | | |
| 55 | 9.53 231 | 9.55 910 | 10.44 090 | 9.97 322 | 5 | | | |
| 56 | 9.53 266 | 9.55 949 | 10.44 051 | 9.97 317 | 4 | | | |
| 57 | 9.53 301 | 9.55 989 | 10.44 011 | 9.97 312 | 3 | | | |
| 58 | 9.53 336 | 9.55 028 | 10.43 972 | 9.97 308 | 2 | | | |
| 59 | 9.53 370 | 9.55 067 | 10.43 933 | 9.97 303 | 1 | | | |
| 60 | 9.53 405 | 9.55 107 | 10.43 893 | 9.97 299 | 0 | | | |
| | cos 70° | cot 70° | tang 70° | sin 70° | M | | | |

| | 41 | 40 | 39 |
|----|------|------|------|
| 10 | 6.8 | 6.7 | 6.5 |
| 20 | 13.7 | 13.3 | 13.0 |
| 30 | 20.5 | 20.0 | 19.5 |
| 40 | 27.3 | 26.7 | 26.0 |
| 50 | 34.2 | 33.3 | 32.5 |
| 6 | 4.1 | 4.0 | 3.9 |
| 7 | 4.8 | 4.7 | 4.6 |
| 8 | 5.5 | 5.3 | 5.2 |
| 9 | 6.2 | 6.0 | 5.9 |

| | 37 | 36 |
|----|------|------|
| 10 | 6.2 | 6.0 |
| 20 | 12.3 | 12.0 |
| 30 | 18.5 | 18.0 |
| 40 | 24.7 | 24.0 |
| 50 | 30.8 | 30.0 |
| 6 | 3.7 | 3.6 |
| 7 | 4.3 | 4.2 |
| 8 | 4.9 | 4.8 |
| 9 | 5.6 | 5.4 |

*

| | 35 | 34 |
|----|------|------|
| 10 | 5.8 | 5.7 |
| 20 | 11.7 | 11.3 |
| 30 | 17.5 | 17.0 |
| 40 | 23.3 | 22.7 |
| 50 | 29.2 | 28.3 |
| 6 | 3.5 | 3.4 |
| 7 | 4.1 | 4.0 |
| 8 | 4.7 | 4.5 |
| 9 | 5.3 | 5.1 |

*

| | 4 | 5 |
|----|-----|-----|
| 10 | 0.7 | 0.8 |
| 20 | 1.3 | 1.7 |
| 30 | 2.0 | 2.5 |
| 40 | 2.7 | 3.3 |
| 50 | 3.3 | 4.2 |
| 6 | 0.4 | 0.5 |
| 7 | 0.5 | 0.6 |
| 8 | 0.5 | 0.7 |
| 9 | 0.6 | 0.8 |

| M | sin 20° | tang 20° | cot 20° | cos 20° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.53 405 | 9.56 107 | 10.43 893 | 9.97 299 | 60 | | | |
| 1 | 9.53 440 | 9.56 146 | 10.43 854 | 9.97 294 | 59 | | | |
| 2 | 9.53 475 | 9.56 185 | 10.43 815 | 9.97 289 | 58 | | | |
| 3 | 9.53 509 | 9.56 224 | 10.43 776 | 9.97 285 | 57 | | | |
| 4 | 9.53 544 | 9.56 264 | 10.43 736 | 9.97 280 | 56 | | | |
| 5 | 9.53 578 | 9.56 303 | 10.43 697 | 9.97 276 | 55 | | | |
| 6 | 9.53 613 | 9.56 342 | 10.43 658 | 9.97 271 | 54 | | | |
| 7 | 9.53 647 | 9.56 381 | 10.43 619 | 9.97 266 | 53 | | | |
| 8 | 9.53 682 | 9.56 420 | 10.43 580 | 9.97 262 | 52 | | | |
| 9 | 9.53 716 | 9.56 459 | 10.43 541 | 9.97 257 | 51 | | | |
| 10 | 9.53 751 | 9.56 498 | 10.43 502 | 9.97 252 | 50 | | | |
| 11 | 9.53 785 | 9.56 537 | 10.43 463 | 9.97 248 | 49 | | | |
| 12 | 9.53 819 | 9.56 576 | 10.43 424 | 9.97 243 | 48 | | | |
| 13 | 9.53 854 | 9.56 615 | 10.43 385 | 9.97 238 | 47 | | | |
| 14 | 9.53 888 | 9.56 654 | 10.43 346 | 9.97 234 | 46 | | | |
| 15 | 9.53 922 | 9.56 693 | 10.43 307 | 9.97 229 | 45 | | | |
| 16 | 9.53 957 | 9.56 732 | 10.43 268 | 9.97 224 | 44 | | | |
| 17 | 9.53 991 | 9.56 771 | 10.43 229 | 9.97 220 | 43 | | | |
| 18 | 9.54 025 | 9.56 810 | 10.43 190 | 9.97 215 | 42 | | | |
| 19 | 9.54 059 | 9.56 849 | 10.43 151 | 9.97 210 | 41 | | | |
| 20 | 9.54 093 | 9.56 887 | 10.43 113 | 9.97 206 | 40 | | | |
| 21 | 9.54 127 | 9.56 926 | 10.43 074 | 9.97 201 | 39 | | | |
| 22 | 9.54 161 | 9.56 965 | 10.43 035 | 9.97 196 | 38 | | | |
| 23 | 9.54 195 | 9.57 004 | 10.42 996 | 9.97 192 | 37 | | | |
| 24 | 9.54 229 | 9.57 042 | 10.42 958 | 9.97 187 | 36 | | | |
| 25 | 9.54 263 | 9.57 081 | 10.42 919 | 9.97 182 | 35 | | | |
| 26 | 9.54 297 | 9.57 120 | 10.42 880 | 9.97 178 | 34 | | | |
| 27 | 9.54 331 | 9.57 158 | 10.42 842 | 9.97 173 | 33 | | | |
| 28 | 9.54 365 | 9.57 197 | 10.42 803 | 9.97 168 | 32 | | | |
| 29 | 9.54 399 | 9.57 235 | 10.42 765 | 9.97 163 | 31 | | | |
| 30 | 9.54 433 | 9.57 274 | 10.42 726 | 9.97 159 | 30 | | | |
| 31 | 9.54 466 | 9.57 312 | 10.42 688 | 9.97 154 | 29 | | | |
| 32 | 9.54 500 | 9.57 351 | 10.42 649 | 9.97 149 | 28 | | | |
| 33 | 9.54 534 | 9.57 389 | 10.42 611 | 9.97 145 | 27 | | | |
| 34 | 9.54 567 | 9.57 428 | 10.42 572 | 9.97 140 | 26 | | | |
| 35 | 9.54 601 | 9.57 466 | 10.42 534 | 9.97 135 | 25 | | | |
| 36 | 9.54 635 | 9.57 504 | 10.42 496 | 9.97 130 | 24 | | | |
| 37 | 9.54 668 | 9.57 543 | 10.42 457 | 9.97 126 | 23 | | | |
| 38 | 9.54 702 | 9.57 581 | 10.42 419 | 9.97 121 | 22 | | | |
| 39 | 9.54 735 | 9.57 619 | 10.42 381 | 9.97 116 | 21 | | | |
| 40 | 9.54 769 | 9.57 658 | 10.42 342 | 9.97 111 | 20 | | | |
| 41 | 9.54 802 | 9.57 696 | 10.42 304 | 9.97 107 | 19 | | | |
| 42 | 9.54 836 | 9.57 734 | 10.42 266 | 9.97 102 | 18 | | | |
| 43 | 9.54 869 | 9.57 772 | 10.42 228 | 9.97 097 | 17 | | | |
| 44 | 9.54 903 | 9.57 810 | 10.42 190 | 9.97 092 | 16 | | | |
| 45 | 9.54 936 | 9.57 849 | 10.42 151 | 9.97 087 | 15 | | | |
| 46 | 9.54 969 | 9.57 887 | 10.42 113 | 9.97 083 | 14 | | | |
| 47 | 9.55 003 | 9.57 925 | 10.42 075 | 9.97 078 | 13 | | | |
| 48 | 9.55 036 | 9.57 963 | 10.42 037 | 9.97 073 | 12 | | | |
| 49 | 9.55 069 | 9.58 001 | 10.41 999 | 9.97 068 | 11 | | | |
| 50 | 9.55 102 | 9.58 039 | 10.41 961 | 9.97 063 | 10 | | | |
| 51 | 9.55 136 | 9.58 077 | 10.41 923 | 9.97 059 | 9 | | | |
| 52 | 9.55 169 | 9.58 115 | 10.41 885 | 9.97 054 | 8 | | | |
| 53 | 9.55 202 | 9.58 153 | 10.41 847 | 9.97 049 | 7 | | | |
| 54 | 9.55 235 | 9.58 191 | 10.41 809 | 9.97 044 | 6 | | | |
| 55 | 9.55 268 | 9.58 229 | 10.41 771 | 9.97 039 | 5 | | | |
| 56 | 9.55 301 | 9.58 267 | 10.41 733 | 9.97 035 | 4 | | | |
| 57 | 9.55 334 | 9.58 304 | 10.41 696 | 9.97 030 | 3 | | | |
| 58 | 9.55 367 | 9.58 342 | 10.41 658 | 9.97 025 | 2 | | | |
| 59 | 9.55 400 | 9.58 380 | 10.41 620 | 9.97 020 | 1 | | | |
| 60 | 9.55 433 | 9.58 418 | 10.41 582 | 9.97 015 | 0 | | | |
| | cos 69° | cot 69° | tang 69° | sin 69° | M | | | |

| | 40 | 39 |
|----|------|------|
| 10 | 6.7 | 6.5 |
| 20 | 13.3 | 13.0 |
| 30 | 20.0 | 19.5 |
| 40 | 26.7 | 26.0 |
| 50 | 33.3 | 32.5 |
| 6 | 4.0 | 3.9 |
| 7 | 4.7 | 4.6 |
| 8 | 5.3 | 5.2 |
| 9 | 6.0 | 5.9 |

| | 38 | 37 |
|----|------|------|
| 10 | 6.3 | 6.2 |
| 20 | 12.7 | 12.3 |
| 30 | 19.0 | 18.5 |
| 40 | 25.3 | 24.7 |
| 50 | 31.7 | 30.8 |
| 6 | 3.8 | 3.7 |
| 7 | 4.4 | 4.3 |
| 8 | 5.1 | 4.9 |
| 9 | 5.7 | 5.6 |

| | 35 | 34 | 33 |
|----|------|------|------|
| 10 | 5.8 | 5.7 | 5.5 |
| 20 | 11.7 | 11.3 | 11.0 |
| 30 | 17.5 | 17.0 | 16.5 |
| 40 | 23.3 | 22.7 | 22.0 |
| 50 | 29.2 | 28.3 | 27.5 |
| 6 | 3.5 | 3.4 | 3.3 |
| 7 | 4.1 | 4.0 | 3.9 |
| 8 | 4.7 | 4.5 | 4.4 |
| 9 | 5.3 | 5.1 | 5.0 |

| | 4 | 5 |
|----|-----|-----|
| 10 | 0.7 | 0.8 |
| 20 | 1.3 | 1.7 |
| 30 | 2.0 | 2.5 |
| 40 | 2.7 | 3.3 |
| 50 | 3.3 | 4.2 |
| 6 | 0.4 | 0.5 |
| 7 | 0.5 | 0.6 |
| 8 | 0.5 | 0.7 |
| 9 | 0.6 | 0.8 |

| M | sin 21° | tang 21° | cot 21° | cos 21° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.55 433 | 9.58 418 | 10.41 582 | 9.97 015 | 60 | | | |
| 1 | 9.55 466 | 9.58 455 | 10.41 545 | 9.97 010 | 59 | | | |
| 2 | 9.55 499 | 9.58 493 | 10.41 507 | 9.97 005 | 58 | | | |
| 3 | 9.55 532 | 9.58 531 | 10.41 469 | 9.97 001 | 57 | | | |
| 4 | 9.55 564 | 9.58 569 | 10.41 431 | 9.96 996 | 56 | | | |
| 5 | 9.55 597 | 9.58 606 | 10.41 394 | 9.96 991 | 55 | | | |
| 6 | 9.55 630 | 9.58 644 | 10.41 356 | 9.96 986 | 54 | | | |
| 7 | 9.55 663 | 9.58 681 | 10.41 319 | 9.96 981 | 53 | | | |
| 8 | 9.55 695 | 9.58 719 | 10.41 281 | 9.96 976 | 52 | | | |
| 9 | 9.55 728 | 9.58 757 | 10.41 243 | 9.96 971 | 51 | | | |
| 10 | 9.55 761 | 9.58 794 | 10.41 206 | 9.96 966 | 50 | | | |
| 11 | 9.55 793 | 9.58 832 | 10.41 168 | 9.96 962 | 49 | | | |
| 12 | 9.55 826 | 9.58 869 | 10.41 131 | 9.96 957 | 48 | | | |
| 13 | 9.55 858 | 9.58 907 | 10.41 093 | 9.96 952 | 47 | | | |
| 14 | 9.55 891 | 9.58 944 | 10.41 056 | 9.96 947 | 46 | | | |
| 15 | 9.55 923 | 9.58 981 | 10.41 019 | 9.96 942 | 45 | | | |
| 16 | 9.55 956 | 9.59 019 | 10.40 981 | 9.96 937 | 44 | | | |
| 17 | 9.55 988 | 9.59 056 | 10.40 944 | 9.96 932 | 43 | | | |
| 18 | 9.56 021 | 9.59 094 | 10.40 906 | 9.96 927 | 42 | | | |
| 19 | 9.56 053 | 9.59 131 | 10.40 869 | 9.96 922 | 41 | | | |
| 20 | 9.56 085 | 9.59 168 | 10.40 832 | 9.96 917 | 40 | | | |
| 21 | 9.56 118 | 9.59 205 | 10.40 795 | 9.96 912 | 39 | | | |
| 22 | 9.56 150 | 9.59 243 | 10.40 757 | 9.96 907 | 38 | | | |
| 23 | 9.56 182 | 9.59 280 | 10.40 720 | 9.96 903 | 37 | | | |
| 24 | 9.56 215 | 9.59 317 | 10.40 683 | 9.96 898 | 36 | | | |
| 25 | 9.56 247 | 9.59 354 | 10.40 646 | 9.96 893 | 35 | | | |
| 26 | 9.56 279 | 9.59 391 | 10.40 609 | 9.96 888 | 34 | | | |
| 27 | 9.56 311 | 9.59 429 | 10.40 571 | 9.96 883 | 33 | | | |
| 28 | 9.56 343 | 9.59 466 | 10.40 534 | 9.96 878 | 32 | | | |
| 29 | 9.56 375 | 9.59 503 | 10.40 497 | 9.96 873 | 31 | | | |
| 30 | 9.56 408 | 9.59 540 | 10.40 460 | 9.96 868 | 30 | | | |
| 31 | 9.56 440 | 9.59 577 | 10.40 423 | 9.96 863 | 29 | | | |
| 32 | 9.56 472 | 9.59 614 | 10.40 386 | 9.96 858 | 28 | | | |
| 33 | 9.56 504 | 9.59 651 | 10.40 349 | 9.96 853 | 27 | | | |
| 34 | 9.56 536 | 9.59 688 | 10.40 312 | 9.96 848 | 26 | | | |
| 35 | 9.56 568 | 9.59 725 | 10.40 275 | 9.96 843 | 25 | | | |
| 36 | 9.56 599 | 9.59 762 | 10.40 238 | 9.96 838 | 24 | | | |
| 37 | 9.56 631 | 9.59 799 | 10.40 201 | 9.96 833 | 23 | | | |
| 38 | 9.56 663 | 9.59 835 | 10.40 165 | 9.96 828 | 22 | | | |
| 39 | 9.56 695 | 9.59 872 | 10.40 128 | 9.96 823 | 21 | | | |
| 40 | 9.56 727 | 9.59 909 | 10.40 091 | 9.96 818 | 20 | | | |
| 41 | 9.56 759 | 9.59 946 | 10.40 054 | 9.96 813 | 19 | | | |
| 42 | 9.56 790 | 9.59 983 | 10.40 017 | 9.96 808 | 18 | | | |
| 43 | 9.56 822 | 9.60 019 | 10.39 981 | 9.96 803 | 17 | | | |
| 44 | 9.56 854 | 9.60 056 | 10.39 944 | 9.96 798 | 16 | | | |
| 45 | 9.56 886 | 9.60 093 | 10.39 907 | 9.96 793 | 15 | | | |
| 46 | 9.56 917 | 9.60 130 | 10.39 870 | 9.96 788 | 14 | | | |
| 47 | 9.56 949 | 9.60 166 | 10.39 834 | 9.96 783 | 13 | | | |
| 48 | 9.56 980 | 9.60 203 | 10.39 797 | 9.96 778 | 12 | | | |
| 49 | 9.57 012 | 9.60 240 | 10.39 760 | 9.96 772 | 11 | | | |
| 50 | 9.57 044 | 9.60 276 | 10.39 724 | 9.96 767 | 10 | | | |
| 51 | 9.57 075 | 9.60 313 | 10.39 687 | 9.96 762 | 9 | | | |
| 52 | 9.57 107 | 9.60 349 | 10.39 651 | 9.96 757 | 8 | | | |
| 53 | 9.57 138 | 9.60 386 | 10.39 614 | 9.96 752 | 7 | | | |
| 54 | 9.57 169 | 9.60 422 | 10.39 578 | 9.96 747 | 6 | | | |
| 55 | 9.57 201 | 9.60 459 | 10.39 541 | 9.96 742 | 5 | | | |
| 56 | 9.57 232 | 9.60 495 | 10.39 505 | 9.96 737 | 4 | | | |
| 57 | 9.57 264 | 9.60 532 | 10.39 468 | 9.96 732 | 3 | | | |
| 58 | 9.57 295 | 9.60 568 | 10.39 432 | 9.96 727 | 2 | | | |
| 59 | 9.57 326 | 9.60 605 | 10.39 395 | 9.96 722 | 1 | | | |
| 60 | 9.57 358 | 9.60 641 | 10.39 359 | 9.96 717 | 0 | | | |
| | cos 68° | cot 68° | tang 68° | sin 68° | M | | | |

| | 38 | 37 | 36 |
|----|------|------|------|
| 10 | 6.3 | 6.2 | 6.0 |
| 20 | 12.7 | 12.3 | 12.0 |
| 30 | 19.0 | 18.5 | 18.0 |
| 40 | 25.3 | 24.7 | 24.0 |
| 50 | 31.7 | 30.8 | 30.0 |
| 6 | 3.8 | 3.7 | 3.6 |
| 7 | 4.4 | 4.3 | 4.2 |
| 8 | 5.1 | 4.9 | 4.8 |
| 9 | 5.7 | 5.6 | 5.4 |

| | 33 | 32 | 31 |
|----|------|------|------|
| 10 | 5.5 | 5.3 | 5.2 |
| 20 | 11.0 | 10.7 | 10.3 |
| 30 | 16.5 | 16.0 | 15.5 |
| 40 | 22.0 | 21.3 | 20.7 |
| 50 | 27.5 | 26.7 | 25.8 |
| 6 | 3.3 | 3.2 | 3.1 |
| 7 | 3.9 | 3.7 | 3.6 |
| 8 | 4.4 | 4.3 | 4.1 |
| 9 | 5.0 | 4.8 | 4.7 |

| | 4 | 5 | 6 |
|----|-----|-----|-----|
| 10 | 0.7 | 0.8 | 1.0 |
| 20 | 1.3 | 1.7 | 2.0 |
| 30 | 2.0 | 2.5 | 3.0 |
| 40 | 2.7 | 3.3 | 4.0 |
| 50 | 3.3 | 4.2 | 5.0 |
| 6 | 0.4 | 0.5 | 0.6 |
| 7 | 0.5 | 0.6 | 0.7 |
| 8 | 0.5 | 0.7 | 0.8 |
| 9 | 0.6 | 0.8 | 0.9 |

| M | sin 22° | tang 22° | cot 22° | cos 22° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.57 358 | 9.60 641 | 10.39 359 | 9.96 717 | 60 | | | |
| 1 | 9.57 389 | 9.60 677 | 10.39 323 | 9.96 711 | 59 | | | |
| 2 | 9.57 420 | 9.60 714 | 10.39 286 | 9.96 706 | 58 | | | |
| 3 | 9.57 451 | 9.60 750 | 10.39 250 | 9.96 701 | 57 | | | |
| 4 | 9.57 482 | 9.60 786 | 10.39 214 | 9.96 696 | 56 | | | |
| 5 | 9.57 514 | 9.60 823 | 10.39 177 | 9.96 691 | 55 | | | |
| 6 | 9.57 545 | 9.60 859 | 10.39 141 | 9.96 686 | 54 | | | |
| 7 | 9.57 576 | 9.60 895 | 10.39 105 | 9.96 681 | 53 | | | |
| 8 | 9.57 607 | 9.60 931 | 10.39 069 | 9.96 676 | 52 | | | |
| 9 | 9.57 638 | 9.60 967 | 10.39 033 | 9.96 670 | 51 | | | |
| 10 | 9.57 669 | 9.61 004 | 10.38 996 | 9.96 665 | 50 | | | |
| 11 | 9.57 700 | 9.61 040 | 10.38 960 | 9.96 660 | 49 | | | |
| 12 | 9.57 731 | 9.61 076 | 10.38 924 | 9.96 655 | 48 | | | |
| 13 | 9.57 762 | 9.61 112 | 10.38 888 | 9.96 650 | 47 | | | |
| 14 | 9.57 793 | 9.61 148 | 10.38 852 | 9.96 645 | 46 | | | |
| 15 | 9.57 824 | 9.61 184 | 10.38 816 | 9.96 640 | 45 | | | |
| 16 | 9.57 855 | 9.61 220 | 10.38 780 | 9.96 634 | 44 | | | |
| 17 | 9.57 885 | 9.61 256 | 10.38 744 | 9.96 629 | 43 | | | |
| 18 | 9.57 916 | 9.61 292 | 10.38 708 | 9.96 624 | 42 | | | |
| 19 | 9.57 947 | 9.61 328 | 10.38 672 | 9.96 619 | 41 | | | |
| 20 | 9.57 978 | 9.61 364 | 10.38 636 | 9.96 614 | 40 | | | |
| 21 | 9.58 008 | 9.61 400 | 10.38 600 | 9.96 608 | 39 | | | |
| 22 | 9.58 039 | 9.61 436 | 10.38 564 | 9.96 603 | 38 | | | |
| 23 | 9.58 070 | 9.61 472 | 10.38 528 | 9.96 598 | 37 | | | |
| 24 | 9.58 101 | 9.61 508 | 10.38 492 | 9.96 593 | 36 | | | |
| 25 | 9.58 131 | 9.61 544 | 10.38 456 | 9.96 588 | 35 | | | |
| 26 | 9.58 162 | 9.61 579 | 10.38 421 | 9.96 582 | 34 | | | |
| 27 | 9.58 192 | 9.61 615 | 10.38 385 | 9.96 577 | 33 | | | |
| 28 | 9.58 223 | 9.61 651 | 10.38 349 | 9.96 572 | 32 | | | |
| 29 | 9.58 253 | 9.61 687 | 10.38 313 | 9.96 567 | 31 | | | |
| 30 | 9.58 284 | 9.61 722 | 10.38 278 | 9.96 562 | 30 | | | |
| 31 | 9.58 314 | 9.61 758 | 10.38 242 | 9.96 556 | 29 | | | |
| 32 | 9.58 345 | 9.61 794 | 10.38 206 | 9.96 551 | 28 | | | |
| 33 | 9.58 375 | 9.61 830 | 10.38 170 | 9.96 546 | 27 | | | |
| 34 | 9.58 406 | 9.61 865 | 10.38 135 | 9.96 541 | 26 | | | |
| 35 | 9.58 436 | 9.61 901 | 10.38 099 | 9.96 535 | 25 | | | |
| 36 | 9.58 467 | 9.61 936 | 10.38 064 | 9.96 530 | 24 | | | |
| 37 | 9.58 497 | 9.61 972 | 10.38 028 | 9.96 525 | 23 | | | |
| 38 | 9.58 527 | 9.62 008 | 10.37 992 | 9.96 520 | 22 | | | |
| 39 | 9.58 557 | 9.62 043 | 10.37 957 | 9.96 514 | 21 | | | |
| 40 | 9.58 588 | 9.62 079 | 10.37 921 | 9.96 509 | 20 | | | |
| 41 | 9.58 618 | 9.62 114 | 10.37 886 | 9.96 504 | 19 | | | |
| 42 | 9.58 648 | 9.62 150 | 10.37 850 | 9.96 498 | 18 | | | |
| 43 | 9.58 678 | 9.62 185 | 10.37 815 | 9.96 493 | 17 | | | |
| 44 | 9.58 709 | 9.62 221 | 10.37 779 | 9.96 488 | 16 | | | |
| 45 | 9.58 739 | 9.62 256 | 10.37 744 | 9.96 483 | 15 | | | |
| 46 | 9.58 769 | 9.62 292 | 10.37 708 | 9.96 477 | 14 | | | |
| 47 | 9.58 799 | 9.62 327 | 10.37 673 | 9.96 472 | 13 | | | |
| 48 | 9.58 829 | 9.62 362 | 10.37 638 | 9.96 467 | 12 | | | |
| 49 | 9.58 859 | 9.62 398 | 10.37 602 | 9.96 461 | 11 | | | |
| 50 | 9.58 889 | 9.62 433 | 10.37 567 | 9.96 456 | 10 | | | |
| 51 | 9.58 919 | 9.62 468 | 10.37 532 | 9.96 451 | 9 | | | |
| 52 | 9.58 949 | 9.62 504 | 10.37 496 | 9.96 445 | 8 | | | |
| 53 | 9.58 979 | 9.62 539 | 10.37 461 | 9.96 440 | 7 | | | |
| 54 | 9.59 009 | 9.62 574 | 10.37 426 | 9.96 435 | 6 | | | |
| 55 | 9.59 039 | 9.62 609 | 10.37 391 | 9.96 429 | 5 | | | |
| 56 | 9.59 069 | 9.62 645 | 10.37 355 | 9.96 424 | 4 | | | |
| 57 | 9.59 098 | 9.62 680 | 10.37 320 | 9.96 419 | 3 | | | |
| 58 | 9.59 128 | 9.62 715 | 10.37 285 | 9.96 413 | 2 | | | |
| 59 | 9.59 158 | 9.62 750 | 10.37 250 | 9.96 408 | 1 | | | |
| 60 | 9.59 188 | 9.62 785 | 10.37 215 | 9.96 403 | 0 | | | |
| | cos 67° | cot 67° | tang 67° | sin 67° | M | | | |

| | 37 | 36 | 35 |
|----|------|------|------|
| 10 | 6.2 | 6.0 | 5.8 |
| 20 | 12.3 | 12.0 | 11.7 |
| 30 | 18.5 | 18.0 | 17.5 |
| 40 | 24.7 | 24.0 | 23.3 |
| 50 | 30.8 | 30.0 | 29.2 |
| 6 | 3.7 | 3.6 | 3.5 |
| 7 | 4.3 | 4.2 | 4.1 |
| 8 | 4.9 | 4.8 | 4.7 |
| 9 | 5.6 | 5.4 | 5.3 |

| | 32 | 31 |
|----|------|------|
| 10 | 5.3 | 5.2 |
| 20 | 10.7 | 10.3 |
| 30 | 16.0 | 15.5 |
| 40 | 21.3 | 20.7 |
| 50 | 26.7 | 25.8 |
| 6 | 3.2 | 3.1 |
| 7 | 3.7 | 3.6 |
| 8 | 4.3 | 4.1 |
| 9 | 4.8 | 4.7 |

| | 30 | 29 |
|----|------|------|
| 10 | 5.0 | 4.8 |
| 20 | 10.0 | 9.7 |
| 30 | 15.0 | 14.5 |
| 40 | 20.0 | 19.3 |
| 50 | 25.0 | 24.2 |
| 6 | 3.0 | 2.9 |
| 7 | 3.5 | 3.4 |
| 8 | 4.0 | 3.9 |
| 9 | 4.5 | 4.4 |

| | 5 | 6 |
|----|-----|-----|
| 10 | 0.8 | 1.0 |
| 20 | 1.7 | 2.0 |
| 30 | 2.5 | 3.0 |
| 40 | 3.3 | 4.0 |
| 50 | 4.2 | 5.0 |
| 6 | 0.5 | 0.6 |
| 7 | 0.6 | 0.7 |
| 8 | 0.7 | 0.8 |
| 9 | 0.8 | 0.9 |

| M | sin 23° | tang 23° | cot 23° | cos 23° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.59 188 | 9.62 785 | 10.37 215 | 9.96 403 | 60 | | | |
| 1 | 9.59 218 | 9.62 820 | 10.37 180 | 9.96 397 | 59 | | | |
| 2 | 9.59 247 | 9.62 855 | 10.37 145 | 9.96 392 | 58 | | | |
| 3 | 9.59 277 | 9.62 890 | 10.37 110 | 9.96 387 | 57 | | | |
| 4 | 9.59 307 | 9.62 926 | 10.37 074 | 9.96 381 | 56 | | | |
| 5 | 9.59 336 | 9.62 961 | 10.37 039 | 9.96 376 | 55 | | | |
| 6 | 9.59 366 | 9.62 996 | 10.37 004 | 9.96 370 | 54 | | | |
| 7 | 9.59 396 | 9.63 031 | 10.36 969 | 9.96 365 | 53 | | | |
| 8 | 9.59 425 | 9.63 066 | 10.36 934 | 9.96 360 | 52 | | | |
| 9 | 9.59 455 | 9.63 101 | 10.36 899 | 9.96 354 | 51 | | | |
| 10 | 9.59 484 | 9.63 135 | 10.36 865 | 9.96 349 | 50 | | | |
| 11 | 9.59 514 | 9.63 170 | 10.36 830 | 9.96 343 | 49 | | | |
| 12 | 9.59 543 | 9.63 205 | 10.36 795 | 9.96 338 | 48 | | | |
| 13 | 9.59 573 | 9.63 240 | 10.36 760 | 9.96 333 | 47 | | | |
| 14 | 9.59 602 | 9.63 275 | 10.36 725 | 9.96 327 | 46 | | | |
| 15 | 9.59 632 | 9.63 310 | 10.36 690 | 9.96 322 | 45 | | | |
| 16 | 9.59 661 | 9.63 345 | 10.36 655 | 9.96 316 | 44 | | | |
| 17 | 9.59 690 | 9.63 379 | 10.36 621 | 9.96 311 | 43 | | | |
| 18 | 9.59 720 | 9.63 414 | 10.36 586 | 9.96 305 | 42 | | | |
| 19 | 9.59 749 | 9.63 449 | 10.36 551 | 9.96 300 | 41 | | | |
| 20 | 9.59 778 | 9.63 484 | 10.36 516 | 9.96 294 | 40 | | | |
| 21 | 9.59 808 | 9.63 519 | 10.36 481 | 9.96 289 | 39 | | | |
| 22 | 9.59 837 | 9.63 553 | 10.36 447 | 9.96 284 | 38 | | | |
| 23 | 9.59 866 | 9.63 588 | 10.36 412 | 9.96 278 | 37 | | | |
| 24 | 9.59 895 | 9.63 623 | 10.36 377 | 9.96 273 | 36 | | | |
| 25 | 9.59 924 | 9.63 657 | 10.36 343 | 9.96 267 | 35 | | | |
| 26 | 9.59 954 | 9.63 692 | 10.36 308 | 9.96 262 | 34 | | | |
| 27 | 9.59 983 | 9.63 726 | 10.36 274 | 9.96 256 | 33 | | | |
| 28 | 9.60 012 | 9.63 761 | 10.36 239 | 9.96 251 | 32 | | | |
| 29 | 9.60 041 | 9.63 796 | 10.36 204 | 9.96 245 | 31 | | | |
| 30 | 9.60 070 | 9.63 830 | 10.36 170 | 9.96 240 | 30 | | | |
| 31 | 9.60 099 | 9.63 865 | 10.36 135 | 9.96 234 | 29 | | | |
| 32 | 9.60 128 | 9.63 899 | 10.36 101 | 9.96 229 | 28 | | | |
| 33 | 9.60 157 | 9.63 934 | 10.36 066 | 9.96 223 | 27 | | | |
| 34 | 9.60 186 | 9.63 968 | 10.36 032 | 9.96 218 | 26 | | | |
| 35 | 9.60 215 | 9.64 003 | 10.35 997 | 9.96 212 | 25 | | | |
| 36 | 9.60 244 | 9.64 037 | 10.35 963 | 9.96 207 | 24 | | | |
| 37 | 9.60 273 | 9.64 072 | 10.35 928 | 9.96 201 | 23 | | | |
| 38 | 9.60 302 | 9.64 106 | 10.35 894 | 9.96 196 | 22 | | | |
| 39 | 9.60 331 | 9.64 140 | 10.35 860 | 9.96 190 | 21 | | | |
| 40 | 9.60 359 | 9.64 175 | 10.35 825 | 9.96 185 | 20 | | | |
| 41 | 9.60 388 | 9.64 209 | 10.35 791 | 9.96 179 | 19 | | | |
| 42 | 9.60 417 | 9.64 243 | 10.35 757 | 9.96 174 | 18 | | | |
| 43 | 9.60 446 | 9.64 278 | 10.35 722 | 9.96 168 | 17 | | | |
| 44 | 9.60 474 | 9.64 312 | 10.35 688 | 9.96 162 | 16 | | | |
| 45 | 9.60 503 | 9.64 346 | 10.35 654 | 9.96 157 | 15 | | | |
| 46 | 9.60 532 | 9.64 381 | 10.35 619 | 9.96 151 | 14 | | | |
| 47 | 9.60 561 | 9.64 415 | 10.35 585 | 9.96 146 | 13 | | | |
| 48 | 9.60 589 | 9.64 449 | 10.35 551 | 9.96 140 | 12 | | | |
| 49 | 9.60 618 | 9.64 483 | 10.35 517 | 9.96 135 | 11 | | | |
| 50 | 9.60 646 | 9.64 517 | 10.35 483 | 9.96 129 | 10 | | | |
| 51 | 9.60 675 | 9.64 552 | 10.35 448 | 9.96 123 | 9 | | | |
| 52 | 9.60 704 | 9.64 586 | 10.35 414 | 9.96 118 | 8 | | | |
| 53 | 9.60 732 | 9.64 620 | 10.35 380 | 9.96 112 | 7 | | | |
| 54 | 9.60 761 | 9.64 654 | 10.35 346 | 9.96 107 | 6 | | | |
| 55 | 9.60 789 | 9.64 688 | 10.35 312 | 9.96 101 | 5 | | | |
| 56 | 9.60 818 | 9.64 722 | 10.35 278 | 9.96 095 | 4 | | | |
| 57 | 9.60 846 | 9.64 756 | 10.35 244 | 9.96 090 | 3 | | | |
| 58 | 9.60 875 | 9.64 790 | 10.35 210 | 9.96 084 | 2 | | | |
| 59 | 9.60 903 | 9.64 824 | 10.35 176 | 9.96 079 | 1 | | | |
| 60 | 9.60 931 | 9.64 858 | 10.35 142 | 9.96 073 | 0 | | | |
| | cos 66° | cot 66° | tang 66° | sin 66° | M | | | |

| | 36 | 35 | 34 |
|----|------|------|------|
| 10 | 6.0 | 5.8 | 5.7 |
| 20 | 12.0 | 11.7 | 11.3 |
| 30 | 18.0 | 17.5 | 17.0 |
| 40 | 24.0 | 23.3 | 22.7 |
| 50 | 30.0 | 29.3 | 28.3 |
| 6 | 3.6 | 3.5 | 3.4 |
| 7 | 4.2 | 4.1 | 4.0 |
| 8 | 4.8 | 4.7 | 4.5 |
| 9 | 5.4 | 5.3 | 5.1 |

| | 30 | 29 | 28 |
|----|------|------|------|
| 10 | 5.0 | 4.8 | 4.7 |
| 20 | 10.0 | 9.7 | 9.3 |
| 30 | 15.0 | 14.5 | 14.0 |
| 40 | 20.0 | 19.3 | 18.7 |
| 50 | 25.0 | 24.2 | 23.3 |
| 6 | 3.0 | 2.9 | 2.8 |
| 7 | 3.5 | 3.4 | 3.3 |
| 8 | 4.0 | 3.9 | 3.7 |
| 9 | 4.5 | 4.4 | 4.2 |

*

| | 5 | 6 |
|----|-----|-----|
| 10 | 0.8 | 1.0 |
| 20 | 1.7 | 2.0 |
| 30 | 2.5 | 3.0 |
| 40 | 3.3 | 4.0 |
| 50 | 4.2 | 5.0 |
| 6 | 0.5 | 0.6 |
| 7 | 0.6 | 0.7 |
| 8 | 0.7 | 0.8 |
| 9 | 0.8 | 0.9 |

| M | sin 24° | tang 24° | cot 24° | cos 24° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.60 931 | 9.64 858 | 10.35 142 | 9.96 073 | 60 | |
| 1 | 9.60 960 | 9.64 892 | 10.35 108 | 9.96 067 | 59 | |
| 2 | 9.60 988 | 9.64 926 | 10.35 074 | 9.96 062 | 58 | |
| 3 | 9.61 016 | 9.64 960 | 10.35 040 | 9.96 056 | 57 | |
| 4 | 9.61 045 | 9.64 994 | 10.35 006 | 9.96 050 | 56 | |
| 5 | 9.61 073 | 9.65 028 | 10.34 972 | 9.96 045 | 55 | |
| 6 | 9.61 101 | 9.65 062 | 10.34 938 | 9.96 039 | 54 | |
| 7 | 9.61 129 | 9.65 096 | 10.34 904 | 9.96 034 | 53 | |
| 8 | 9.61 158 | 9.65 130 | 10.34 870 | 9.96 028 | 52 | |
| 9 | 9.61 186 | 9.65 164 | 10.34 836 | 9.96 022 | 51 | |
| 10 | 9.61 214 | 9.65 197 | 10.34 803 | 9.96 017 | 50 | |
| 11 | 9.61 242 | 9.65 231 | 10.34 769 | 9.96 011 | 49 | |
| 12 | 9.61 270 | 9.65 265 | 10.34 735 | 9.96 005 | 48 | |
| 13 | 9.61 298 | 9.65 299 | 10.34 701 | 9.96 000 | 47 | |
| 14 | 9.61 326 | 9.65 333 | 10.34 667 | 9.95 994 | 46 | |
| 15 | 9.61 354 | 9.65 366 | 10.34 634 | 9.95 988 | 45 | |
| 16 | 9.61 382 | 9.65 400 | 10.34 600 | 9.95 982 | 44 | |
| 17 | 9.61 411 | 9.65 434 | 10.34 566 | 9.95 977 | 43 | |
| 18 | 9.61 438 | 9.65 467 | 10.34 533 | 9.95 971 | 42 | |
| 19 | 9.61 466 | 9.65 501 | 10.34 499 | 9.95 965 | 41 | |
| 20 | 9.61 494 | 9.65 535 | 10.34 465 | 9.95 960 | 40 | |
| 21 | 9.61 522 | 9.65 568 | 10.34 432 | 9.95 954 | 39 | * |
| 22 | 9.61 550 | 9.65 602 | 10.34 398 | 9.95 948 | 38 | |
| 23 | 9.61 578 | 9.65 636 | 10.34 364 | 9.95 942 | 37 | |
| 24 | 9.61 606 | 9.65 669 | 10.34 331 | 9.95 937 | 36 | |
| 25 | 9.61 634 | 9.65 703 | 10.34 297 | 9.95 931 | 35 | |
| 26 | 9.61 662 | 9.65 736 | 10.34 264 | 9.95 925 | 34 | |
| 27 | 9.61 689 | 9.65 770 | 10.34 230 | 9.95 920 | 33 | |
| 28 | 9.61 717 | 9.65 803 | 10.34 197 | 9.95 914 | 32 | |
| 29 | 9.61 745 | 9.65 837 | 10.34 163 | 9.95 908 | 31 | |
| 30 | 9.61 773 | 9.65 870 | 10.34 130 | 9.95 902 | 30 | |
| 31 | 9.61 800 | 9.65 904 | 10.34 096 | 9.95 897 | 29 | |
| 32 | 9.61 828 | 9.65 937 | 10.34 063 | 9.95 891 | 28 | |
| 33 | 9.61 856 | 9.65 971 | 10.34 029 | 9.95 885 | 27 | |
| 34 | 9.61 883 | 9.66 004 | 10.33 996 | 9.95 879 | 26 | |
| 35 | 9.61 911 | 9.66 038 | 10.33 962 | 9.95 873 | 25 | |
| 36 | 9.61 939 | 9.66 071 | 10.33 929 | 9.95 868 | 24 | |
| 37 | 9.61 966 | 9.66 104 | 10.33 896 | 9.95 862 | 23 | |
| 38 | 9.61 994 | 9.66 138 | 10.33 862 | 9.95 856 | 22 | |
| 39 | 9.62 021 | 9.66 171 | 10.33 829 | 9.95 850 | 21 | |
| 40 | 9.62 049 | 9.66 204 | 10.33 796 | 9.95 844 | 20 | |
| 41 | 9.62 076 | 9.66 238 | 10.33 762 | 9.95 839 | 19 | |
| 42 | 9.62 104 | 9.66 271 | 10.33 729 | 9.95 833 | 18 | |
| 43 | 9.62 131 | 9.66 304 | 10.33 696 | 9.95 827 | 17 | |
| 44 | 9.62 159 | 9.66 337 | 10.33 663 | 9.95 821 | 16 | |
| 45 | 9.62 186 | 9.66 371 | 10.33 629 | 9.95 815 | 15 | |
| 46 | 9.62 214 | 9.66 404 | 10.33 596 | 9.95 810 | 14 | |
| 47 | 9.62 241 | 9.66 437 | 10.33 563 | 9.95 804 | 13 | |
| 48 | 9.62 268 | 9.66 470 | 10.33 530 | 9.95 798 | 12 | |
| 49 | 9.62 296 | 9.66 503 | 10.33 497 | 9.95 792 | 11 | |
| 50 | 9.62 323 | 9.66 537 | 10.33 463 | 9.95 786 | 10 | |
| 51 | 9.62 350 | 9.66 570 | 10.33 430 | 9.95 780 | 9 | |
| 52 | 9.62 377 | 9.66 603 | 10.33 397 | 9.95 775 | 8 | |
| 53 | 9.62 405 | 9.66 636 | 10.33 364 | 9.95 769 | 7 | |
| 54 | 9.62 432 | 9.66 669 | 10.33 331 | 9.95 763 | 6 | |
| 55 | 9.62 459 | 9.66 702 | 10.33 298 | 9.95 757 | 5 | |
| 56 | 9.62 486 | 9.66 735 | 10.33 265 | 9.95 751 | 4 | |
| 57 | 9.62 513 | 9.66 768 | 10.33 232 | 9.95 745 | 3 | |
| 58 | 9.62 541 | 9.66 801 | 10.33 199 | 9.95 739 | 2 | |
| 59 | 9.62 568 | 9.66 834 | 10.33 166 | 9.95 733 | 1 | |
| 60 | 9.62 595 | 9.66 867 | 10.33 133 | 9.95 728 | 0 | |
| | cos 65° | cot 65° | tang 65° | sin 65° | M | |

| | 34 | 33 |
|----|------|------|
| 10 | 5.7 | 5.5 |
| 20 | 11.3 | 11.0 |
| 30 | 17.0 | 16.5 |
| 40 | 22.7 | 22.0 |
| 50 | 28.3 | 27.5 |
| 6 | 3.4 | 3.3 |
| 7 | 4.0 | 3.9 |
| 8 | 4.5 | 4.4 |
| 9 | 5.1 | 5.0 |

| | 29 | 28 | 27 |
|----|------|------|------|
| 10 | 4.8 | 4.7 | 4.5 |
| 20 | 9.7 | 9.3 | 9.0 |
| 30 | 14.5 | 14.0 | 13.5 |
| 40 | 19.3 | 18.7 | 18.0 |
| 50 | 24.2 | 23.3 | 22.5 |
| 6 | 2.9 | 2.8 | 2.7 |
| 7 | 3.4 | 3.3 | 3.2 |
| 8 | 3.9 | 3.7 | 3.6 |
| 9 | 4.4 | 4.2 | 4.1 |

| | 5 | 6 |
|----|-----|-----|
| 10 | 0.8 | 1.0 |
| 20 | 1.7 | 2.0 |
| 30 | 2.5 | 3.0 |
| 40 | 3.3 | 4.0 |
| 50 | 4.2 | 5.0 |
| 6 | 0.5 | 0.6 |
| 7 | 0.6 | 0.7 |
| 8 | 0.7 | 0.8 |
| 9 | 0.8 | 0.9 |

| M | sin 25° | tang 25° | cot 25° | cos 25° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.62 595 | 9.66 867 | 10.33 133 | 9.95 728 | 60 | | | |
| 1 | 9.62 622 | 9.66 900 | 10.33 100 | 9.95 722 | 59 | | | |
| 2 | 9.62 649 | 9.66 933 | 10.33 067 | 9.95 716 | 58 | | | |
| 3 | 9.62 676 | 9.66 966 | 10.33 034 | 9.95 710 | 57 | | | |
| 4 | 9.62 703 | 9.66 999 | 10.33 001 | 9.95 704 | 56 | | | |
| 5 | 9.62 730 | 9.67 032 | 10.32 968 | 9.95 698 | 55 | | | |
| 6 | 9.62 757 | 9.67 065 | 10.32 935 | 9.95 692 | 54 | | | |
| 7 | 9.62 784 | 9.67 098 | 10.32 902 | 9.95 686 | 53 | | | |
| 8 | 9.62 811 | 9.67 131 | 10.32 869 | 9.95 680 | 52 | | | |
| 9 | 9.62 838 | 9.67 163 | 10.32 837 | 9.95 674 | 51 | | | |
| 10 | 9.62 865 | 9.67 196 | 10.32 804 | 9.95 668 | 50 | | | |
| 11 | 9.62 892 | 9.67 229 | 10.32 771 | 9.95 663 | 49 | | | |
| 12 | 9.62 918 | 9.67 262 | 10.32 738 | 9.95 657 | 48 | | | |
| 13 | 9.62 945 | 9.67 295 | 10.32 705 | 9.95 651 | 47 | | | |
| 14 | 9.62 972 | 9.67 327 | 10.32 673 | 9.95 645 | 46 | | | |
| 15 | 9.62 999 | 9.67 360 | 10.32 640 | 9.95 639 | 45 | | | |
| 16 | 9.63 026 | 9.67 393 | 10.32 607 | 9.95 633 | 44 | | | |
| 17 | 9.63 052 | 9.67 426 | 10.32 574 | 9.95 627 | 43 | | | |
| 18 | 9.63 079 | 9.67 458 | 10.32 542 | 9.95 621 | 42 | | | |
| 19 | 9.63 106 | 9.67 491 | 10.32 509 | 9.95 615 | 41 | | | |
| 20 | 9.63 133 | 9.67 524 | 10.32 476 | 9.95 609 | 40 | | | |
| 21 | 9.63 159 | 9.67 556 | 10.32 444 | 9.95 603 | 39 | | | |
| 22 | 9.63 186 | 9.67 589 | 10.32 411 | 9.95 597 | 38 | | | |
| 23 | 9.63 213 | 9.67 622 | 10.32 378 | 9.95 591 | 37 | | | |
| 24 | 9.63 239 | 9.67 654 | 10.32 346 | 9.95 585 | 36 | | | |
| 25 | 9.63 266 | 9.67 687 | 10.32 313 | 9.95 579 | 35 | | | |
| 26 | 9.63 292 | 9.67 719 | 10.32 281 | 9.95 573 | 34 | | | |
| 27 | 9.63 319 | 9.67 752 | 10.32 248 | 9.95 567 | 33 | | | |
| 28 | 9.63 345 | 9.67 785 | 10.32 215 | 9.95 561 | 32 | | | |
| 29 | 9.63 372 | 9.67 817 | 10.32 183 | 9.95 555 | 31 | | | |
| 30 | 9.63 398 | 9.67 850 | 10.32 150 | 9.95 549 | 30 | | | |
| 31 | 9.63 425 | 9.67 882 | 10.32 118 | 9.95 543 | 29 | | | |
| 32 | 9.63 451 | 9.67 915 | 10.32 085 | 9.95 537 | 28 | | | |
| 33 | 9.63 478 | 9.67 947 | 10.32 053 | 9.95 531 | 27 | | | |
| 34 | 9.63 504 | 9.67 980 | 10.32 020 | 9.95 525 | 26 | | | |
| 35 | 9.63 531 | 9.68 012 | 10.31 988 | 9.95 519 | 25 | | | |
| 36 | 9.63 557 | 9.68 044 | 10.31 956 | 9.95 513 | 24 | | | |
| 37 | 9.63 583 | 9.68 077 | 10.31 923 | 9.95 507 | 23 | | | |
| 38 | 9.63 610 | 9.68 109 | 10.31 891 | 9.95 500 | 22 | | | |
| 39 | 9.63 636 | 9.68 142 | 10.31 858 | 9.95 494 | 21 | | | |
| 40 | 9.63 662 | 9.68 174 | 10.31 826 | 9.95 488 | 20 | | | |
| 41 | 9.63 689 | 9.68 206 | 10.31 794 | 9.95 482 | 19 | | | |
| 42 | 9.63 715 | 9.68 239 | 10.31 761 | 9.95 476 | 18 | | | |
| 43 | 9.63 741 | 9.68 271 | 10.31 729 | 9.95 470 | 17 | | | |
| 44 | 9.63 767 | 9.68 303 | 10.31 697 | 9.95 464 | 16 | | | |
| 45 | 9.63 794 | 9.68 336 | 10.31 664 | 9.95 458 | 15 | | | |
| 46 | 9.63 820 | 9.68 368 | 10.31 632 | 9.95 452 | 14 | | | |
| 47 | 9.63 846 | 9.68 400 | 10.31 600 | 9.95 446 | 13 | | | |
| 48 | 9.63 872 | 9.68 432 | 10.31 568 | 9.95 440 | 12 | | | |
| 49 | 9.63 898 | 9.68 465 | 10.31 535 | 9.95 434 | 11 | | | |
| 50 | 9.63 924 | 9.68 497 | 10.31 503 | 9.95 427 | 10 | | | |
| 51 | 9.63 950 | 9.68 529 | 10.31 471 | 9.95 421 | 9 | | | |
| 52 | 9.63 976 | 9.68 561 | 10.31 439 | 9.95 415 | 8 | | | |
| 53 | 9.64 002 | 9.68 593 | 10.31 407 | 9.95 409 | 7 | | | |
| 54 | 9.64 028 | 9.68 626 | 10.31 374 | 9.95 403 | 6 | | | |
| 55 | 9.64 054 | 9.68 658 | 10.31 342 | 9.95 397 | 5 | | | |
| 56 | 9.64 080 | 9.68 690 | 10.31 310 | 9.95 391 | 4 | | | |
| 57 | 9.64 106 | 9.68 722 | 10.31 278 | 9.95 384 | 3 | | | |
| 58 | 9.64 132 | 9.68 754 | 10.31 246 | 9.95 378 | 2 | | | |
| 59 | 9.64 158 | 9.68 786 | 10.31 214 | 9.95 372 | 1 | | | |
| 60 | 9.64 184 | 9.68 818 | 10.31 182 | 9.95 366 | 0 | | | |
| | cos 64° | cot 64° | tang 64° | sin 64° | M | | | |

| | 33 | 32 |
|----|------|------|
| 10 | 5.5 | 5.3 |
| 20 | 11.0 | 10.7 |
| 30 | 16.5 | 16.0 |
| 40 | 22.0 | 21.3 |
| 50 | 27.5 | 26.7 |
| 6 | 3.3 | 3.2 |
| 7 | 3.9 | 3.7 |
| 8 | 4.4 | 4.3 |
| 9 | 5.0 | 4.8 |

| | 27 | 26 |
|----|------|------|
| 10 | 4.5 | 4.3 |
| 20 | 9.0 | 8.7 |
| 30 | 13.5 | 13.0 |
| 40 | 18.0 | 17.3 |
| 50 | 22.5 | 21.7 |
| 6 | 2.7 | 2.6 |
| 7 | 3.2 | 3.0 |
| 8 | 3.6 | 3.5 |
| 9 | 4.1 | 3.9 |

| | 5 | 6 | 7 |
|----|-----|-----|-----|
| 10 | 0.8 | 1.0 | 1.2 |
| 20 | 1.7 | 2.0 | 2.3 |
| 30 | 2.5 | 3.0 | 3.5 |
| 40 | 3.3 | 4.0 | 4.7 |
| 50 | 4.2 | 5.0 | 5.8 |
| 6 | 0.5 | 0.6 | 0.7 |
| 7 | 0.6 | 0.7 | 0.8 |
| 8 | 0.7 | 0.8 | 0.9 |
| 9 | 0.8 | 0.9 | 1.1 |

| M | sin 26° | tang 26° | cot 26° | cos 26° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.64 184 | 9.68 818 | 10.31 182 | 9.95 366 | 60 | |
| 1 | 9.64 210 | 9.68 850 | 10.31 150 | 9.95 360 | 59 | |
| 2 | 9.64 236 | 9.68 882 | 10.31 118 | 9.95 354 | 58 | |
| 3 | 9.64 262 | 9.68 914 | 10.31 086 | 9.95 348 | 57 | |
| 4 | 9.64 288 | 9.68 946 | 10.31 054 | 9.95 341 | 56 | |
| 5 | 9.64 313 | 9.68 978 | 10.31 022 | 9.95 335 | 55 | |
| 6 | 9.64 339 | 9.69 010 | 10.30 990 | 9.95 329 | 54 | |
| 7 | 9.64 365 | 9.69 042 | 10.30 958 | 9.95 323 | 53 | |
| 8 | 9.64 391 | 9.69 074 | 10.30 926 | 9.95 317 | 52 | |
| 9 | 9.64 417 | 9.69 106 | 10.30 894 | 9.95 310 | 51 | |
| 10 | 9.64 442 | 9.69 138 | 10.30 862 | 9.95 304 | 50 | |
| 11 | 9.64 468 | 9.69 170 | 10.30 830 | 9.95 298 | 49 | |
| 12 | 9.64 494 | 9.69 202 | 10.30 798 | 9.95 292 | 48 | |
| 13 | 9.64 519 | 9.69 234 | 10.30 766 | 9.95 286 | 47 | |
| 14 | 9.64 545 | 9.69 266 | 10.30 734 | 9.95 279 | 46 | |
| 15 | 9.64 571 | 9.69 298 | 10.30 702 | 9.95 273 | 45 | |
| 16 | 9.64 596 | 9.69 329 | 10.30 671 | 9.95 267 | 44 | |
| 17 | 9.64 622 | 9.69 361 | 10.30 639 | 9.95 261 | 43 | |
| 18 | 9.64 647 | 9.69 393 | 10.30 607 | 9.95 254 | 42 | |
| 19 | 9.64 673 | 9.69 425 | 10.30 575 | 9.95 248 | 41 | |
| 20 | 9.64 698 | 9.69 457 | 10.30 543 | 9.95 242 | 40 | |
| 21 | 9.64 724 | 9.69 488 | 10.30 512 | 9.95 236 | 39 | |
| 22 | 9.64 749 | 9.69 520 | 10.30 480 | 9.95 229 | 38 | |
| 23 | 9.64 775 | 9.69 552 | 10.30 448 | 9.95 223 | 37 | |
| 24 | 9.64 800 | 9.69 584 | 10.30 416 | 9.95 217 | 36 | |
| 25 | 9.64 826 | 9.69 615 | 10.30 385 | 9.95 211 | 35 | |
| 26 | 9.64 851 | 9.69 647 | 10.30 353 | 9.95 204 | 34 | |
| 27 | 9.64 877 | 9.69 679 | 10.30 321 | 9.95 198 | 33 | |
| 28 | 9.64 902 | 9.69 710 | 10.30 290 | 9.95 192 | 32 | |
| 29 | 9.64 927 | 9.69 742 | 10.30 258 | 9.95 185 | 31 | |
| 30 | 9.64 953 | 9.69 774 | 10.30 226 | 9.95 179 | 30 | |
| 31 | 9.64 978 | 9.69 805 | 10.30 195 | 9.95 173 | 29 | |
| 32 | 9.65 003 | 9.69 837 | 10.30 163 | 9.95 167 | 28 | |
| 33 | 9.65 029 | 9.69 868 | 10.30 132 | 9.95 160 | 27 | |
| 34 | 9.65 054 | 9.69 900 | 10.30 100 | 9.95 154 | 26 | |
| 35 | 9.65 079 | 9.69 932 | 10.30 068 | 9.95 148 | 25 | |
| 36 | 9.65 104 | 9.69 963 | 10.30 037 | 9.95 141 | 24 | |
| 37 | 9.65 130 | 9.69 995 | 10.30 005 | 9.95 135 | 23 | |
| 38 | 9.65 155 | 9.70 026 | 10.29 974 | 9.95 129 | 22 | |
| 39 | 9.65 180 | 9.70 058 | 10.29 942 | 9.95 122 | 21 | |
| 40 | 9.65 205 | 9.70 089 | 10.29 911 | 9.95 116 | 20 | |
| 41 | 9.65 230 | 9.70 121 | 10.29 879 | 9.95 110 | 19 | |
| 42 | 9.65 255 | 9.70 152 | 10.29 848 | 9.95 103 | 18 | |
| 43 | 9.65 281 | 9.70 184 | 10.29 816 | 9.95 097 | 17 | |
| 44 | 9.65 306 | 9.70 215 | 10.29 785 | 9.95 090 | 16 | |
| 45 | 9.65 331 | 9.70 247 | 10.29 753 | 9.95 084 | 15 | |
| 46 | 9.65 356 | 9.70 278 | 10.29 722 | 9.95 078 | 14 | |
| 47 | 9.65 381 | 9.70 309 | 10.29 691 | 9.95 071 | 13 | |
| 48 | 9.65 406 | 9.70 341 | 10.29 659 | 9.95 065 | 12 | |
| 49 | 9.65 431 | 9.70 372 | 10.29 628 | 9.95 059 | 11 | |
| 50 | 9.65 456 | 9.70 404 | 10.29 596 | 9.95 052 | 10 | |
| 51 | 9.65 481 | 9.70 435 | 10.29 565 | 9.95 046 | 9 | |
| 52 | 9.65 506 | 9.70 466 | 10.29 534 | 9.95 039 | 8 | |
| 53 | 9.65 531 | 9.70 498 | 10.29 502 | 9.95 033 | 7 | |
| 54 | 9.65 556 | 9.70 529 | 10.29 471 | 9.95 027 | 6 | |
| 55 | 9.65 580 | 9.70 560 | 10.29 440 | 9.95 020 | 5 | |
| 56 | 9.65 605 | 9.70 592 | 10.29 408 | 9.95 014 | 4 | |
| 57 | 9.65 630 | 9.70 623 | 10.29 377 | 9.95 007 | 3 | |
| 58 | 9.65 655 | 9.70 654 | 10.29 346 | 9.95 001 | 2 | |
| 59 | 9.65 680 | 9.70 685 | 10.29 315 | 9.94 995 | 1 | |
| 60 | 9.65 705 | 9.70 717 | 10.29 283 | 9.94 988 | 0 | |
| | cos 63° | cot 63° | tang 63° | sin 63° | M | |

| | 32 | 31 |
|----|------|------|
| 10 | 5.3 | 5.2 |
| 20 | 10.7 | 10.3 |
| 30 | 16.0 | 15.5 |
| 40 | 21.3 | 20.7 |
| 50 | 26.7 | 25.8 |
| 6 | 3.2 | 3.1 |
| 7 | 3.7 | 3.6 |
| 8 | 4.3 | 4.1 |
| 9 | 4.8 | 4.7 |

| | 26 | 25 | 24 |
|----|------|------|------|
| 10 | 4.3 | 4.2 | 4.0 |
| 20 | 8.7 | 8.3 | 8.0 |
| 30 | 13.0 | 12.5 | 12.0 |
| 40 | 17.3 | 16.7 | 16.0 |
| 50 | 21.7 | 20.8 | 20.0 |
| 6 | 2.6 | 2.5 | 2.4 |
| 7 | 3.0 | 2.9 | 2.8 |
| 8 | 3.5 | 3.3 | 3.2 |
| 9 | 3.9 | 3.8 | 3.6 |

| | 6 | 7 |
|----|-----|-----|
| 10 | 1.0 | 1.2 |
| 20 | 2.0 | 2.3 |
| 30 | 3.0 | 3.5 |
| 40 | 4.0 | 4.7 |
| 50 | 5.0 | 5.8 |
| 6 | 0.6 | 0.7 |
| 7 | 0.7 | 0.8 |
| 8 | 0.8 | 0.9 |
| 9 | 0.9 | 1.1 |

| M | sin 27° | tang 27° | cot 27° | cos 27° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.65 705 | 9.70 717 | 10.29 283 | 9.94 988 | 60 | | | |
| 1 | 9.65 729 | 9.70 748 | 10.29 252 | 9.94 982 | 59 | | | |
| 2 | 9.65 754 | 9.70 779 | 10.29 221 | 9.94 975 | 58 | | | |
| 3 | 9.65 779 | 9.70 810 | 10.29 190 | 9.94 969 | 57 | | | |
| 4 | 9.65 804 | 9.70 841 | 10.29 159 | 9.94 962 | 56 | | | |
| 5 | 9.65 828 | 9.70 873 | 10.29 127 | 9.94 956 | 55 | | | |
| 6 | 9.65 853 | 9.70 904 | 10.29 096 | 9.94 949 | 54 | | | |
| 7 | 9.65 878 | 9.70 935 | 10.29 065 | 9.94 943 | 53 | | | |
| 8 | 9.65 902 | 9.70 966 | 10.29 034 | 9.94 936 | 52 | | | |
| 9 | 9.65 927 | 9.70 997 | 10.29 003 | 9.94 930 | 51 | | | |
| 10 | 9.65 952 | 9.71 028 | 10.28 972 | 9.94 923 | 50 | | | |
| 11 | 9.65 976 | 9.71 059 | 10.28 941 | 9.94 917 | 49 | | | |
| 12 | 9.66 001 | 9.71 090 | 10.28 910 | 9.94 911 | 48 | | | |
| 13 | 9.66 025 | 9.71 121 | 10.28 879 | 9.94 904 | 47 | | | |
| 14 | 9.66 050 | 9.71 153 | 10.28 847 | 9.94 898 | 46 | | | |
| 15 | 9.66 075 | 9.71 184 | 10.28 816 | 9.94 891 | 45 | | | |
| 16 | 9.66 099 | 9.71 215 | 10.28 785 | 9.94 885 | 44 | | | |
| 17 | 9.66 124 | 9.71 246 | 10.28 754 | 9.94 878 | 43 | | | |
| 18 | 9.66 148 | 9.71 277 | 10.28 723 | 9.94 871 | 42 | | | |
| 19 | 9.66 173 | 9.71 308 | 10.28 692 | 9.94 865 | 41 | | | |
| 20 | 9.66 197 | 9.71 339 | 10.28 661 | 9.94 858 | 40 | | | |
| 21 | 9.66 221 | 9.71 370 | 10.28 630 | 9.94 852 | 39 | | | |
| 22 | 9.66 246 | 9.71 401 | 10.28 599 | 9.94 845 | 38 | | | |
| 23 | 9.66 270 | 9.71 431 | 10.28 569 | 9.94 839 | 37 | | | |
| 24 | 9.66 295 | 9.71 462 | 10.28 538 | 9.94 832 | 36 | | | |
| 25 | 9.66 319 | 9.71 493 | 10.28 507 | 9.94 826 | 35 | | | |
| 26 | 9.66 343 | 9.71 524 | 10.28 476 | 9.94 819 | 34 | | | |
| 27 | 9.66 368 | 9.71 555 | 10.28 445 | 9.94 813 | 33 | | | |
| 28 | 9.66 392 | 9.71 586 | 10.28 414 | 9.94 806 | 32 | | | |
| 29 | 9.66 416 | 9.71 617 | 10.28 383 | 9.94 799 | 31 | | | |
| 30 | 9.66 441 | 9.71 648 | 10.28 352 | 9.94 793 | 30 | | | |
| 31 | 9.66 465 | 9.71 679 | 10.28 321 | 9.94 786 | 29 | | | |
| 32 | 9.66 489 | 9.71 709 | 10.28 291 | 9.94 780 | 28 | | | |
| 33 | 9.66 513 | 9.71 740 | 10.28 260 | 9.94 773 | 27 | | | |
| 34 | 9.66 537 | 9.71 771 | 10.28 229 | 9.94 767 | 26 | | | |
| 35 | 9.66 562 | 9.71 802 | 10.28 198 | 9.94 760 | 25 | | | |
| 36 | 9.66 586 | 9.71 833 | 10.28 167 | 9.94 753 | 24 | | | |
| 37 | 9.66 610 | 9.71 863 | 10.28 137 | 9.94 747 | 23 | | | |
| 38 | 9.66 634 | 9.71 894 | 10.28 106 | 9.94 740 | 22 | | | |
| 39 | 9.66 658 | 9.71 925 | 10.28 075 | 9.94 734 | 21 | | | |
| 40 | 9.66 682 | 9.71 955 | 10.28 045 | 9.94 727 | 20 | | | |
| 41 | 9.66 706 | 9.71 986 | 10.28 014 | 9.94 720 | 19 | | | |
| 42 | 9.66 731 | 9.72 017 | 10.27 983 | 9.94 714 | 18 | | | |
| 43 | 9.66 755 | 9.72 048 | 10.27 952 | 9.94 707 | 17 | | | |
| 44 | 9.66 779 | 9.72 078 | 10.27 922 | 9.94 700 | 16 | | | |
| 45 | 9.66 803 | 9.72 109 | 10.27 891 | 9.94 694 | 15 | | | |
| 46 | 9.66 827 | 9.72 140 | 10.27 860 | 9.94 687 | 14 | | | |
| 47 | 9.66 851 | 9.72 170 | 10.27 830 | 9.94 680 | 13 | | | |
| 48 | 9.66 875 | 9.72 201 | 10.27 799 | 9.94 674 | 12 | | | |
| 49 | 9.66 899 | 9.72 231 | 10.27 769 | 9.94 667 | 11 | | | |
| 50 | 9.66 922 | 9.72 262 | 10.27 738 | 9.94 660 | 10 | | | |
| 51 | 9.66 946 | 9.72 293 | 10.27 707 | 9.94 654 | 9 | | | |
| 52 | 9.66 970 | 9.72 323 | 10.27 677 | 9.94 647 | 8 | | | |
| 53 | 9.66 994 | 9.72 354 | 10.27 646 | 9.94 640 | 7 | | | |
| 54 | 9.67 018 | 9.72 384 | 10.27 616 | 9.94 634 | 6 | | | |
| 55 | 9.67 042 | 9.72 415 | 10.27 585 | 9.94 627 | 5 | | | |
| 56 | 9.67 066 | 9.72 445 | 10.27 555 | 9.94 620 | 4 | | | |
| 57 | 9.67 090 | 9.72 476 | 10.27 524 | 9.94 614 | 3 | | | |
| 58 | 9.67 113 | 9.72 506 | 10.27 494 | 9.94 607 | 2 | | | |
| 59 | 9.67 137 | 9.72 537 | 10.27 463 | 9.94 600 | 1 | | | |
| 60 | 9.67 161 | 9.72 567 | 10.27 433 | 9.94 593 | 0 | | | |
| | cos 62° | cot 62° | tang 62° | sin 62° | M | | | |

| | 32 | 31 | 30 |
|----|------|------|------|
| 10 | 5.3 | 5.2 | 5.0 |
| 20 | 10.7 | 10.3 | 10.0 |
| 30 | 16.0 | 15.5 | 15.0 |
| 40 | 21.3 | 20.7 | 20.0 |
| 50 | 26.7 | 25.8 | 25.0 |
| 6 | 3.2 | 3.1 | 3.0 |
| 7 | 3.7 | 3.6 | 3.5 |
| 8 | 4.3 | 4.1 | 4.0 |
| 9 | 4.8 | 4.7 | 4.5 |

| | 25 | 24 | 23 |
|----|------|------|------|
| 10 | 4.2 | 4.0 | 3.8 |
| 20 | 8.3 | 8.0 | 7.7 |
| 30 | 12.5 | 12.0 | 11.5 |
| 40 | 16.7 | 16.0 | 15.3 |
| 50 | 20.8 | 20.0 | 19.2 |
| 6 | 2.5 | 2.4 | 2.3 |
| 7 | 2.9 | 2.8 | 2.7 |
| 8 | 3.3 | 3.2 | 3.1 |
| 9 | 3.8 | 3.6 | 3.5 |

| | 6 | 7 |
|----|-----|-----|
| 10 | 1.0 | 1.2 |
| 20 | 2.0 | 2.3 |
| 30 | 3.0 | 3.5 |
| 40 | 4.0 | 4.7 |
| 50 | 5.0 | 5.8 |
| 6 | 0.6 | 0.7 |
| 7 | 0.7 | 0.8 |
| 8 | 0.8 | 0.9 |
| 9 | 0.9 | 1.1 |

| M | sin 28° | tang 28° | cot 28° | cos 28° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.67 161 | 9.72 567 | 10.27 433 | 9.94 593 | 60 | | | |
| 1 | 9.67 185 | 9.72 598 | 10.27 402 | 9.94 587 | 59 | | | |
| 2 | 9.67 208 | 9.72 628 | 10.27 372 | 9.94 580 | 58 | | | |
| 3 | 9.67 232 | 9.72 659 | 10.27 341 | 9.94 573 | 57 | | | |
| 4 | 9.67 256 | 9.72 689 | 10.27 311 | 9.94 567 | 56 | | | |
| 5 | 9.67 280 | 9.72 720 | 10.27 280 | 9.94 560 | 55 | | | |
| 6 | 9.67 303 | 9.72 750 | 10.27 250 | 9.94 553 | 54 | | | |
| 7 | 9.67 327 | 9.72 780 | 10.27 220 | 9.94 546 | 53 | | | |
| 8 | 9.67 350 | 9.72 811 | 10.27 189 | 9.94 540 | 52 | | | |
| 9 | 9.67 374 | 9.72 841 | 10.27 159 | 9.94 533 | 51 | | | |
| 10 | 9.67 398 | 9.72 872 | 10.27 128 | 9.94 526 | 50 | | | |
| 11 | 9.67 421 | 9.72 902 | 10.27 098 | 9.94 519 | 49 | | | |
| 12 | 9.67 445 | 9.72 932 | 10.27 068 | 9.94 513 | 48 | | | |
| 13 | 9.67 468 | 9.72 963 | 10.27 037 | 9.94 506 | 47 | | | |
| 14 | 9.67 492 | 9.72 993 | 10.27 007 | 9.94 499 | 46 | | | |
| 15 | 9.67 515 | 9.73 023 | 10.26 977 | 9.94 492 | 45 | | | |
| 16 | 9.67 539 | 9.73 054 | 10.26 946 | 9.94 485 | 44 | | | |
| 17 | 9.67 562 | 9.73 084 | 10.26 916 | 9.94 479 | 43 | | | |
| 18 | 9.67 586 | 9.73 114 | 10.26 886 | 9.94 472 | 42 | | | |
| 19 | 9.67 609 | 9.73 144 | 10.26 856 | 9.94 465 | 41 | | | |
| 20 | 9.67 633 | 9.73 175 | 10.26 825 | 9.94 458 | 40 | | | |
| 21 | 9.67 656 | 9.73 205 | 10.26 795 | 9.94 451 | 39 | | | |
| 22 | 9.67 680 | 9.73 235 | 10.26 765 | 9.94 445 | 38 | | | |
| 23 | 9.67 703 | 9.73 265 | 10.26 735 | 9.94 438 | 37 | | | |
| 24 | 9.67 726 | 9.73 295 | 10.26 705 | 9.94 431 | 36 | | | |
| 25 | 9.67 750 | 9.73 326 | 10.26 674 | 9.94 424 | 35 | | | |
| 26 | 9.67 773 | 9.73 356 | 10.26 644 | 9.94 417 | 34 | | | |
| 27 | 9.67 796 | 9.73 386 | 10.26 614 | 9.94 410 | 33 | | | |
| 28 | 9.67 820 | 9.73 416 | 10.26 584 | 9.94 404 | 32 | | | |
| 29 | 9.67 843 | 9.73 446 | 10.26 554 | 9.94 397 | 31 | | | |
| 30 | 9.67 866 | 9.73 476 | 10.26 524 | 9.94 390 | 30 | | | |
| 31 | 9.67 890 | 9.73 507 | 10.26 493 | 9.94 383 | 29 | | | |
| 32 | 9.67 913 | 9.73 537 | 10.26 463 | 9.94 376 | 28 | | | |
| 33 | 9.67 936 | 9.73 567 | 10.26 433 | 9.94 369 | 27 | | | |
| 34 | 9.67 959 | 9.73 597 | 10.26 403 | 9.94 362 | 26 | | | |
| 35 | 9.67 982 | 9.73 627 | 10.26 373 | 9.94 355 | 25 | | | |
| 36 | 9.68 006 | 9.73 657 | 10.26 343 | 9.94 349 | 24 | | | |
| 37 | 9.68 029 | 9.73 687 | 10.26 313 | 9.94 342 | 23 | | | |
| 38 | 9.68 052 | 9.73 717 | 10.26 283 | 9.94 335 | 22 | | | |
| 39 | 9.68 075 | 9.73 747 | 10.26 253 | 9.94 328 | 21 | | | |
| 40 | 9.68 098 | 9.73 777 | 10.26 223 | 9.94 321 | 20 | | | |
| 41 | 9.68 121 | 9.73 807 | 10.26 193 | 9.94 314 | 19 | | | |
| 42 | 9.68 144 | 9.73 837 | 10.26 163 | 9.94 307 | 18 | | | |
| 43 | 9.68 167 | 9.73 867 | 10.26 133 | 9.94 300 | 17 | | | |
| 44 | 9.68 190 | 9.73 897 | 10.26 103 | 9.94 293 | 16 | | | |
| 45 | 9.68 213 | 9.73 927 | 10.26 073 | 9.94 286 | 15 | | | |
| 46 | 9.68 237 | 9.73 957 | 10.26 043 | 9.94 279 | 14 | | | |
| 47 | 9.68 260 | 9.73 987 | 10.26 013 | 9.94 273 | 13 | | | |
| 48 | 9.68 283 | 9.74 017 | 10.25 983 | 9.94 266 | 12 | | | |
| 49 | 9.68 305 | 9.74 047 | 10.25 953 | 9.94 259 | 11 | | | |
| 50 | 9.68 328 | 9.74 077 | 10.25 923 | 9.94 252 | 10 | | | |
| 51 | 9.68 351 | 9.74 107 | 10.25 893 | 9.94 245 | 9 | | | |
| 52 | 9.68 374 | 9.74 137 | 10.25 863 | 9.94 238 | 8 | | | |
| 53 | 9.68 397 | 9.74 166 | 10.25 834 | 9.94 231 | 7 | | | |
| 54 | 9.68 420 | 9.74 196 | 10.25 804 | 9.94 224 | 6 | | | |
| 55 | 9.68 443 | 9.74 226 | 10.25 774 | 9.94 217 | 5 | | | |
| 56 | 9.68 466 | 9.74 256 | 10.25 744 | 9.94 210 | 4 | | | |
| 57 | 9.68 489 | 9.74 286 | 10.25 714 | 9.94 203 | 3 | | | |
| 58 | 9.68 512 | 9.74 316 | 10.25 684 | 9.94 196 | 2 | | | |
| 59 | 9.68 534 | 9.74 345 | 10.25 655 | 9.94 189 | 1 | | | |
| 60 | 9.68 557 | 9.74 375 | 10.25 625 | 9.94 182 | 0 | | | |
| | cos 61° | cot 61° | tang 61° | sin 61° | M | | | |

| | 31 | 30 | 29 |
|----|------|------|------|
| 10 | 5.2 | 5.0 | 4.8 |
| 20 | 10.3 | 10.0 | 9.7 |
| 30 | 15.5 | 15.0 | 14.5 |
| 40 | 20.7 | 20.0 | 19.3 |
| 50 | 25.8 | 25.0 | 24.2 |
| 6 | 3.1 | 3.0 | 2.9 |
| 7 | 3.6 | 3.5 | 3.4 |
| 8 | 4.1 | 4.0 | 3.9 |
| 9 | 4.7 | 4.5 | 4.4 |

| | 24 | 23 | 22 |
|----|------|------|------|
| 10 | 4.0 | 3.8 | 3.7 |
| 20 | 8.0 | 7.7 | 7.3 |
| 30 | 12.0 | 11.5 | 11.0 |
| 40 | 16.0 | 15.3 | 14.7 |
| 50 | 20.0 | 19.2 | 18.3 |
| 6 | 2.4 | 2.3 | 2.2 |
| 7 | 2.8 | 2.7 | 2.6 |
| 8 | 3.2 | 3.1 | 2.9 |
| 9 | 3.6 | 3.5 | 3.3 |

| | 6 | 7 |
|----|-----|-----|
| 10 | 1.0 | 1.2 |
| 20 | 2.0 | 2.3 |
| 30 | 3.0 | 3.5 |
| 40 | 4.0 | 4.7 |
| 50 | 5.0 | 5.8 |
| 6 | 0.6 | 0.7 |
| 7 | 0.7 | 0.8 |
| 8 | 0.8 | 0.9 |
| 9 | 0.9 | 1.1 |

| M | sin 29° | tang 29° | cot 29° | cos 29° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.68 557 | 9.74 375 | 10.25 625 | 9.94 182 | 60 | |
| 1 | 9.68 580 | 9.74 405 | 10.25 595 | 9.94 175 | 59 | |
| 2 | 9.68 603 | 9.74 435 | 10.25 565 | 9.94 168 | 58 | |
| 3 | 9.68 625 | 9.74 465 | 10.25 535 | 9.94 161 | 57 | |
| 4 | 9.68 648 | 9.74 494 | 10.25 506 | 9.94 154 | 56 | |
| 5 | 9.68 671 | 9.74 524 | 10.25 476 | 9.94 147 | 55 | |
| 6 | 9.68 694 | 9.74 554 | 10.25 446 | 9.94 140 | 54 | |
| 7 | 9.68 716 | 9.74 583 | 10.25 417 | 9.94 133 | 53 | |
| 8 | 9.68 739 | 9.74 613 | 10.25 387 | 9.94 126 | 52 | |
| 9 | 9.68 762 | 9.74 643 | 10.25 357 | 9.94 119 | 51 | |
| 10 | 9.68 784 | 9.74 673 | 10.25 327 | 9.94 112 | 50 | |
| 11 | 9.68 807 | 9.74 702 | 10.25 298 | 9.94 105 | 49 | |
| 12 | 9.68 829 | 9.74 732 | 10.25 268 | 9.94 098 | 48 | |
| 13 | 9.68 852 | 9.74 762 | 10.25 238 | 9.94 090 | 47 | |
| 14 | 9.68 875 | 9.74 791 | 10.25 209 | 9.94 083 | 46 | |
| 15 | 9.68 897 | 9.74 821 | 10.25 179 | 9.94 076 | 45 | |
| 16 | 9.68 920 | 9.74 851 | 10.25 149 | 9.94 069 | 44 | |
| 17 | 9.68 942 | 9.74 880 | 10.25 120 | 9.94 062 | 43 | |
| 18 | 9.68 965 | 9.74 910 | 10.25 090 | 9.94 055 | 42 | |
| 19 | 9.68 987 | 9.74 939 | 10.25 061 | 9.94 048 | 41 | |
| 20 | 9.69 010 | 9.74 969 | 10.25 031 | 9.94 041 | 40 | |
| 21 | 9.69 032 | 9.74 998 | 10.25 002 | 9.94 034 | 39 | |
| 22 | 9.69 055 | 9.75 028 | 10.24 972 | 9.94 027 | 38 | |
| 23 | 9.69 077 | 9.75 058 | 10.24 942 | 9.94 020 | 37 | |
| 24 | 9.69 100 | 9.75 087 | 10.24 913 | 9.94 012 | 36 | |
| 25 | 9.69 122 | 9.75 117 | 10.24 883 | 9.94 005 | 35 | |
| 26 | 9.69 144 | 9.75 146 | 10.24 854 | 9.93 998 | 34 | |
| 27 | 9.69 167 | 9.75 176 | 10.24 824 | 9.93 991 | 33 | |
| 28 | 9.69 189 | 9.75 205 | 10.24 795 | 9.93 984 | 32 | |
| 29 | 9.69 212 | 9.75 235 | 10.24 765 | 9.93 977 | 31 | |
| 30 | 9.69 234 | 9.75 264 | 10.24 736 | 9.93 970 | 30 | |
| 31 | 9.69 256 | 9.75 294 | 10.24 706 | 9.93 963 | 29 | |
| 32 | 9.69 279 | 9.75 323 | 10.24 677 | 9.93 955 | 28 | |
| 33 | 9.69 301 | 9.75 353 | 10.24 647 | 9.93 948 | 27 | |
| 34 | 9.69 323 | 9.75 382 | 10.24 618 | 9.93 941 | 26 | |
| 35 | 9.69 345 | 9.75 411 | 10.24 589 | 9.93 934 | 25 | |
| 36 | 9.69 368 | 9.75 441 | 10.24 559 | 9.93 927 | 24 | |
| 37 | 9.69 390 | 9.75 470 | 10.24 530 | 9.93 920 | 23 | |
| 38 | 9.69 412 | 9.75 500 | 10.24 500 | 9.93 912 | 22 | |
| 39 | 9.69 434 | 9.75 529 | 10.24 471 | 9.93 905 | 21 | |
| 40 | 9.69 456 | 9.75 558 | 10.24 442 | 9.93 898 | 20 | |
| 41 | 9.69 479 | 9.75 588 | 10.24 412 | 9.93 891 | 19 | |
| 42 | 9.69 501 | 9.75 617 | 10.24 383 | 9.93 884 | 18 | |
| 43 | 9.69 523 | 9.75 647 | 10.24 353 | 9.93 876 | 17 | |
| 44 | 9.69 545 | 9.75 676 | 10.24 324 | 9.93 869 | 16 | |
| 45 | 9.69 567 | 9.75 705 | 10.24 295 | 9.93 862 | 15 | |
| 46 | 9.69 589 | 9.75 735 | 10.24 265 | 9.93 855 | 14 | |
| 47 | 9.69 611 | 9.75 764 | 10.24 236 | 9.93 847 | 13 | |
| 48 | 9.69 633 | 9.75 793 | 10.24 207 | 9.93 840 | 12 | |
| 49 | 9.69 655 | 9.75 822 | 10.24 178 | 9.93 833 | 11 | |
| 50 | 9.69 677 | 9.75 852 | 10.24 148 | 9.93 826 | 10 | |
| 51 | 9.69 699 | 9.75 881 | 10.24 119 | 9.93 819 | 9 | |
| 52 | 9.69 721 | 9.75 910 | 10.24 090 | 9.93 811 | 8 | |
| 53 | 9.69 743 | 9.75 939 | 10.24 061 | 9.93 804 | 7 | |
| 54 | 9.69 765 | 9.75 969 | 10.24 031 | 9.93 797 | 6 | |
| 55 | 9.69 787 | 9.75 998 | 10.24 002 | 9.93 789 | 5 | |
| 56 | 9.69 809 | 9.76 027 | 10.23 973 | 9.93 782 | 4 | |
| 57 | 9.69 831 | 9.76 056 | 10.23 944 | 9.93 775 | 3 | |
| 58 | 9.69 853 | 9.76 086 | 10.23 914 | 9.93 768 | 2 | |
| 59 | 9.69 875 | 9.76 115 | 10.23 885 | 9.93 760 | 1 | |
| 60 | 9.69 897 | 9.76 144 | 10.23 856 | 9.93 753 | 0 | |
| ' | cos 60° | cot 60° | tang 60° | sin 60° | M | |

| | 30 | 29 |
|----|------|------|
| 10 | 5.0 | 4.8 |
| 20 | 10.0 | 9.7 |
| 30 | 15.0 | 14.5 |
| 40 | 20.0 | 19.3 |
| 50 | 25.0 | 24.2 |
| 6 | 3.0 | 2.9 |
| 7 | 3.5 | 3.4 |
| 8 | 4.0 | 3.9 |
| 9 | 4.5 | 4.4 |

| | 23 | 22 |
|----|------|------|
| 10 | 3.8 | 3.7 |
| 20 | 7.7 | 7.3 |
| 30 | 11.5 | 11.0 |
| 40 | 15.3 | 14.7 |
| 50 | 19.2 | 18.3 |
| 6 | 2.3 | 2.2 |
| 7 | 2.7 | 2.6 |
| 8 | 3.1 | 2.9 |
| 9 | 3.5 | 3.3 |

| | 7 | 8 |
|----|-----|-----|
| 10 | 1.2 | 1.3 |
| 20 | 2.3 | 2.7 |
| 30 | 3.5 | 4.0 |
| 40 | 4.7 | 5.3 |
| 50 | 5.8 | 6.7 |
| 6 | 0.7 | 0.8 |
| 7 | 0.8 | 0.9 |
| 8 | 0.9 | 1.1 |
| 9 | 1.1 | 1.2 |

| M | sin 30° | tang 30° | cot 30° | cos 30° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.69 897 | 9.76 144 | 10.23 856 | 9.93 753 | 60 | |
| 1 | 9.69 919 | 9.76 173 | 10.23 827 | 9.93 746 | 59 | |
| 2 | 9.69 941 | 9.76 202 | 10.23 798 | 9.93 738 | 58 | |
| 3 | 9.69 963 | 9.76 231 | 10.23 769 | 9.93 731 | 57 | |
| 4 | 9.69 984 | 9.76 261 | 10.23 739 | 9.93 724 | 56 | |
| 5 | 9.70 006 | 9.76 290 | 10.23 710 | 9.93 717 | 55 | |
| 6 | 9.70 028 | 9.76 319 | 10.23 681 | 9.93 709 | 54 | |
| 7 | 9.70 050 | 9.76 348 | 10.23 652 | 9.93 702 | 53 | |
| 8 | 9.70 072 | 9.76 377 | 10.23 623 | 9.93 695 | 52 | |
| 9 | 9.70 093 | 9.76 406 | 10.23 594 | 9.93 687 | 51 | |
| 10 | 9.70 115 | 9.76 435 | 10.23 565 | 9.93 680 | 50 | |
| 11 | 9.70 137 | 9.76 464 | 10.23 536 | 9.93 673 | 49 | |
| 12 | 9.70 159 | 9.76 493 | 10.23 507 | 9.93 665 | 48 | |
| 13 | 9.70 180 | 9.76 522 | 10.23 478 | 9.93 658 | 47 | |
| 14 | 9.70 202 | 9.76 551 | 10.23 449 | 9.93 650 | 46 | |
| 15 | 9.70 224 | 9.76 580 | 10.23 420 | 9.93 643 | 45 | |
| 16 | 9.70 245 | 9.76 609 | 10.23 391 | 9.93 636 | 44 | |
| 17 | 9.70 267 | 9.76 639 | 10.23 361 | 9.93 628 | 43 | |
| 18 | 9.70 288 | 9.76 668 | 10.23 332 | 9.93 621 | 42 | |
| 19 | 9.70 310 | 9.76 697 | 10.23 303 | 9.93 614 | 41 | |
| 20 | 9.70 332 | 9.76 725 | 10.23 275 | 9.93 606 | 40 | |
| 21 | 9.70 353 | 9.76 754 | 10.23 246 | 9.93 599 | 39 | |
| 22 | 9.70 375 | 9.76 783 | 10.23 217 | 9.93 591 | 38 | |
| 23 | 9.70 396 | 9.76 812 | 10.23 188 | 9.93 584 | 37 | |
| 24 | 9.70 418 | 9.76 841 | 10.23 159 | 9.93 577 | 36 | |
| 25 | 9.70 439 | 9.76 870 | 10.23 130 | 9.93 569 | 35 | |
| 26 | 9.70 461 | 9.76 899 | 10.23 101 | 9.93 562 | 34 | |
| 27 | 9.70 482 | 9.76 928 | 10.23 072 | 9.93 554 | 33 | |
| 28 | 9.70 504 | 9.76 957 | 10.23 043 | 9.93 547 | 32 | |
| 29 | 9.70 525 | 9.76 986 | 10.23 014 | 9.93 539 | 31 | |
| 30 | 9.70 547 | 9.77 015 | 10.22 985 | 9.93 532 | 30 | |
| 31 | 9.70 568 | 9.77 044 | 10.22 956 | 9.93 525 | 29 | |
| 32 | 9.70 590 | 9.77 073 | 10.22 927 | 9.93 517 | 28 | |
| 33 | 9.70 611 | 9.77 101 | 10.22 899 | 9.93 510 | 27 | |
| 34 | 9.70 633 | 9.77 130 | 10.22 870 | 9.93 502 | 26 | |
| 35 | 9.70 654 | 9.77 159 | 10.22 841 | 9.93 495 | 25 | |
| 36 | 9.70 675 | 9.77 188 | 10.22 812 | 9.93 487 | 24 | |
| 37 | 9.70 697 | 9.77 217 | 10.22 783 | 9.93 480 | 23 | |
| 38 | 9.70 718 | 9.77 246 | 10.22 754 | 9.93 472 | 22 | |
| 39 | 9.70 739 | 9.77 274 | 10.22 726 | 9.93 465 | 21 | |
| 40 | 9.70 761 | 9.77 303 | 10.22 697 | 9.93 457 | 20 | |
| 41 | 9.70 782 | 9.77 332 | 10.22 668 | 9.93 450 | 19 | |
| 42 | 9.70 803 | 9.77 361 | 10.22 639 | 9.93 442 | 18 | |
| 43 | 9.70 824 | 9.77 390 | 10.22 610 | 9.93 435 | 17 | |
| 44 | 9.70 846 | 9.77 418 | 10.22 582 | 9.93 427 | 16 | |
| 45 | 9.70 867 | 9.77 447 | 10.22 553 | 9.93 420 | 15 | |
| 46 | 9.70 888 | 9.77 476 | 10.22 524 | 9.93 412 | 14 | |
| 47 | 9.70 909 | 9.77 505 | 10.22 495 | 9.93 405 | 13 | |
| 48 | 9.70 931 | 9.77 533 | 10.22 467 | 9.93 397 | 12 | |
| 49 | 9.70 952 | 9.77 562 | 10.22 438 | 9.93 390 | 11 | |
| 50 | 9.70 973 | 9.77 591 | 10.22 409 | 9.93 382 | 10 | |
| 51 | 9.70 994 | 9.77 619 | 10.22 381 | 9.93 375 | 9 | |
| 52 | 9.71 015 | 9.77 648 | 10.22 352 | 9.93 367 | 8 | |
| 53 | 9.71 036 | 9.77 677 | 10.22 323 | 9.93 360 | 7 | |
| 54 | 9.71 058 | 9.77 706 | 10.22 294 | 9.93 352 | 6 | |
| 55 | 9.71 079 | 9.77 734 | 10.22 266 | 9.93 344 | 5 | |
| 56 | 9.71 100 | 9.77 763 | 10.22 237 | 9.93 337 | 4 | |
| 57 | 9.71 121 | 9.77 791 | 10.22 209 | 9.93 329 | 3 | |
| 58 | 9.71 142 | 9.77 820 | 10.22 180 | 9.93 322 | 2 | |
| 59 | 9.71 163 | 9.77 849 | 10.22 151 | 9.93 314 | 1 | |
| 60 | 9.71 184 | 9.77 877 | 10.22 123 | 9.93 307 | 0 | |
| | cos 59° | cot 59° | tang 59° | sin 59° | M | |

| | 30 | 29 | 28 |
|----|------|------|------|
| 10 | 5.0 | 4.8 | 4.7 |
| 20 | 10.0 | 9.7 | 9.3 |
| 30 | 15.0 | 14.5 | 14.0 |
| 40 | 20.0 | 19.3 | 18.7 |
| 50 | 25.0 | 24.2 | 23.3 |
| 6 | 3.0 | 2.9 | 2.8 |
| 7 | 3.5 | 3.4 | 3.3 |
| 8 | 4.0 | 3.9 | 3.7 |
| 9 | 4.5 | 4.4 | 4.2 |

| | 22 | 21 |
|----|------|------|
| 10 | 3.7 | 3.5 |
| 20 | 7.3 | 7.0 |
| 30 | 11.0 | 10.5 |
| 40 | 14.7 | 14.0 |
| 50 | 18.3 | 17.5 |
| 6 | 2.2 | 2.1 |
| 7 | 2.6 | 2.5 |
| 8 | 2.9 | 2.8 |
| 9 | 3.3 | 3.2 |

| | 7 | 8 |
|----|-----|-----|
| 10 | 1.2 | 1.3 |
| 20 | 2.3 | 2.7 |
| 30 | 3.5 | 4.0 |
| 40 | 4.7 | 5.3 |
| 50 | 5.8 | 6.7 |
| 6 | 0.7 | 0.8 |
| 7 | 0.8 | 0.9 |
| 8 | 0.9 | 1.1 |
| 9 | 1.1 | 1.2 |

| M | sin 31° | tang 31° | cot 31° | cos 31° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|-----------|
| 0 | 9.71 184 | 9.77 877 | 10.22 123 | 9.93 307 | 60 | | |
| 1 | 9.71 205 | 9.77 906 | 10.22 094 | 9.93 299 | 59 | | |
| 2 | 9.71 226 | 9.77 935 | 10.22 065 | 9.93 291 | 58 | | |
| 3 | 9.71 247 | 9.77 963 | 10.22 037 | 9.93 284 | 57 | | |
| 4 | 9.71 268 | 9.77 992 | 10.22 008 | 9.93 276 | 56 | | |
| 5 | 9.71 289 | 9.78 020 | 10.21 980 | 9.93 269 | 55 | | |
| 6 | 9.71 310 | 9.78 049 | 10.21 951 | 9.93 261 | 54 | | |
| 7 | 9.71 331 | 9.78 077 | 10.21 923 | 9.93 253 | 53 | | |
| 8 | 9.71 352 | 9.78 106 | 10.21 894 | 9.93 246 | 52 | | |
| 9 | 9.71 373 | 9.78 135 | 10.21 865 | 9.93 238 | 51 | | |
| 10 | 9.71 393 | 9.78 163 | 10.21 837 | 9.93 230 | 50 | 29 | 28 |
| 11 | 9.71 414 | 9.78 192 | 10.21 808 | 9.93 223 | 49 | 10 | 4.8 4.7 |
| 12 | 9.71 435 | 9.78 220 | 10.21 780 | 9.93 215 | 48 | 20 | 9.7 9.3 |
| 13 | 9.71 456 | 9.78 249 | 10.21 751 | 9.93 207 | 47 | 30 | 14.5 14.0 |
| 14 | 9.71 477 | 9.78 277 | 10.21 723 | 9.93 200 | 46 | 40 | 19.3 18.7 |
| 15 | 9.71 498 | 9.78 306 | 10.21 694 | 9.93 192 | 45 | 50 | 24.2 23.3 |
| 16 | 9.71 519 | 9.78 334 | 10.21 666 | 9.93 184 | 44 | 6 | 2.9 2.8 |
| 17 | 9.71 539 | 9.78 363 | 10.21 637 | 9.93 177 | 43 | 7 | 3.4 3.3 |
| 18 | 9.71 560 | 9.78 391 | 10.21 609 | 9.93 169 | 42 | 8 | 3.9 3.7 |
| 19 | 9.71 581 | 9.78 419 | 10.21 581 | 9.93 161 | 41 | 9 | 4.4 4.2 |
| 20 | 9.71 602 | 9.78 448 | 10.21 552 | 9.93 154 | 40 | | * |
| 21 | 9.71 622 | 9.78 476 | 10.21 524 | 9.93 146 | 39 | | |
| 22 | 9.71 643 | 9.78 505 | 10.21 495 | 9.93 138 | 38 | | |
| 23 | 9.71 664 | 9.78 533 | 10.21 467 | 9.93 131 | 37 | | |
| 24 | 9.71 685 | 9.78 562 | 10.21 438 | 9.93 123 | 36 | | |
| 25 | 9.71 705 | 9.78 590 | 10.21 410 | 9.93 115 | 35 | | |
| 26 | 9.71 726 | 9.78 618 | 10.21 382 | 9.93 108 | 34 | | |
| 27 | 9.71 747 | 9.78 647 | 10.21 353 | 9.93 100 | 33 | | |
| 28 | 9.71 767 | 9.78 675 | 10.21 325 | 9.93 092 | 32 | 21 | 20 |
| 29 | 9.71 788 | 9.78 704 | 10.21 296 | 9.93 084 | 31 | 10 | 3.5 3.3 |
| 30 | 9.71 809 | 9.78 732 | 10.21 268 | 9.93 077 | 30 | 20 | 7.0 6.7 |
| 31 | 9.71 829 | 9.78 760 | 10.21 240 | 9.93 069 | 29 | 30 | 10.5 10.0 |
| 32 | 9.71 850 | 9.78 789 | 10.21 211 | 9.93 061 | 28 | 40 | 14.0 13.3 |
| 33 | 9.71 870 | 9.78 817 | 10.21 183 | 9.93 053 | 27 | 50 | 17.5 16.7 |
| 34 | 9.71 891 | 9.78 845 | 10.21 155 | 9.93 046 | 26 | 6 | 2.1 2.0 |
| 35 | 9.71 911 | 9.78 874 | 10.21 126 | 9.93 038 | 25 | 7 | 2.5 2.3 |
| 36 | 9.71 932 | 9.78 902 | 10.21 098 | 9.93 030 | 24 | 8 | 2.8 2.7 |
| 37 | 9.71 952 | 9.78 930 | 10.21 070 | 9.93 022 | 23 | 9 | 3.2 3.0 |
| 38 | 9.71 973 | 9.78 959 | 10.21 041 | 9.93 014 | 22 | | |
| 39 | 9.71 994 | 9.78 987 | 10.21 013 | 9.93 007 | 21 | | |
| 40 | 9.72 014 | 9.79 015 | 10.20 985 | 9.92 999 | 20 | | * |
| 41 | 9.72 034 | 9.79 043 | 10.20 957 | 9.92 991 | 19 | | |
| 42 | 9.72 055 | 9.79 072 | 10.20 928 | 9.92 983 | 18 | | |
| 43 | 9.72 075 | 9.79 100 | 10.20 900 | 9.92 976 | 17 | | |
| 44 | 9.72 096 | 9.79 128 | 10.20 872 | 9.92 968 | 16 | | |
| 45 | 9.72 116 | 9.79 156 | 10.20 844 | 9.92 960 | 15 | | |
| 46 | 9.72 137 | 9.79 185 | 10.20 815 | 9.92 952 | 14 | | |
| 47 | 9.72 157 | 9.79 213 | 10.20 787 | 9.92 944 | 13 | | |
| 48 | 9.72 177 | 9.79 241 | 10.20 759 | 9.92 936 | 12 | | |
| 49 | 9.72 198 | 9.79 269 | 10.20 731 | 9.92 929 | 11 | | |
| 50 | 9.72 218 | 9.79 297 | 10.20 703 | 9.92 921 | 10 | | |
| 51 | 9.72 238 | 9.79 326 | 10.20 674 | 9.92 913 | 9 | | |
| 52 | 9.72 259 | 9.79 354 | 10.20 646 | 9.92 905 | 8 | | |
| 53 | 9.72 279 | 9.79 382 | 10.20 618 | 9.92 897 | 7 | | |
| 54 | 9.72 299 | 9.79 410 | 10.20 590 | 9.92 889 | 6 | | |
| 55 | 9.72 320 | 9.79 438 | 10.20 562 | 9.92 881 | 5 | | |
| 56 | 9.72 340 | 9.79 466 | 10.20 534 | 9.92 874 | 4 | | |
| 57 | 9.72 360 | 9.79 495 | 10.20 505 | 9.92 866 | 3 | | |
| 58 | 9.72 381 | 9.79 523 | 10.20 477 | 9.92 858 | 2 | | |
| 59 | 9.72 401 | 9.79 551 | 10.20 449 | 9.92 850 | 1 | | |
| 60 | 9.72 421 | 9.79 579 | 10.20 421 | 9.92 842 | 0 | | |
| ' | cos 58° | cot 58° | tang 58° | sin 58° | M | | |

| M | sin 32° | tang 32° | cot 32° | cos 32° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.72 421 | 9.79 579 | 10.20 421 | 9.92 842 | 60 | | | |
| 1 | 9.72 441 | 9.79 607 | 10.20 393 | 9.92 834 | 59 | | | |
| 2 | 9.72 461 | 9.79 635 | 10.20 365 | 9.92 826 | 58 | | | |
| 3 | 9.72 482 | 9.79 663 | 10.20 337 | 9.92 818 | 57 | | | |
| 4 | 9.72 502 | 9.79 691 | 10.20 309 | 9.92 810 | 56 | | | |
| 5 | 9.72 522 | 9.79 719 | 10.20 281 | 9.92 803 | 55 | | | |
| 6 | 9.72 542 | 9.79 747 | 10.20 253 | 9.92 795 | 54 | | | |
| 7 | 9.72 562 | 9.79 776 | 10.20 224 | 9.92 787 | 53 | | | |
| 8 | 9.72 582 | 9.79 804 | 10.20 196 | 9.92 779 | 52 | | | |
| 9 | 9.72 602 | 9.79 832 | 10.20 168 | 9.92 771 | 51 | | | |
| 10 | 9.72 622 | 9.79 860 | 10.20 140 | 9.92 763 | 50 | | | |
| 11 | 9.72 643 | 9.79 888 | 10.20 112 | 9.92 755 | 49 | | | |
| 12 | 9.72 663 | 9.79 916 | 10.20 084 | 9.92 747 | 48 | | | |
| 13 | 9.72 683 | 9.79 944 | 10.20 056 | 9.92 739 | 47 | | | |
| 14 | 9.72 703 | 9.79 972 | 10.20 028 | 9.92 731 | 46 | | | |
| 15 | 9.72 723 | 9.80 000 | 10.20 000 | 9.92 723 | 45 | | | |
| 16 | 9.72 743 | 9.80 028 | 10.19 972 | 9.92 715 | 44 | | | |
| 17 | 9.72 763 | 9.80 056 | 10.19 944 | 9.92 707 | 43 | | | |
| 18 | 9.72 783 | 9.80 084 | 10.19 916 | 9.92 699 | 42 | | | |
| 19 | 9.72 803 | 9.80 112 | 10.19 888 | 9.92 691 | 41 | | | |
| 20 | 9.72 823 | 9.80 140 | 10.19 860 | 9.92 683 | 40 | | | |
| 21 | 9.72 843 | 9.80 168 | 10.19 832 | 9.92 675 | 39 | | | |
| 22 | 9.72 863 | 9.80 195 | 10.19 805 | 9.92 667 | 38 | | | |
| 23 | 9.72 883 | 9.80 223 | 10.19 777 | 9.92 659 | 37 | | | |
| 24 | 9.72 902 | 9.80 251 | 10.19 749 | 9.92 651 | 36 | | | |
| 25 | 9.72 922 | 9.80 279 | 10.19 721 | 9.92 643 | 35 | | | |
| 26 | 9.72 942 | 9.80 307 | 10.19 693 | 9.92 635 | 34 | | | |
| 27 | 9.72 962 | 9.80 335 | 10.19 665 | 9.92 627 | 33 | | | |
| 28 | 9.72 982 | 9.80 363 | 10.19 637 | 9.92 619 | 32 | | | |
| 29 | 9.73 002 | 9.80 391 | 10.19 609 | 9.92 611 | 31 | | | |
| 30 | 9.73 022 | 9.80 419 | 10.19 581 | 9.92 603 | 30 | | | |
| 31 | 9.73 041 | 9.80 447 | 10.19 553 | 9.92 595 | 29 | | | |
| 32 | 9.73 061 | 9.80 474 | 10.19 526 | 9.92 587 | 28 | | | |
| 33 | 9.73 081 | 9.80 502 | 10.19 498 | 9.92 579 | 27 | | | |
| 34 | 9.73 101 | 9.80 530 | 10.19 470 | 9.92 571 | 26 | | | |
| 35 | 9.73 121 | 9.80 558 | 10.19 442 | 9.92 563 | 25 | | | |
| 36 | 9.73 140 | 9.80 586 | 10.19 414 | 9.92 555 | 24 | | | |
| 37 | 9.73 160 | 9.80 614 | 10.19 386 | 9.92 546 | 23 | | | |
| 38 | 9.73 180 | 9.80 642 | 10.19 358 | 9.92 538 | 22 | | | |
| 39 | 9.73 200 | 9.80 669 | 10.19 331 | 9.92 530 | 21 | | | |
| 40 | 9.73 219 | 9.80 697 | 10.19 303 | 9.92 522 | 20 | | | |
| 41 | 9.73 239 | 9.80 725 | 10.19 275 | 9.92 514 | 19 | | | |
| 42 | 9.73 259 | 9.80 753 | 10.19 247 | 9.92 506 | 18 | | | |
| 43 | 9.73 278 | 9.80 781 | 10.19 219 | 9.92 498 | 17 | | | |
| 44 | 9.73 298 | 9.80 808 | 10.19 192 | 9.92 490 | 16 | | | |
| 45 | 9.73 318 | 9.80 836 | 10.19 164 | 9.92 482 | 15 | | | |
| 46 | 9.73 337 | 9.80 864 | 10.19 136 | 9.92 473 | 14 | | | |
| 47 | 9.73 357 | 9.80 892 | 10.19 108 | 9.92 465 | 13 | | | |
| 48 | 9.73 377 | 9.80 919 | 10.19 081 | 9.92 457 | 12 | | | |
| 49 | 9.73 396 | 9.80 947 | 10.19 053 | 9.92 449 | 11 | | | |
| 50 | 9.73 416 | 9.80 975 | 10.19 025 | 9.92 441 | 10 | | | |
| 51 | 9.73 435 | 9.81 003 | 10.18 997 | 9.92 433 | 9 | | | |
| 52 | 9.73 455 | 9.81 030 | 10.18 970 | 9.92 425 | 8 | | | |
| 53 | 9.73 474 | 9.81 058 | 10.18 942 | 9.92 416 | 7 | | | |
| 54 | 9.73 494 | 9.81 086 | 10.18 914 | 9.92 408 | 6 | | | |
| 55 | 9.73 513 | 9.81 113 | 10.18 887 | 9.92 400 | 5 | | | |
| 56 | 9.73 533 | 9.81 141 | 10.18 859 | 9.92 392 | 4 | | | |
| 57 | 9.73 552 | 9.81 169 | 10.18 831 | 9.92 384 | 3 | | | |
| 58 | 9.73 572 | 9.81 196 | 10.18 804 | 9.92 376 | 2 | | | |
| 59 | 9.73 591 | 9.81 224 | 10.18 776 | 9.92 367 | 1 | | | |
| 60 | 9.73 611 | 9.81 252 | 10.18 748 | 9.92 359 | 0 | | | |
| | cos 57° | cot 57° | tang 57° | sin 57° | M | | | |

| | 29 | 28 | 27 |
|----|------|------|------|
| 10 | 4.8 | 4.7 | 4.5 |
| 20 | 9.7 | 9.3 | 9.0 |
| 30 | 14.5 | 14.0 | 13.5 |
| 40 | 19.3 | 18.7 | 18.0 |
| 50 | 24.2 | 23.3 | 22.5 |
| 6 | 2.9 | 2.8 | 2.7 |
| 7 | 3.4 | 3.3 | 3.2 |
| 8 | 3.9 | 3.7 | 3.6 |
| 9 | 4.4 | 4.2 | 4.1 |

| | 21 | 20 | 19 |
|----|------|------|------|
| 10 | 3.5 | 3.3 | 3.2 |
| 20 | 7.0 | 6.7 | 6.3 |
| 30 | 10.5 | 10.0 | 9.5 |
| 40 | 14.0 | 13.3 | 12.7 |
| 50 | 17.5 | 16.7 | 15.8 |
| 6 | 2.1 | 2.0 | 1.9 |
| 7 | 2.5 | 2.3 | 2.2 |
| 8 | 2.8 | 2.7 | 2.5 |
| 9 | 3.2 | 3.0 | 2.9 |

| | 7 | 8 | 9 |
|----|-----|-----|-----|
| 10 | 1.2 | 1.3 | 1.5 |
| 20 | 2.3 | 2.7 | 3.0 |
| 30 | 3.5 | 4.0 | 4.5 |
| 40 | 4.7 | 5.3 | 6.0 |
| 50 | 5.8 | 6.7 | 7.5 |
| 6 | 0.7 | 0.8 | 0.9 |
| 7 | 0.8 | 0.9 | 1.1 |
| 8 | 0.9 | 1.1 | 1.2 |
| 9 | 1.1 | 1.2 | 1.4 |

| M | sin 33° | tang 33° | cot 33° | cos 33° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.73 611 | 9.81 252 | 10.18 748 | 9.92 359 | 60 | | | |
| 1 | 9.73 630 | 9.81 279 | 10.18 721 | 9.92 351 | 59 | | | |
| 2 | 9.73 650 | 9.81 307 | 10.18 693 | 9.92 343 | 58 | | | |
| 3 | 9.73 669 | 9.81 335 | 10.18 665 | 9.92 335 | 57 | | | |
| 4 | 9.73 689 | 9.81 362 | 10.18 638 | 9.92 326 | 56 | | | |
| 5 | 9.73 708 | 9.81 390 | 10.18 610 | 9.92 318 | 55 | | | |
| 6 | 9.73 727 | 9.81 418 | 10.18 582 | 9.92 310 | 54 | | | |
| 7 | 9.73 747 | 9.81 445 | 10.18 555 | 9.92 302 | 53 | | | |
| 8 | 9.73 766 | 9.81 473 | 10.18 527 | 9.92 293 | 52 | | | |
| 9 | 9.73 785 | 9.81 500 | 10.18 500 | 9.92 285 | 51 | | | |
| 10 | 9.73 805 | 9.81 528 | 10.18 472 | 9.92 277 | 50 | | | |
| 11 | 9.73 824 | 9.81 556 | 10.18 444 | 9.92 269 | 49 | | | |
| 12 | 9.73 843 | 9.81 583 | 10.18 417 | 9.92 260 | 48 | | | |
| 13 | 9.73 863 | 9.81 611 | 10.18 389 | 9.92 252 | 47 | | | |
| 14 | 9.73 882 | 9.81 638 | 10.18 362 | 9.92 244 | 46 | | | |
| 15 | 9.73 901 | 9.81 666 | 10.18 334 | 9.92 235 | 45 | | | |
| 16 | 9.73 921 | 9.81 693 | 10.18 307 | 9.92 227 | 44 | | | |
| 17 | 9.73 940 | 9.81 721 | 10.18 279 | 9.92 219 | 43 | | | |
| 18 | 9.73 959 | 9.81 748 | 10.18 252 | 9.92 211 | 42 | | | |
| 19 | 9.73 978 | 9.81 776 | 10.18 224 | 9.92 202 | 41 | | | |
| 20 | 9.73 997 | 9.81 803 | 10.18 197 | 9.92 194 | 40 | | | |
| 21 | 9.74 017 | 9.81 831 | 10.18 169 | 9.92 186 | 39 | | | |
| 22 | 9.74 036 | 9.81 858 | 10.18 142 | 9.92 177 | 38 | | | |
| 23 | 9.74 055 | 9.81 886 | 10.18 114 | 9.92 169 | 37 | | | |
| 24 | 9.74 074 | 9.81 913 | 10.18 087 | 9.92 161 | 36 | | | |
| 25 | 9.74 093 | 9.81 941 | 10.18 059 | 9.92 152 | 35 | | | |
| 26 | 9.74 113 | 9.81 968 | 10.18 032 | 9.92 144 | 34 | | | |
| 27 | 9.74 132 | 9.81 996 | 10.18 004 | 9.92 136 | 33 | | | |
| 28 | 9.74 151 | 9.82 023 | 10.17 977 | 9.92 127 | 32 | | | |
| 29 | 9.74 170 | 9.82 051 | 10.17 949 | 9.92 119 | 31 | | | |
| 30 | 9.74 189 | 9.82 078 | 10.17 922 | 9.92 111 | 30 | | | |
| 31 | 9.74 208 | 9.82 106 | 10.17 894 | 9.92 102 | 29 | | | |
| 32 | 9.74 227 | 9.82 133 | 10.17 867 | 9.92 094 | 28 | | | |
| 33 | 9.74 246 | 9.82 161 | 10.17 839 | 9.92 086 | 27 | | | |
| 34 | 9.74 265 | 9.82 188 | 10.17 812 | 9.92 077 | 26 | | | |
| 35 | 9.74 284 | 9.82 215 | 10.17 785 | 9.92 069 | 25 | | | |
| 36 | 9.74 303 | 9.82 243 | 10.17 757 | 9.92 060 | 24 | | | |
| 37 | 9.74 322 | 9.82 270 | 10.17 730 | 9.92 052 | 23 | | | |
| 38 | 9.74 341 | 9.82 298 | 10.17 702 | 9.92 044 | 22 | | | |
| 39 | 9.74 360 | 9.82 325 | 10.17 675 | 9.92 035 | 21 | | | |
| 40 | 9.74 379 | 9.82 352 | 10.17 648 | 9.92 027 | 20 | | | |
| 41 | 9.74 398 | 9.82 380 | 10.17 620 | 9.92 018 | 19 | | | |
| 42 | 9.74 417 | 9.82 407 | 10.17 593 | 9.92 010 | 18 | | | |
| 43 | 9.74 436 | 9.82 435 | 10.17 565 | 9.92 002 | 17 | | | |
| 44 | 9.74 455 | 9.82 462 | 10.17 538 | 9.91 993 | 16 | | | |
| 45 | 9.74 474 | 9.82 489 | 10.17 511 | 9.91 985 | 15 | | | |
| 46 | 9.74 493 | 9.82 517 | 10.17 483 | 9.91 976 | 14 | | | |
| 47 | 9.74 512 | 9.82 544 | 10.17 456 | 9.91 968 | 13 | | | |
| 48 | 9.74 531 | 9.82 571 | 10.17 429 | 9.91 959 | 12 | | | |
| 49 | 9.74 549 | 9.82 599 | 10.17 401 | 9.91 951 | 11 | | | |
| 50 | 9.74 568 | 9.82 626 | 10.17 374 | 9.91 942 | 10 | | | |
| 51 | 9.74 587 | 9.82 653 | 10.17 347 | 9.91 934 | 9 | | | |
| 52 | 9.74 606 | 9.82 681 | 10.17 319 | 9.91 925 | 8 | | | |
| 53 | 9.74 625 | 9.82 708 | 10.17 292 | 9.91 917 | 7 | | | |
| 54 | 9.74 644 | 9.82 735 | 10.17 265 | 9.91 908 | 6 | | | |
| 55 | 9.74 662 | 9.82 762 | 10.17 238 | 9.91 900 | 5 | | | |
| 56 | 9.74 681 | 9.82 790 | 10.17 210 | 9.91 891 | 4 | | | |
| 57 | 9.74 700 | 9.82 817 | 10.17 183 | 9.91 883 | 3 | | | |
| 58 | 9.74 719 | 9.82 844 | 10.17 156 | 9.91 874 | 2 | | | |
| 59 | 9.74 737 | 9.82 871 | 10.17 129 | 9.91 866 | 1 | | | |
| 60 | 9.74 756 | 9.82 899 | 10.17 101 | 9.91 857 | 0 | | | |
| | cos 56° | cot 56° | tang 56° | sin 56° | M | | | |

| | 28 | 27 |
|----|------|------|
| 10 | 4.7 | 4.5 |
| 20 | 9.3 | 9.0 |
| 30 | 14.0 | 13.5 |
| 40 | 18.7 | 18.0 |
| 50 | 23.3 | 22.5 |
| 6 | 2.8 | 2.7 |
| 7 | 3.3 | 3.2 |
| 8 | 3.7 | 3.6 |
| 9 | 4.2 | 4.1 |

| | 20 | 19 | 18 |
|----|------|------|------|
| 10 | 3.3 | 3.2 | 3.0 |
| 20 | 6.7 | 6.3 | 6.0 |
| 30 | 10.0 | 9.5 | 9.0 |
| 40 | 13.3 | 12.7 | 12.0 |
| 50 | 16.7 | 15.8 | 15.0 |
| 6 | 2.0 | 1.9 | 1.8 |
| 7 | 2.3 | 2.2 | 2.1 |
| 8 | 2.7 | 2.5 | 2.4 |
| 9 | 3.0 | 2.9 | 2.7 |

| | 8 | 9 |
|----|-----|-----|
| 10 | 1.3 | 1.5 |
| 20 | 2.7 | 3.0 |
| 30 | 4.0 | 4.5 |
| 40 | 5.3 | 6.0 |
| 50 | 6.7 | 7.5 |
| 6 | 0.8 | 0.9 |
| 7 | 0.9 | 1.1 |
| 8 | 1.1 | 1.2 |
| 9 | 1.2 | 1.4 |

| M | sin 34° | tang 34° | cot 34° | cos 34° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------------------------|
| 0 | 9.74 756 | 9.82 899 | 10.17 101 | 9.91 857 | 60 | |
| 1 | 9.74 775 | 9.82 926 | 10.17 074 | 9.91 849 | 59 | |
| 2 | 9.74 794 | 9.82 953 | 10.17 047 | 9.91 840 | 58 | |
| 3 | 9.74 812 | 9.82 980 | 10.17 020 | 9.91 832 | 57 | |
| 4 | 9.74 831 | 9.83 008 | 10.16 992 | 9.91 823 | 56 | |
| 5 | 9.74 850 | 9.83 035 | 10.16 965 | 9.91 815 | 55 | |
| 6 | 9.74 868 | 9.83 062 | 10.16 938 | 9.91 806 | 54 | |
| 7 | 9.74 887 | 9.83 089 | 10.16 911 | 9.91 798 | 53 | |
| 8 | 9.74 906 | 9.83 117 | 10.16 883 | 9.91 789 | 52 | |
| 9 | 9.74 924 | 9.83 144 | 10.16 856 | 9.91 781 | 51 | |
| 10 | 9.74 943 | 9.83 171 | 10.16 829 | 9.91 772 | 50 | 28 27 26 |
| 11 | 9.74 961 | 9.83 198 | 10.16 802 | 9.91 763 | 49 | 10 4.7 4.5 4.3 |
| 12 | 9.74 980 | 9.83 225 | 10.16 775 | 9.91 755 | 48 | 20 9.3 9.0 8.7 |
| 13 | 9.74 999 | 9.83 252 | 10.16 748 | 9.91 746 | 47 | 30 14.0 13.5 13.0 |
| 14 | 9.75 017 | 9.83 280 | 10.16 720 | 9.91 738 | 46 | 40 18.7 18.0 17.3 |
| 15 | 9.75 036 | 9.83 307 | 10.16 693 | 9.91 729 | 45 | 50 23.3 22.5 21.7 |
| 16 | 9.75 054 | 9.83 334 | 10.16 666 | 9.91 720 | 44 | 6 2.8 2.7 2.6 |
| 17 | 9.75 073 | 9.83 361 | 10.16 639 | 9.91 712 | 43 | 7 3.3 3.2 3.0 |
| 18 | 9.75 091 | 9.83 388 | 10.16 612 | 9.91 703 | 42 | 8 3.7 3.6 3.5 |
| 19 | 9.75 110 | 9.83 415 | 10.16 585 | 9.91 695 | 41 | 9 4.2 4.1 3.9 |
| 20 | 9.75 128 | 9.83 442 | 10.16 558 | 9.91 686 | 40 | |
| 21 | 9.75 147 | 9.83 470 | 10.16 530 | 9.91 677 | 39 | |
| 22 | 9.75 165 | 9.83 497 | 10.16 503 | 9.91 669 | 38 | * |
| 23 | 9.75 184 | 9.83 524 | 10.16 476 | 9.91 660 | 37 | |
| 24 | 9.75 202 | 9.83 551 | 10.16 449 | 9.91 651 | 36 | |
| 25 | 9.75 221 | 9.83 578 | 10.16 422 | 9.91 643 | 35 | |
| 26 | 9.75 239 | 9.83 605 | 10.16 395 | 9.91 634 | 34 | |
| 27 | 9.75 258 | 9.83 632 | 10.16 368 | 9.91 625 | 33 | |
| 28 | 9.75 276 | 9.83 659 | 10.16 341 | 9.91 617 | 32 | |
| 29 | 9.75 294 | 9.83 686 | 10.16 314 | 9.91 608 | 31 | |
| 30 | 9.75 313 | 9.83 713 | 10.16 287 | 9.91 599 | 30 | 19 18 |
| 31 | 9.75 331 | 9.83 740 | 10.16 260 | 9.91 591 | 29 | 10 3.2 3.0 |
| 32 | 9.75 350 | 9.83 768 | 10.16 232 | 9.91 582 | 28 | 20 6.3 6.0 |
| 33 | 9.75 368 | 9.83 795 | 10.16 205 | 9.91 573 | 27 | 30 9.5 9.0 |
| 34 | 9.75 386 | 9.83 822 | 10.16 178 | 9.91 565 | 26 | 40 12.7 12.0 |
| 35 | 9.75 405 | 9.83 849 | 10.16 151 | 9.91 556 | 25 | 50 15.8 15.0 |
| 36 | 9.75 423 | 9.83 876 | 10.16 124 | 9.91 547 | 24 | 6 1.9 1.8 |
| 37 | 9.75 441 | 9.83 903 | 10.16 097 | 9.91 538 | 23 | 7 2.2 2.1 |
| 38 | 9.75 459 | 9.83 930 | 10.16 070 | 9.91 530 | 22 | 8 2.5 2.4 |
| 39 | 9.75 478 | 9.83 957 | 10.16 043 | 9.91 521 | 21 | 9 2.9 2.7 |
| 40 | 9.75 496 | 9.83 984 | 10.16 016 | 9.91 512 | 20 | |
| 41 | 9.75 514 | 9.84 011 | 10.15 989 | 9.91 504 | 19 | |
| 42 | 9.75 533 | 9.84 038 | 10.15 962 | 9.91 495 | 18 | |
| 43 | 9.75 551 | 9.84 065 | 10.15 935 | 9.91 486 | 17 | |
| 44 | 9.75 569 | 9.84 092 | 10.15 908 | 9.91 477 | 16 | 3 9 |
| 45 | 9.75 587 | 9.84 119 | 10.15 881 | 9.91 469 | 15 | 10 1.3 1.5 |
| 46 | 9.75 605 | 9.84 146 | 10.15 854 | 9.91 460 | 14 | 20 2.7 3.0 |
| 47 | 9.75 624 | 9.84 173 | 10.15 827 | 9.91 451 | 13 | 30 4.0 4.5 |
| 48 | 9.75 642 | 9.84 200 | 10.15 800 | 9.91 442 | 12 | 40 5.3 6.0 |
| 49 | 9.75 660 | 9.84 227 | 10.15 773 | 9.91 433 | 11 | 50 6.7 7.5 |
| 50 | 9.75 678 | 9.84 254 | 10.15 746 | 9.91 425 | 10 | 6 0.8 0.9 |
| 51 | 9.75 696 | 9.84 280 | 10.15 720 | 9.91 416 | 9 | 7 0.9 1.1 |
| 52 | 9.75 714 | 9.84 307 | 10.15 693 | 9.91 407 | 8 | 8 1.1 1.2 |
| 53 | 9.75 733 | 9.84 334 | 10.15 666 | 9.91 398 | 7 | 9 1.2 1.4 |
| 54 | 9.75 751 | 9.84 361 | 10.15 639 | 9.91 389 | 6 | |
| 55 | 9.75 769 | 9.84 388 | 10.15 612 | 9.91 381 | 5 | |
| 56 | 9.75 787 | 9.84 415 | 10.15 585 | 9.91 372 | 4 | |
| 57 | 9.75 805 | 9.84 442 | 10.15 558 | 9.91 363 | 3 | |
| 58 | 9.75 823 | 9.84 469 | 10.15 531 | 9.91 354 | 2 | |
| 59 | 9.75 841 | 9.84 496 | 10.15 504 | 9.91 345 | 1 | |
| 60 | 9.75 859 | 9.84 523 | 10.15 477 | 9.91 336 | 0 | |
| | cos 55° | cot 55° | tang 55° | sin 55° | M | |

| M | sin 35° | tang 35° | cot 35° | cos 35° | ' | P. P. | | |
|----|----------|----------|-----------|----------|----|-------|--|--|
| 0 | 9.75 859 | 9.84 523 | 10.15 477 | 9.91 336 | 60 | | | |
| 1 | 9.75 877 | 9.84 550 | 10.15 450 | 9.91 328 | 59 | | | |
| 2 | 9.75 895 | 9.84 576 | 10.15 424 | 9.91 319 | 58 | | | |
| 3 | 9.75 913 | 9.84 603 | 10.15 397 | 9.91 310 | 57 | | | |
| 4 | 9.75 931 | 9.84 630 | 10.15 370 | 9.91 301 | 56 | | | |
| 5 | 9.75 949 | 9.84 657 | 10.15 343 | 9.91 292 | 55 | | | |
| 6 | 9.75 967 | 9.84 684 | 10.15 316 | 9.91 283 | 54 | | | |
| 7 | 9.75 985 | 9.84 711 | 10.15 289 | 9.91 274 | 53 | | | |
| 8 | 9.76 003 | 9.84 738 | 10.15 262 | 9.91 266 | 52 | | | |
| 9 | 9.76 021 | 9.84 764 | 10.15 236 | 9.91 257 | 51 | | | |
| 10 | 9.76 039 | 9.84 791 | 10.15 209 | 9.91 248 | 50 | | | |
| 11 | 9.76 057 | 9.84 818 | 10.15 182 | 9.91 239 | 49 | | | |
| 12 | 9.76 075 | 9.84 845 | 10.15 155 | 9.91 230 | 48 | | | |
| 13 | 9.76 093 | 9.84 872 | 10.15 128 | 9.91 221 | 47 | | | |
| 14 | 9.76 111 | 9.84 899 | 10.15 101 | 9.91 212 | 46 | | | |
| 15 | 9.76 129 | 9.84 925 | 10.15 075 | 9.91 203 | 45 | | | |
| 16 | 9.76 146 | 9.84 952 | 10.15 048 | 9.91 194 | 44 | | | |
| 17 | 9.76 164 | 9.84 979 | 10.15 021 | 9.91 185 | 43 | | | |
| 18 | 9.76 182 | 9.85 006 | 10.14 994 | 9.91 176 | 42 | | | |
| 19 | 9.76 200 | 9.85 033 | 10.14 967 | 9.91 167 | 41 | | | |
| 20 | 9.76 218 | 9.85 059 | 10.14 941 | 9.91 158 | 40 | | | |
| 21 | 9.76 236 | 9.85 086 | 10.14 914 | 9.91 149 | 39 | | | |
| 22 | 9.76 253 | 9.85 113 | 10.14 887 | 9.91 141 | 38 | | | |
| 23 | 9.76 271 | 9.85 140 | 10.14 860 | 9.91 132 | 37 | | | |
| 24 | 9.76 289 | 9.85 166 | 10.14 834 | 9.91 123 | 36 | | | |
| 25 | 9.76 307 | 9.85 193 | 10.14 807 | 9.91 114 | 35 | | | |
| 26 | 9.76 324 | 9.85 220 | 10.14 780 | 9.91 105 | 34 | | | |
| 27 | 9.76 342 | 9.85 247 | 10.14 753 | 9.91 096 | 33 | | | |
| 28 | 9.76 360 | 9.85 273 | 10.14 727 | 9.91 087 | 32 | | | |
| 29 | 9.76 378 | 9.85 300 | 10.14 700 | 9.91 078 | 31 | | | |
| 30 | 9.76 395 | 9.85 327 | 10.14 673 | 9.91 069 | 30 | | | |
| 31 | 9.76 413 | 9.85 354 | 10.14 646 | 9.91 060 | 29 | | | |
| 32 | 9.76 431 | 9.85 380 | 10.14 620 | 9.91 051 | 28 | | | |
| 33 | 9.76 448 | 9.85 407 | 10.14 593 | 9.91 042 | 27 | | | |
| 34 | 9.76 466 | 9.85 434 | 10.14 566 | 9.91 033 | 26 | | | |
| 35 | 9.76 484 | 9.85 460 | 10.14 540 | 9.91 023 | 25 | | | |
| 36 | 9.76 501 | 9.85 487 | 10.14 513 | 9.91 014 | 24 | | | |
| 37 | 9.76 519 | 9.85 514 | 10.14 486 | 9.91 005 | 23 | | | |
| 38 | 9.76 537 | 9.85 540 | 10.14 460 | 9.90 996 | 22 | | | |
| 39 | 9.76 554 | 9.85 567 | 10.14 433 | 9.90 987 | 21 | | | |
| 40 | 9.76 572 | 9.85 594 | 10.14 406 | 9.90 978 | 20 | | | |
| 41 | 9.76 590 | 9.85 620 | 10.14 380 | 9.90 969 | 19 | | | |
| 42 | 9.76 607 | 9.85 647 | 10.14 353 | 9.90 960 | 18 | | | |
| 43 | 9.76 625 | 9.85 674 | 10.14 326 | 9.90 951 | 17 | | | |
| 44 | 9.76 642 | 9.85 700 | 10.14 300 | 9.90 942 | 16 | | | |
| 45 | 9.76 660 | 9.85 727 | 10.14 273 | 9.90 933 | 15 | | | |
| 46 | 9.76 677 | 9.85 754 | 10.14 246 | 9.90 924 | 14 | | | |
| 47 | 9.76 695 | 9.85 780 | 10.14 220 | 9.90 915 | 13 | | | |
| 48 | 9.76 712 | 9.85 807 | 10.14 193 | 9.90 906 | 12 | | | |
| 49 | 9.76 730 | 9.85 834 | 10.14 166 | 9.90 896 | 11 | | | |
| 50 | 9.76 747 | 9.85 860 | 10.14 140 | 9.90 887 | 10 | | | |
| 51 | 9.76 765 | 9.85 887 | 10.14 113 | 9.90 878 | 9 | | | |
| 52 | 9.76 782 | 9.85 913 | 10.14 087 | 9.90 869 | 8 | | | |
| 53 | 9.76 800 | 9.85 940 | 10.14 060 | 9.90 860 | 7 | | | |
| 54 | 9.76 817 | 9.85 967 | 10.14 033 | 9.90 851 | 6 | | | |
| 55 | 9.76 835 | 9.85 993 | 10.14 007 | 9.90 842 | 5 | | | |
| 56 | 9.76 852 | 9.86 020 | 10.13 980 | 9.90 832 | 4 | | | |
| 57 | 9.76 870 | 9.86 046 | 10.13 954 | 9.90 823 | 3 | | | |
| 58 | 9.76 887 | 9.86 073 | 10.13 927 | 9.90 814 | 2 | | | |
| 59 | 9.76 904 | 9.86 100 | 10.13 900 | 9.90 805 | 1 | | | |
| 60 | 9.76 922 | 9.86 126 | 10.13 874 | 9.90 796 | 0 | | | |
| ' | cos 54° | cot 54° | tang 54° | sin 54° | M | | | |

| | 27 | 26 |
|----|------|------|
| 10 | 4.5 | 4.3 |
| 20 | 9.0 | 8.7 |
| 30 | 13.5 | 13.0 |
| 40 | 18.0 | 17.3 |
| 50 | 22.5 | 21.7 |
| 6 | 2.7 | 2.6 |
| 7 | 3.2 | 3.0 |
| 8 | 3.6 | 3.5 |
| 9 | 4.1 | 3.9 |

| | 18 | 17 |
|----|------|------|
| 10 | 3.0 | 2.8 |
| 20 | 6.0 | 5.7 |
| 30 | 9.0 | 8.5 |
| 40 | 12.0 | 11.3 |
| 50 | 15.0 | 14.2 |
| 6 | 1.8 | 1.7 |
| 7 | 2.1 | 2.0 |
| 8 | 2.4 | 2.3 |
| 9 | 2.7 | 2.6 |

| | 8 | 9 | 10 |
|----|-----|-----|-----|
| 10 | 1.3 | 1.5 | 1.7 |
| 20 | 2.7 | 3.0 | 3.3 |
| 30 | 4.0 | 4.5 | 5.0 |
| 40 | 5.3 | 6.0 | 6.7 |
| 50 | 6.7 | 7.5 | 8.3 |
| 6 | 0.8 | 0.9 | 1.0 |
| 7 | 0.9 | 1.1 | 1.2 |
| 8 | 1.1 | 1.2 | 1.3 |
| 9 | 1.2 | 1.4 | 1.5 |

| M | sin 36° | tang 36° | cot 36° | cos 36° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.76 922 | 9.86 126 | 10.13 874 | 9.90 796 | 60 | |
| 1 | 9.76 939 | 9.86 153 | 10.13 847 | 9.90 787 | 59 | |
| 2 | 9.76 957 | 9.86 179 | 10.13 821 | 9.90 777 | 58 | |
| 3 | 9.76 974 | 9.86 206 | 10.13 794 | 9.90 768 | 57 | |
| 4 | 9.76 991 | 9.86 232 | 10.13 768 | 9.90 759 | 56 | |
| 5 | 9.77 009 | 9.86 259 | 10.13 741 | 9.90 750 | 55 | |
| 6 | 9.77 026 | 9.86 285 | 10.13 715 | 9.90 741 | 54 | |
| 7 | 9.77 043 | 9.86 312 | 10.13 688 | 9.90 731 | 53 | |
| 8 | 9.77 061 | 9.86 338 | 10.13 662 | 9.90 722 | 52 | |
| 9 | 9.77 078 | 9.86 365 | 10.13 635 | 9.90 713 | 51 | |
| 10 | 9.77 095 | 9.86 392 | 10.13 608 | 9.90 704 | 50 | |
| 11 | 9.77 112 | 9.86 418 | 10.13 582 | 9.90 694 | 49 | |
| 12 | 9.77 130 | 9.86 445 | 10.13 555 | 9.90 685 | 48 | |
| 13 | 9.77 147 | 9.86 471 | 10.13 529 | 9.90 676 | 47 | |
| 14 | 9.77 164 | 9.86 498 | 10.13 502 | 9.90 667 | 46 | |
| 15 | 9.77 181 | 9.86 524 | 10.13 476 | 9.90 657 | 45 | |
| 16 | 9.77 199 | 9.86 551 | 10.13 449 | 9.90 648 | 44 | |
| 17 | 9.77 216 | 9.86 577 | 10.13 423 | 9.90 639 | 43 | |
| 18 | 9.77 233 | 9.86 603 | 10.13 397 | 9.90 630 | 42 | |
| 19 | 9.77 250 | 9.86 630 | 10.13 370 | 9.90 620 | 41 | |
| 20 | 9.77 268 | 9.86 656 | 10.13 344 | 9.90 611 | 40 | |
| 21 | 9.77 285 | 9.86 683 | 10.13 317 | 9.90 602 | 39 | |
| 22 | 9.77 302 | 9.86 709 | 10.13 291 | 9.90 592 | 38 | |
| 23 | 9.77 319 | 9.86 736 | 10.13 264 | 9.90 583 | 37 | |
| 24 | 9.77 336 | 9.86 762 | 10.13 238 | 9.90 574 | 36 | |
| 25 | 9.77 353 | 9.86 789 | 10.13 211 | 9.90 565 | 35 | |
| 26 | 9.77 370 | 9.86 815 | 10.13 185 | 9.90 555 | 34 | |
| 27 | 9.77 387 | 9.86 842 | 10.13 158 | 9.90 546 | 33 | |
| 28 | 9.77 405 | 9.86 868 | 10.13 132 | 9.90 537 | 32 | |
| 29 | 9.77 422 | 9.86 894 | 10.13 106 | 9.90 527 | 31 | |
| 30 | 9.77 439 | 9.86 921 | 10.13 079 | 9.90 518 | 30 | |
| 31 | 9.77 456 | 9.86 947 | 10.13 053 | 9.90 509 | 29 | |
| 32 | 9.77 473 | 9.86 974 | 10.13 026 | 9.90 499 | 28 | |
| 33 | 9.77 490 | 9.87 000 | 10.13 000 | 9.90 490 | 27 | |
| 34 | 9.77 507 | 9.87 027 | 10.12 973 | 9.90 480 | 26 | |
| 35 | 9.77 524 | 9.87 053 | 10.12 947 | 9.90 471 | 25 | |
| 36 | 9.77 541 | 9.87 079 | 10.12 921 | 9.90 462 | 24 | |
| 37 | 9.77 558 | 9.87 106 | 10.12 894 | 9.90 452 | 23 | |
| 38 | 9.77 575 | 9.87 132 | 10.12 868 | 9.90 443 | 22 | |
| 39 | 9.77 592 | 9.87 158 | 10.12 842 | 9.90 434 | 21 | |
| 40 | 9.77 609 | 9.87 185 | 10.12 815 | 9.90 424 | 20 | |
| 41 | 9.77 626 | 9.87 211 | 10.12 789 | 9.90 415 | 19 | |
| 42 | 9.77 643 | 9.87 238 | 10.12 762 | 9.90 405 | 18 | |
| 43 | 9.77 660 | 9.87 264 | 10.12 736 | 9.90 396 | 17 | |
| 44 | 9.77 677 | 9.87 290 | 10.12 710 | 9.90 386 | 16 | |
| 45 | 9.77 694 | 9.87 317 | 10.12 683 | 9.90 377 | 15 | |
| 46 | 9.77 711 | 9.87 343 | 10.12 657 | 9.90 368 | 14 | |
| 47 | 9.77 728 | 9.87 369 | 10.12 631 | 9.90 358 | 13 | |
| 48 | 9.77 744 | 9.87 396 | 10.12 604 | 9.90 349 | 12 | |
| 49 | 9.77 761 | 9.87 422 | 10.12 578 | 9.90 339 | 11 | |
| 50 | 9.77 778 | 9.87 448 | 10.12 552 | 9.90 330 | 10 | |
| 51 | 9.77 795 | 9.87 475 | 10.12 525 | 9.90 320 | 9 | |
| 52 | 9.77 812 | 9.87 501 | 10.12 499 | 9.90 311 | 8 | |
| 53 | 9.77 829 | 9.87 527 | 10.12 473 | 9.90 301 | 7 | |
| 54 | 9.77 846 | 9.87 554 | 10.12 446 | 9.90 292 | 6 | |
| 55 | 9.77 862 | 9.87 580 | 10.12 420 | 9.90 282 | 5 | |
| 56 | 9.77 879 | 9.87 606 | 10.12 394 | 9.90 273 | 4 | |
| 57 | 9.77 896 | 9.87 633 | 10.12 367 | 9.90 263 | 3 | |
| 58 | 9.77 913 | 9.87 659 | 10.12 341 | 9.90 254 | 2 | |
| 59 | 9.77 930 | 9.87 685 | 10.12 315 | 9.90 244 | 1 | |
| 60 | 9.77 946 | 9.87 711 | 10.12 289 | 9.90 235 | 0 | |
| | cos 53° | cot 53° | tang 53° | sin 53° | M | |

| | 27 | 26 |
|----|------|------|
| 10 | 4.5 | 4.3 |
| 20 | 9.0 | 8.7 |
| 30 | 13.5 | 13.0 |
| 40 | 18.0 | 17.3 |
| 50 | 22.5 | 21.7 |
| 6 | 2.7 | 2.6 |
| 7 | 3.2 | 3.0 |
| 8 | 3.6 | 3.5 |
| 9 | 4.1 | 3.9 |

| | 18 | 17 | 16 |
|----|------|------|------|
| 10 | 3.0 | 2.8 | 2.7 |
| 20 | 6.0 | 5.7 | 5.3 |
| 30 | 9.0 | 8.5 | 8.0 |
| 40 | 12.0 | 11.3 | 10.7 |
| 50 | 15.0 | 14.2 | 13.3 |
| 6 | 1.8 | 1.7 | 1.6 |
| 7 | 2.1 | 2.0 | 1.9 |
| 8 | 2.4 | 2.3 | 2.1 |
| 9 | 2.7 | 2.6 | 2.4 |

| | 9 | 10 |
|----|-----|-----|
| 10 | 1.5 | 1.7 |
| 20 | 3.0 | 3.3 |
| 30 | 4.5 | 5.0 |
| 40 | 6.0 | 6.7 |
| 50 | 7.5 | 8.3 |
| 6 | 0.9 | 1.0 |
| 7 | 1.1 | 1.2 |
| 8 | 1.2 | 1.3 |
| 9 | 1.4 | 1.5 |

| M | sin 37° | tang 37° | cot 37° | cos 37° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.77 946 | 9.87 711 | 10.12 289 | 9.90 235 | 60 | |
| 1 | 9.77 963 | 9.87 738 | 10.12 262 | 9.90 225 | 59 | |
| 2 | 9.77 980 | 9.87 764 | 10.12 236 | 9.90 216 | 58 | |
| 3 | 9.77 997 | 9.87 790 | 10.12 210 | 9.90 206 | 57 | |
| 4 | 9.78 013 | 9.87 817 | 10.12 183 | 9.90 197 | 56 | |
| 5 | 9.78 030 | 9.87 843 | 10.12 157 | 9.90 187 | 55 | |
| 6 | 9.78 047 | 9.87 869 | 10.12 131 | 9.90 178 | 54 | |
| 7 | 9.78 063 | 9.87 895 | 10.12 105 | 9.90 168 | 53 | |
| 8 | 9.78 080 | 9.87 922 | 10.12 078 | 9.90 159 | 52 | |
| 9 | 9.78 097 | 9.87 948 | 10.12 052 | 9.90 149 | 51 | |
| 10 | 9.78 113 | 9.87 974 | 10.12 026 | 9.90 139 | 50 | |
| 11 | 9.78 130 | 9.88 000 | 10.12 000 | 9.90 130 | 49 | |
| 12 | 9.78 147 | 9.88 027 | 10.11 973 | 9.90 120 | 48 | |
| 13 | 9.78 163 | 9.88 053 | 10.11 947 | 9.90 111 | 47 | |
| 14 | 9.78 180 | 9.88 079 | 10.11 921 | 9.90 101 | 46 | |
| 15 | 9.78 197 | 9.88 105 | 10.11 895 | 9.90 091 | 45 | |
| 16 | 9.78 213 | 9.88 131 | 10.11 869 | 9.90 082 | 44 | |
| 17 | 9.78 230 | 9.88 158 | 10.11 842 | 9.90 072 | 43 | |
| 18 | 9.78 246 | 9.88 184 | 10.11 816 | 9.90 063 | 42 | |
| 19 | 9.78 263 | 9.88 210 | 10.11 790 | 9.90 053 | 41 | |
| 20 | 9.78 280 | 9.88 236 | 10.11 764 | 9.90 043 | 40 | |
| 21 | 9.78 296 | 9.88 262 | 10.11 738 | 9.90 034 | 39 | |
| 22 | 9.78 313 | 9.88 289 | 10.11 711 | 9.90 024 | 38 | |
| 23 | 9.78 329 | 9.88 315 | 10.11 685 | 9.90 014 | 37 | |
| 24 | 9.78 346 | 9.88 341 | 10.11 659 | 9.90 005 | 36 | |
| 25 | 9.78 362 | 9.88 367 | 10.11 633 | 9.89 995 | 35 | |
| 26 | 9.78 379 | 9.88 393 | 10.11 607 | 9.89 985 | 34 | |
| 27 | 9.78 395 | 9.88 420 | 10.11 580 | 9.89 976 | 33 | |
| 28 | 9.78 412 | 9.88 446 | 10.11 554 | 9.89 966 | 32 | |
| 29 | 9.78 428 | 9.88 472 | 10.11 528 | 9.89 956 | 31 | |
| 30 | 9.78 445 | 9.88 498 | 10.11 502 | 9.89 947 | 30 | |
| 31 | 9.78 461 | 9.88 524 | 10.11 476 | 9.89 937 | 29 | |
| 32 | 9.78 478 | 9.88 550 | 10.11 450 | 9.89 927 | 28 | |
| 33 | 9.78 494 | 9.88 577 | 10.11 423 | 9.89 918 | 27 | |
| 34 | 9.78 510 | 9.88 603 | 10.11 397 | 9.89 908 | 26 | |
| 35 | 9.78 527 | 9.88 629 | 10.11 371 | 9.89 898 | 25 | |
| 36 | 9.78 543 | 9.88 655 | 10.11 345 | 9.89 888 | 24 | |
| 37 | 9.78 560 | 9.88 681 | 10.11 319 | 9.89 879 | 23 | |
| 38 | 9.78 576 | 9.88 707 | 10.11 293 | 9.89 869 | 22 | |
| 39 | 9.78 592 | 9.88 733 | 10.11 267 | 9.89 859 | 21 | |
| 40 | 9.78 609 | 9.88 759 | 10.11 241 | 9.89 849 | 20 | |
| 41 | 9.78 625 | 9.88 786 | 10.11 214 | 9.89 840 | 19 | |
| 42 | 9.78 642 | 9.88 812 | 10.11 188 | 9.89 830 | 18 | |
| 43 | 9.78 658 | 9.88 838 | 10.11 162 | 9.89 820 | 17 | |
| 44 | 9.78 674 | 9.88 864 | 10.11 136 | 9.89 810 | 16 | |
| 45 | 9.78 691 | 9.88 890 | 10.11 110 | 9.89 801 | 15 | |
| 46 | 9.78 707 | 9.88 916 | 10.11 084 | 9.89 791 | 14 | |
| 47 | 9.78 723 | 9.88 942 | 10.11 058 | 9.89 781 | 13 | |
| 48 | 9.78 739 | 9.88 968 | 10.11 032 | 9.89 771 | 12 | |
| 49 | 9.78 756 | 9.88 994 | 10.11 006 | 9.89 761 | 11 | |
| 50 | 9.78 772 | 9.89 020 | 10.10 980 | 9.89 752 | 10 | |
| 51 | 9.78 788 | 9.89 046 | 10.10 954 | 9.89 742 | 9 | |
| 52 | 9.78 805 | 9.89 073 | 10.10 927 | 9.89 732 | 8 | |
| 53 | 9.78 821 | 9.89 099 | 10.10 901 | 9.89 722 | 7 | |
| 54 | 9.78 837 | 9.89 125 | 10.10 875 | 9.89 712 | 6 | |
| 55 | 9.78 853 | 9.89 151 | 10.10 849 | 9.89 702 | 5 | |
| 56 | 9.78 869 | 9.89 177 | 10.10 823 | 9.89 693 | 4 | |
| 57 | 9.78 886 | 9.89 203 | 10.10 797 | 9.89 683 | 3 | |
| 58 | 9.78 902 | 9.89 229 | 10.10 771 | 9.89 673 | 2 | |
| 59 | 9.78 918 | 9.89 255 | 10.10 745 | 9.89 663 | 1 | |
| 60 | 9.78 934 | 9.89 281 | 10.10 719 | 9.89 653 | 0 | |
| | cos 52° | cot 52° | tang 52° | sin 52° | M | |

| | 27 | 26 |
|----|------|------|
| 10 | 4.5 | 4.3 |
| 20 | 9.0 | 8.7 |
| 30 | 13.5 | 13.0 |
| 40 | 18.0 | 17.3 |
| 50 | 22.5 | 21.7 |
| 6 | 2.7 | 2.6 |
| 7 | 3.2 | 3.0 |
| 8 | 3.6 | 3.5 |
| 9 | 4.1 | 3.9 |

| | 17 | 16 |
|----|------|------|
| 10 | 2.8 | 2.7 |
| 20 | 5.7 | 5.3 |
| 30 | 8.5 | 8.0 |
| 40 | 11.3 | 10.7 |
| 50 | 14.2 | 13.3 |
| 6 | 1.7 | 1.6 |
| 7 | 2.0 | 1.9 |
| 8 | 2.3 | 2.1 |
| 9 | 2.6 | 2.4 |

| M | sin 38° | tang 38° | cot 38° | cos 38° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.78 934 | 9.89 281 | 10.10 719 | 9.89 653 | 60 | |
| 1 | 9.78 950 | 9.89 307 | 10.10 693 | 9.89 643 | 59 | |
| 2 | 9.78 967 | 9.89 333 | 10.10 667 | 9.89 633 | 58 | |
| 3 | 9.78 983 | 9.89 359 | 10.10 641 | 9.89 624 | 57 | |
| 4 | 9.78 999 | 9.89 385 | 10.10 615 | 9.89 614 | 56 | |
| 5 | 9.79 015 | 9.89 411 | 10.10 589 | 9.89 604 | 55 | |
| 6 | 9.79 031 | 9.89 437 | 10.10 563 | 9.89 594 | 54 | |
| 7 | 9.79 047 | 9.89 463 | 10.10 537 | 9.89 584 | 53 | |
| 8 | 9.79 063 | 9.89 489 | 10.10 511 | 9.89 574 | 52 | |
| 9 | 9.79 079 | 9.89 515 | 10.10 485 | 9.89 564 | 51 | |
| 10 | 9.79 095 | 9.89 541 | 10.10 459 | 9.89 554 | 50 | |
| 11 | 9.79 111 | 9.89 567 | 10.10 433 | 9.89 544 | 49 | |
| 12 | 9.79 128 | 9.89 593 | 10.10 407 | 9.89 534 | 48 | |
| 13 | 9.79 144 | 9.89 619 | 10.10 381 | 9.89 524 | 47 | |
| 14 | 9.79 160 | 9.89 645 | 10.10 355 | 9.89 514 | 46 | |
| 15 | 9.79 176 | 9.89 671 | 10.10 329 | 9.89 504 | 45 | |
| 16 | 9.79 192 | 9.89 697 | 10.10 303 | 9.89 495 | 44 | |
| 17 | 9.79 208 | 9.89 723 | 10.10 277 | 9.89 485 | 43 | |
| 18 | 9.79 224 | 9.89 749 | 10.10 251 | 9.89 475 | 42 | |
| 19 | 9.79 240 | 9.89 775 | 10.10 225 | 9.89 465 | 41 | |
| 20 | 9.79 256 | 9.89 801 | 10.10 199 | 9.89 455 | 40 | |
| 21 | 9.79 272 | 9.89 827 | 10.10 173 | 9.89 445 | 39 | |
| 22 | 9.79 288 | 9.89 853 | 10.10 147 | 9.89 435 | 38 | |
| 23 | 9.79 304 | 9.89 879 | 10.10 121 | 9.89 425 | 37 | |
| 24 | 9.79 319 | 9.89 905 | 10.10 095 | 9.89 415 | 36 | |
| 25 | 9.79 335 | 9.89 931 | 10.10 069 | 9.89 405 | 35 | |
| 26 | 9.79 351 | 9.89 957 | 10.10 043 | 9.89 395 | 34 | |
| 27 | 9.79 367 | 9.89 983 | 10.10 017 | 9.89 385 | 33 | |
| 28 | 9.79 383 | 9.90 009 | 10.09 991 | 9.89 375 | 32 | |
| 29 | 9.79 399 | 9.90 035 | 10.09 965 | 9.89 364 | 31 | |
| 30 | 9.79 415 | 9.90 061 | 10.09 939 | 9.89 354 | 30 | |
| 31 | 9.79 431 | 9.90 086 | 10.09 914 | 9.89 344 | 29 | |
| 32 | 9.79 447 | 9.90 112 | 10.09 888 | 9.89 334 | 28 | |
| 33 | 9.79 463 | 9.90 138 | 10.09 862 | 9.89 324 | 27 | |
| 34 | 9.79 478 | 9.90 164 | 10.09 836 | 9.89 314 | 26 | |
| 35 | 9.79 494 | 9.90 190 | 10.09 810 | 9.89 304 | 25 | |
| 36 | 9.79 510 | 9.90 216 | 10.09 784 | 9.89 294 | 24 | |
| 37 | 9.79 526 | 9.90 242 | 10.09 758 | 9.89 284 | 23 | |
| 38 | 9.79 542 | 9.90 268 | 10.09 732 | 9.89 274 | 22 | |
| 39 | 9.79 558 | 9.90 294 | 10.09 706 | 9.89 264 | 21 | |
| 40 | 9.79 573 | 9.90 320 | 10.09 680 | 9.89 254 | 20 | |
| 41 | 9.79 589 | 9.90 346 | 10.09 654 | 9.89 244 | 19 | |
| 42 | 9.79 605 | 9.90 371 | 10.09 629 | 9.89 233 | 18 | |
| 43 | 9.79 621 | 9.90 397 | 10.09 603 | 9.89 223 | 17 | |
| 44 | 9.79 636 | 9.90 423 | 10.09 577 | 9.89 213 | 16 | |
| 45 | 9.79 652 | 9.90 449 | 10.09 551 | 9.89 203 | 15 | |
| 46 | 9.79 668 | 9.90 475 | 10.09 525 | 9.89 193 | 14 | |
| 47 | 9.79 684 | 9.90 501 | 10.09 499 | 9.89 183 | 13 | |
| 48 | 9.79 699 | 9.90 527 | 10.09 473 | 9.89 173 | 12 | |
| 49 | 9.79 715 | 9.90 553 | 10.09 447 | 9.89 162 | 11 | |
| 50 | 9.79 731 | 9.90 578 | 10.09 422 | 9.89 152 | 10 | |
| 51 | 9.79 746 | 9.90 604 | 10.09 396 | 9.89 142 | 9 | |
| 52 | 9.79 762 | 9.90 630 | 10.09 370 | 9.89 132 | 8 | |
| 53 | 9.79 778 | 9.90 656 | 10.09 344 | 9.89 122 | 7 | |
| 54 | 9.79 793 | 9.90 682 | 10.09 318 | 9.89 112 | 6 | |
| 55 | 9.79 809 | 9.90 708 | 10.09 292 | 9.89 101 | 5 | |
| 56 | 9.79 825 | 9.90 734 | 10.09 266 | 9.89 091 | 4 | |
| 57 | 9.79 840 | 9.90 759 | 10.09 241 | 9.89 081 | 3 | |
| 58 | 9.79 856 | 9.90 785 | 10.09 215 | 9.89 071 | 2 | |
| 59 | 9.79 872 | 9.90 811 | 10.09 189 | 9.89 060 | 1 | |
| 60 | 9.79 887 | 9.90 837 | 10.09 163 | 9.89 050 | 0 | |
| | cos 51° | cot 51° | tang 51° | sin 51° | M | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 17 | 16 | 15 |
|----|------|------|------|
| 10 | 2.8 | 2.7 | 2.5 |
| 20 | 5.7 | 5.3 | 5.0 |
| 30 | 8.5 | 8.0 | 7.5 |
| 40 | 11.3 | 10.7 | 10.0 |
| 50 | 14.2 | 13.3 | 12.5 |
| 6 | 1.7 | 1.6 | 1.5 |
| 7 | 2.0 | 1.9 | 1.8 |
| 8 | 2.3 | 2.1 | 2.0 |
| 9 | 2.6 | 2.4 | 2.3 |

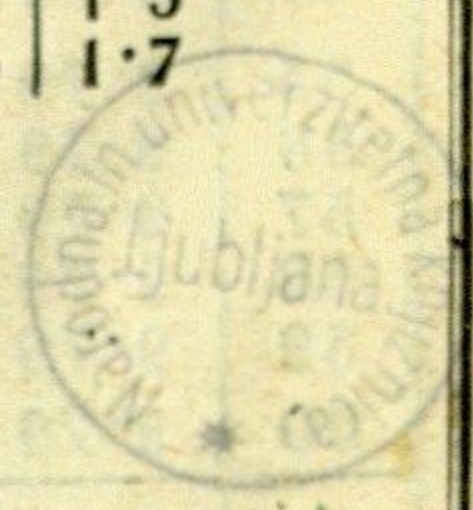
| | 9 | 10 | 11 |
|----|-----|-----|-----|
| 10 | 1.5 | 1.7 | 1.8 |
| 20 | 3.0 | 3.3 | 3.7 |
| 30 | 4.5 | 5.0 | 5.5 |
| 40 | 6.0 | 6.7 | 7.3 |
| 50 | 7.5 | 8.3 | 9.2 |
| 6 | 0.9 | 1.0 | 1.1 |
| 7 | 1.1 | 1.2 | 1.3 |
| 8 | 1.2 | 1.3 | 1.5 |
| 9 | 1.4 | 1.5 | 1.7 |

| M | sin 39° | tang 39° | cot 39° | cos 39° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|--|
| 0 | 9.79 887 | 9.90 837 | 10.09 163 | 9.89 050 | 60 | | |
| 1 | 9.79 903 | 9.90 863 | 10.09 137 | 9.89 040 | 59 | | |
| 2 | 9.79 918 | 9.90 889 | 10.09 111 | 9.89 030 | 58 | | |
| 3 | 9.79 934 | 9.90 914 | 10.09 086 | 9.89 020 | 57 | | |
| 4 | 9.79 950 | 9.90 940 | 10.09 060 | 9.89 009 | 56 | | |
| 5 | 9.79 965 | 9.90 966 | 10.09 034 | 9.88 999 | 55 | | |
| 6 | 9.79 981 | 9.90 992 | 10.09 008 | 9.88 989 | 54 | | |
| 7 | 9.79 996 | 9.91 018 | 10.08 982 | 9.88 978 | 53 | | |
| 8 | 9.80 012 | 9.91 043 | 10.08 957 | 9.88 968 | 52 | | |
| 9 | 9.80 027 | 9.91 069 | 10.08 931 | 9.88 958 | 51 | | |
| 10 | 9.80 043 | 9.91 095 | 10.08 905 | 9.88 948 | 50 | | |
| 11 | 9.80 058 | 9.91 121 | 10.08 879 | 9.88 937 | 49 | | |
| 12 | 9.80 074 | 9.91 147 | 10.08 853 | 9.88 927 | 48 | | |
| 13 | 9.80 089 | 9.91 172 | 10.08 828 | 9.88 917 | 47 | | |
| 14 | 9.80 105 | 9.91 198 | 10.08 802 | 9.88 906 | 46 | | |
| 15 | 9.80 120 | 9.91 224 | 10.08 776 | 9.88 896 | 45 | | |
| 16 | 9.80 136 | 9.91 250 | 10.08 750 | 9.88 886 | 44 | | |
| 17 | 9.80 151 | 9.91 276 | 10.08 724 | 9.88 875 | 43 | | |
| 18 | 9.80 166 | 9.91 301 | 10.08 699 | 9.88 865 | 42 | | |
| 19 | 9.80 182 | 9.91 327 | 10.08 673 | 9.88 855 | 41 | | |
| 20 | 9.80 197 | 9.91 353 | 10.08 647 | 9.88 844 | 40 | | |
| 21 | 9.80 213 | 9.91 379 | 10.08 621 | 9.88 834 | 39 | | |
| 22 | 9.80 228 | 9.91 404 | 10.08 596 | 9.88 824 | 38 | | |
| 23 | 9.80 244 | 9.91 430 | 10.08 570 | 9.88 813 | 37 | | |
| 24 | 9.80 259 | 9.91 456 | 10.08 544 | 9.88 803 | 36 | | |
| 25 | 9.80 274 | 9.91 482 | 10.08 518 | 9.88 793 | 35 | | |
| 26 | 9.80 290 | 9.91 507 | 10.08 493 | 9.88 782 | 34 | | |
| 27 | 9.80 305 | 9.91 533 | 10.08 467 | 9.88 772 | 33 | | |
| 28 | 9.80 320 | 9.91 559 | 10.08 441 | 9.88 761 | 32 | | |
| 29 | 9.80 336 | 9.91 585 | 10.08 415 | 9.88 751 | 31 | | |
| 30 | 9.80 351 | 9.91 610 | 10.08 390 | 9.88 741 | 30 | | |
| 31 | 9.80 366 | 9.91 636 | 10.08 364 | 9.88 730 | 29 | | |
| 32 | 9.80 382 | 9.91 662 | 10.08 338 | 9.88 720 | 28 | | |
| 33 | 9.80 397 | 9.91 688 | 10.08 312 | 9.88 709 | 27 | | |
| 34 | 9.80 412 | 9.91 713 | 10.08 287 | 9.88 699 | 26 | | |
| 35 | 9.80 428 | 9.91 739 | 10.08 261 | 9.88 688 | 25 | | |
| 36 | 9.80 443 | 9.91 765 | 10.08 235 | 9.88 678 | 24 | | |
| 37 | 9.80 458 | 9.91 791 | 10.08 209 | 9.88 668 | 23 | | |
| 38 | 9.80 473 | 9.91 816 | 10.08 184 | 9.88 657 | 22 | | |
| 39 | 9.80 489 | 9.91 842 | 10.08 158 | 9.88 647 | 21 | | |
| 40 | 9.80 504 | 9.91 868 | 10.08 132 | 9.88 636 | 20 | | |
| 41 | 9.80 519 | 9.91 893 | 10.08 107 | 9.88 626 | 19 | | |
| 42 | 9.80 534 | 9.91 919 | 10.08 081 | 9.88 615 | 18 | | |
| 43 | 9.80 550 | 9.91 945 | 10.08 055 | 9.88 605 | 17 | | |
| 44 | 9.80 565 | 9.91 971 | 10.08 029 | 9.88 594 | 16 | | |
| 45 | 9.80 580 | 9.91 996 | 10.08 004 | 9.88 584 | 15 | | |
| 46 | 9.80 595 | 9.92 022 | 10.07 978 | 9.88 573 | 14 | | |
| 47 | 9.80 610 | 9.92 048 | 10.07 952 | 9.88 563 | 13 | | |
| 48 | 9.80 625 | 9.92 073 | 10.07 927 | 9.88 552 | 12 | | |
| 49 | 9.80 641 | 9.92 099 | 10.07 901 | 9.88 542 | 11 | | |
| 50 | 9.80 656 | 9.92 125 | 10.07 875 | 9.88 531 | 10 | | |
| 51 | 9.80 671 | 9.92 150 | 10.07 850 | 9.88 521 | 9 | | |
| 52 | 9.80 686 | 9.92 176 | 10.07 824 | 9.88 510 | 8 | | |
| 53 | 9.80 701 | 9.92 202 | 10.07 798 | 9.88 499 | 7 | | |
| 54 | 9.80 716 | 9.92 227 | 10.07 773 | 9.88 489 | 6 | | |
| 55 | 9.80 731 | 9.92 253 | 10.07 747 | 9.88 478 | 5 | | |
| 56 | 9.80 746 | 9.92 279 | 10.07 721 | 9.88 468 | 4 | | |
| 57 | 9.80 762 | 9.92 304 | 10.07 696 | 9.88 457 | 3 | | |
| 58 | 9.80 777 | 9.92 330 | 10.07 670 | 9.88 447 | 2 | | |
| 59 | 9.80 792 | 9.92 356 | 10.07 644 | 9.88 436 | 1 | | |
| 60 | 9.80 807 | 9.92 381 | 10.07 619 | 9.88 425 | 0 | | |
| | cos 50° | cot 50° | tang 50° | sin 50° | M | | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 16 | 15 |
|----|------|------|
| 10 | 2.7 | 2.5 |
| 20 | 5.3 | 5.0 |
| 30 | 8.0 | 7.5 |
| 40 | 10.7 | 10.0 |
| 50 | 13.3 | 12.5 |
| 6 | 1.6 | 1.5 |
| 7 | 1.9 | 1.8 |
| 8 | 2.1 | 2.0 |
| 9 | 2.4 | 2.3 |

| | 10 | 11 |
|----|-----|-----|
| 10 | 1.7 | 1.8 |
| 20 | 3.3 | 3.7 |
| 30 | 5.0 | 5.5 |
| 40 | 6.7 | 7.3 |
| 50 | 8.3 | 9.2 |
| 6 | 1.0 | 1.1 |
| 7 | 1.2 | 1.3 |
| 8 | 1.3 | 1.5 |
| 9 | 1.5 | 1.7 |



| M | sin 40° | tang 40° | cot 40° | cos 40° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.80 807 | 9.92 381 | 10.07 619 | 9.88 425 | 60 | |
| 1 | 9.80 822 | 9.92 407 | 10.07 593 | 9.88 415 | 59 | |
| 2 | 9.80 837 | 9.92 433 | 10.07 567 | 9.88 404 | 58 | |
| 3 | 9.80 852 | 9.92 458 | 10.07 542 | 9.88 394 | 57 | |
| 4 | 9.80 867 | 9.92 484 | 10.07 516 | 9.88 383 | 56 | |
| 5 | 9.80 882 | 9.92 510 | 10.07 490 | 9.88 372 | 55 | |
| 6 | 9.80 897 | 9.92 535 | 10.07 465 | 9.88 362 | 54 | |
| 7 | 9.80 912 | 9.92 561 | 10.07 439 | 9.88 351 | 53 | |
| 8 | 9.80 927 | 9.92 587 | 10.07 413 | 9.88 340 | 52 | |
| 9 | 9.80 942 | 9.92 612 | 10.07 388 | 9.88 330 | 51 | |
| 10 | 9.80 957 | 9.92 638 | 10.07 362 | 9.88 319 | 50 | |
| 11 | 9.80 972 | 9.92 663 | 10.07 337 | 9.88 308 | 49 | |
| 12 | 9.80 987 | 9.92 689 | 10.07 311 | 9.88 298 | 48 | |
| 13 | 9.81 002 | 9.92 715 | 10.07 285 | 9.88 287 | 47 | |
| 14 | 9.81 017 | 9.92 740 | 10.07 260 | 9.88 276 | 46 | |
| 15 | 9.81 032 | 9.92 766 | 10.07 234 | 9.88 266 | 45 | |
| 16 | 9.81 047 | 9.92 792 | 10.07 208 | 9.88 255 | 44 | |
| 17 | 9.81 061 | 9.92 817 | 10.07 183 | 9.88 244 | 43 | |
| 18 | 9.81 076 | 9.92 843 | 10.07 157 | 9.88 234 | 42 | |
| 19 | 9.81 091 | 9.92 868 | 10.07 132 | 9.88 223 | 41 | |
| 20 | 9.81 106 | 9.92 894 | 10.07 106 | 9.88 212 | 40 | |
| 21 | 9.81 121 | 9.92 920 | 10.07 080 | 9.88 201 | 39 | |
| 22 | 9.81 136 | 9.92 945 | 10.07 055 | 9.88 191 | 38 | |
| 23 | 9.81 151 | 9.92 971 | 10.07 029 | 9.88 180 | 37 | |
| 24 | 9.81 166 | 9.92 996 | 10.07 004 | 9.88 169 | 36 | |
| 25 | 9.81 180 | 9.93 022 | 10.06 978 | 9.88 158 | 35 | |
| 26 | 9.81 195 | 9.93 048 | 10.06 952 | 9.88 148 | 34 | |
| 27 | 9.81 210 | 9.93 073 | 10.06 927 | 9.88 137 | 33 | |
| 28 | 9.81 225 | 9.93 099 | 10.06 901 | 9.88 126 | 32 | |
| 29 | 9.81 240 | 9.93 124 | 10.06 876 | 9.88 115 | 31 | |
| 30 | 9.81 254 | 9.93 150 | 10.06 850 | 9.88 105 | 30 | |
| 31 | 9.81 269 | 9.93 175 | 10.06 825 | 9.88 094 | 29 | |
| 32 | 9.81 284 | 9.93 201 | 10.06 799 | 9.88 083 | 28 | |
| 33 | 9.81 299 | 9.93 227 | 10.06 773 | 9.88 072 | 27 | |
| 34 | 9.81 314 | 9.93 252 | 10.06 748 | 9.88 061 | 26 | |
| 35 | 9.81 328 | 9.93 278 | 10.06 722 | 9.88 051 | 25 | |
| 36 | 9.81 343 | 9.93 303 | 10.06 697 | 9.88 040 | 24 | |
| 37 | 9.81 358 | 9.93 329 | 10.06 671 | 9.88 029 | 23 | |
| 38 | 9.81 372 | 9.93 354 | 10.06 646 | 9.88 018 | 22 | |
| 39 | 9.81 387 | 9.93 380 | 10.06 620 | 9.88 007 | 21 | |
| 40 | 9.81 402 | 9.93 406 | 10.06 594 | 9.87 996 | 20 | |
| 41 | 9.81 417 | 9.93 431 | 10.06 569 | 9.87 985 | 19 | |
| 42 | 9.81 431 | 9.93 457 | 10.06 543 | 9.87 975 | 18 | |
| 43 | 9.81 446 | 9.93 482 | 10.06 518 | 9.87 964 | 17 | |
| 44 | 9.81 461 | 9.93 508 | 10.06 492 | 9.87 953 | 16 | |
| 45 | 9.81 475 | 9.93 533 | 10.06 467 | 9.87 942 | 15 | |
| 46 | 9.81 490 | 9.93 559 | 10.06 441 | 9.87 931 | 14 | |
| 47 | 9.81 505 | 9.93 584 | 10.06 416 | 9.87 920 | 13 | |
| 48 | 9.81 519 | 9.93 610 | 10.06 390 | 9.87 909 | 12 | |
| 49 | 9.81 534 | 9.93 636 | 10.06 364 | 9.87 898 | 11 | |
| 50 | 9.81 549 | 9.93 661 | 10.06 339 | 9.87 887 | 10 | |
| 51 | 9.81 563 | 9.93 687 | 10.06 313 | 9.87 877 | 9 | |
| 52 | 9.81 578 | 9.93 712 | 10.06 288 | 9.87 866 | 8 | |
| 53 | 9.81 592 | 9.93 738 | 10.06 262 | 9.87 855 | 7 | |
| 54 | 9.81 607 | 9.93 763 | 10.06 237 | 9.87 844 | 6 | |
| 55 | 9.81 622 | 9.93 789 | 10.06 211 | 9.87 833 | 5 | |
| 56 | 9.81 636 | 9.93 814 | 10.06 186 | 9.87 822 | 4 | |
| 57 | 9.81 651 | 9.93 840 | 10.06 160 | 9.87 811 | 3 | |
| 58 | 9.81 665 | 9.93 865 | 10.06 135 | 9.87 800 | 2 | |
| 59 | 9.81 680 | 9.93 891 | 10.06 109 | 9.87 789 | 1 | |
| 60 | 9.81 694 | 9.93 916 | 10.06 084 | 9.87 778 | 0 | |
| ' | cos 49° | cot 49° | tang 49° | sin 49° | M | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 15 | 14 |
|----|------|------|
| 10 | 2.5 | 2.3 |
| 20 | 5.0 | 4.7 |
| 30 | 7.5 | 7.0 |
| 40 | 10.0 | 9.3 |
| 50 | 12.5 | 11.7 |
| 6 | 1.5 | 1.4 |
| 7 | 1.8 | 1.6 |
| 8 | 2.0 | 1.9 |
| 9 | 2.3 | 2.1 |

| | 10 | 11 |
|----|-----|-----|
| 10 | 1.7 | 1.8 |
| 20 | 3.3 | 3.7 |
| 30 | 5.0 | 5.5 |
| 40 | 6.7 | 7.3 |
| 50 | 8.3 | 9.2 |
| 6 | 1.0 | 1.1 |
| 7 | 1.2 | 1.3 |
| 8 | 1.3 | 1.5 |
| 9 | 1.5 | 1.7 |

| M | sin 41° | tang 41° | cot 41° | cos 41° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|--|
| 0 | 9.81 694 | 9.93 916 | 10.06 084 | 9.87 778 | 60 | | |
| 1 | 9.81 709 | 9.93 942 | 10.06 058 | 9.87 767 | 59 | | |
| 2 | 9.81 723 | 9.93 967 | 10.06 033 | 9.87 756 | 58 | | |
| 3 | 9.81 738 | 9.93 993 | 10.06 007 | 9.87 745 | 57 | | |
| 4 | 9.81 752 | 9.94 018 | 10.05 982 | 9.87 734 | 56 | | |
| 5 | 9.81 767 | 9.94 044 | 10.05 956 | 9.87 723 | 55 | | |
| 6 | 9.81 781 | 9.94 069 | 10.05 931 | 9.87 712 | 54 | | |
| 7 | 9.81 796 | 9.94 095 | 10.05 905 | 9.87 701 | 53 | | |
| 8 | 9.81 810 | 9.94 120 | 10.05 880 | 9.87 690 | 52 | | |
| 9 | 9.81 825 | 9.94 146 | 10.05 854 | 9.87 679 | 51 | | |
| 10 | 9.81 839 | 9.94 171 | 10.05 829 | 9.87 668 | 50 | | |
| 11 | 9.81 854 | 9.94 197 | 10.05 803 | 9.87 657 | 49 | | |
| 12 | 9.81 868 | 9.94 222 | 10.05 778 | 9.87 646 | 48 | | |
| 13 | 9.81 882 | 9.94 248 | 10.05 752 | 9.87 635 | 47 | | |
| 14 | 9.81 897 | 9.94 273 | 10.05 727 | 9.87 624 | 46 | | |
| 15 | 9.81 911 | 9.94 299 | 10.05 701 | 9.87 613 | 45 | | |
| 16 | 9.81 926 | 9.94 324 | 10.05 676 | 9.87 601 | 44 | | |
| 17 | 9.81 940 | 9.94 350 | 10.05 650 | 9.87 590 | 43 | | |
| 18 | 9.81 955 | 9.94 375 | 10.05 625 | 9.87 579 | 42 | | |
| 19 | 9.81 969 | 9.94 401 | 10.05 599 | 9.87 568 | 41 | | |
| 20 | 9.81 983 | 9.94 426 | 10.05 574 | 9.87 557 | 40 | | |
| 21 | 9.81 998 | 9.94 452 | 10.05 548 | 9.87 546 | 39 | | |
| 22 | 9.82 012 | 9.94 477 | 10.05 523 | 9.87 535 | 38 | | |
| 23 | 9.82 026 | 9.94 503 | 10.05 497 | 9.87 524 | 37 | | |
| 24 | 9.82 041 | 9.94 528 | 10.05 472 | 9.87 513 | 36 | | |
| 25 | 9.82 055 | 9.94 554 | 10.05 446 | 9.87 501 | 35 | | |
| 26 | 9.82 069 | 9.94 579 | 10.05 421 | 9.87 490 | 34 | | |
| 27 | 9.82 084 | 9.94 604 | 10.05 396 | 9.87 479 | 33 | | |
| 28 | 9.82 098 | 9.94 630 | 10.05 370 | 9.87 468 | 32 | | |
| 29 | 9.82 112 | 9.94 655 | 10.05 345 | 9.87 457 | 31 | | |
| 30 | 9.82 126 | 9.94 681 | 10.05 319 | 9.87 446 | 30 | | |
| 31 | 9.82 141 | 9.94 706 | 10.05 294 | 9.87 434 | 29 | | |
| 32 | 9.82 155 | 9.94 732 | 10.05 268 | 9.87 423 | 28 | | |
| 33 | 9.82 169 | 9.94 757 | 10.05 243 | 9.87 412 | 27 | | |
| 34 | 9.82 184 | 9.94 783 | 10.05 217 | 9.87 401 | 26 | | |
| 35 | 9.82 198 | 9.94 808 | 10.05 192 | 9.87 390 | 25 | | |
| 36 | 9.82 212 | 9.94 834 | 10.05 166 | 9.87 378 | 24 | | |
| 37 | 9.82 226 | 9.94 859 | 10.05 141 | 9.87 367 | 23 | | |
| 38 | 9.82 240 | 9.94 884 | 10.05 116 | 9.87 356 | 22 | | |
| 39 | 9.82 255 | 9.94 910 | 10.05 090 | 9.87 345 | 21 | | |
| 40 | 9.82 269 | 9.94 935 | 10.05 065 | 9.87 334 | 20 | | |
| 41 | 9.82 283 | 9.94 961 | 10.05 039 | 9.87 322 | 19 | | |
| 42 | 9.82 297 | 9.94 986 | 10.05 014 | 9.87 311 | 18 | | |
| 43 | 9.82 311 | 9.95 012 | 10.04 988 | 9.87 300 | 17 | | |
| 44 | 9.82 326 | 9.95 037 | 10.04 963 | 9.87 288 | 16 | | |
| 45 | 9.82 340 | 9.95 062 | 10.04 938 | 9.87 277 | 15 | | |
| 46 | 9.82 354 | 9.95 088 | 10.04 912 | 9.87 266 | 14 | | |
| 47 | 9.82 368 | 9.95 113 | 10.04 887 | 9.87 255 | 13 | | |
| 48 | 9.82 382 | 9.95 139 | 10.04 861 | 9.87 243 | 12 | | |
| 49 | 9.82 396 | 9.95 164 | 10.04 836 | 9.87 232 | 11 | | |
| 50 | 9.82 410 | 9.95 190 | 10.04 810 | 9.87 221 | 10 | | |
| 51 | 9.82 424 | 9.95 215 | 10.04 785 | 9.87 209 | 9 | | |
| 52 | 9.82 439 | 9.95 240 | 10.04 760 | 9.87 198 | 8 | | |
| 53 | 9.82 453 | 9.95 266 | 10.04 734 | 9.87 187 | 7 | | |
| 54 | 9.82 467 | 9.95 291 | 10.04 709 | 9.87 175 | 6 | | |
| 55 | 9.82 481 | 9.95 317 | 10.04 683 | 9.87 164 | 5 | | |
| 56 | 9.82 495 | 9.95 342 | 10.04 658 | 9.87 153 | 4 | | |
| 57 | 9.82 509 | 9.95 368 | 10.04 632 | 9.87 141 | 3 | | |
| 58 | 9.82 523 | 9.95 393 | 10.04 607 | 9.87 130 | 2 | | |
| 59 | 9.82 537 | 9.95 418 | 10.04 582 | 9.87 119 | 1 | | |
| 60 | 9.82 551 | 9.95 444 | 10.04 556 | 9.87 107 | 0 | | |
| | cos 48° | cot 48° | tang 48° | sin 48° | M | | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 15 | 14 |
|----|------|------|
| 10 | 2.5 | 2.3 |
| 20 | 5.0 | 4.7 |
| 30 | 7.5 | 7.0 |
| 40 | 10.0 | 9.3 |
| 50 | 12.5 | 11.7 |
| 6 | 1.5 | 1.4 |
| 7 | 1.8 | 1.6 |
| 8 | 2.0 | 1.9 |
| 9 | 2.3 | 2.1 |

| | 11 | 12 |
|----|-----|------|
| 10 | 1.8 | 2.0 |
| 20 | 3.7 | 4.0 |
| 30 | 5.5 | 6.0 |
| 40 | 7.3 | 8.0 |
| 50 | 9.2 | 10.0 |
| 6 | 1.1 | 1.2 |
| 7 | 1.3 | 1.4 |
| 8 | 1.5 | 1.6 |
| 9 | 1.7 | 1.8 |

| M | sin 42° | tang 42° | cot 42° | cos 42° | ' | P. P. |
|----|----------|----------|-----------|----------|----|-------|
| 0 | 9.82 551 | 9.95 444 | 10.04 556 | 9.87 107 | 60 | |
| 1 | 9.82 565 | 9.95 469 | 10.04 531 | 9.87 096 | 59 | |
| 2 | 9.82 579 | 9.95 495 | 10.04 505 | 9.87 085 | 58 | |
| 3 | 9.82 593 | 9.95 520 | 10.04 480 | 9.87 073 | 57 | |
| 4 | 9.82 607 | 9.95 545 | 10.04 455 | 9.87 062 | 56 | |
| 5 | 9.82 621 | 9.95 571 | 10.04 429 | 9.87 050 | 55 | |
| 6 | 9.82 635 | 9.95 596 | 10.04 404 | 9.87 039 | 54 | |
| 7 | 9.82 649 | 9.95 622 | 10.04 378 | 9.87 028 | 53 | |
| 8 | 9.82 663 | 9.95 647 | 10.04 353 | 9.87 016 | 52 | |
| 9 | 9.82 677 | 9.95 672 | 10.04 328 | 9.87 005 | 51 | |
| 10 | 9.82 691 | 9.95 698 | 10.04 302 | 9.86 993 | 50 | |
| 11 | 9.82 705 | 9.95 723 | 10.04 277 | 9.86 982 | 49 | |
| 12 | 9.82 719 | 9.95 748 | 10.04 252 | 9.86 970 | 48 | |
| 13 | 9.82 733 | 9.95 774 | 10.04 226 | 9.86 959 | 47 | |
| 14 | 9.82 747 | 9.95 799 | 10.04 201 | 9.86 947 | 46 | |
| 15 | 9.82 761 | 9.95 825 | 10.04 175 | 9.86 936 | 45 | |
| 16 | 9.82 775 | 9.95 850 | 10.04 150 | 9.86 924 | 44 | |
| 17 | 9.82 788 | 9.95 875 | 10.04 125 | 9.86 913 | 43 | |
| 18 | 9.82 802 | 9.95 901 | 10.04 099 | 9.86 902 | 42 | |
| 19 | 9.82 816 | 9.95 926 | 10.04 074 | 9.85 890 | 41 | |
| 20 | 9.82 830 | 9.95 952 | 10.04 048 | 9.86 879 | 40 | |
| 21 | 9.82 844 | 9.95 977 | 10.04 023 | 9.86 867 | 39 | |
| 22 | 9.82 858 | 9.96 002 | 10.03 998 | 9.86 855 | 38 | |
| 23 | 9.82 872 | 9.96 028 | 10.03 972 | 9.86 844 | 37 | |
| 24 | 9.82 885 | 9.96 053 | 10.03 947 | 9.86 832 | 36 | |
| 25 | 9.82 899 | 9.96 078 | 10.03 922 | 9.86 821 | 35 | |
| 26 | 9.82 913 | 9.96 104 | 10.03 896 | 9.86 809 | 34 | |
| 27 | 9.82 927 | 9.96 129 | 10.03 871 | 9.86 798 | 33 | |
| 28 | 9.82 941 | 9.96 155 | 10.03 845 | 9.86 786 | 32 | |
| 29 | 9.82 955 | 9.96 180 | 10.03 820 | 9.86 775 | 31 | |
| 30 | 9.82 968 | 9.96 205 | 10.03 795 | 9.86 763 | 30 | |
| 31 | 9.82 982 | 9.96 231 | 10.03 769 | 9.86 752 | 29 | |
| 32 | 9.82 996 | 9.96 256 | 10.03 744 | 9.86 740 | 28 | |
| 33 | 9.83 010 | 9.96 281 | 10.03 719 | 9.86 728 | 27 | |
| 34 | 9.83 023 | 9.96 307 | 10.03 693 | 9.86 717 | 26 | |
| 35 | 9.83 037 | 9.96 332 | 10.03 668 | 9.86 705 | 25 | |
| 36 | 9.83 051 | 9.96 357 | 10.03 643 | 9.86 694 | 24 | |
| 37 | 9.83 065 | 9.96 383 | 10.03 617 | 9.86 682 | 23 | |
| 38 | 9.83 078 | 9.96 408 | 10.03 592 | 9.86 670 | 22 | |
| 39 | 9.83 092 | 9.96 433 | 10.03 567 | 9.86 659 | 21 | |
| 40 | 9.83 106 | 9.96 459 | 10.03 541 | 9.86 647 | 20 | |
| 41 | 9.83 120 | 9.96 484 | 10.03 516 | 9.86 635 | 19 | |
| 42 | 9.83 133 | 9.96 510 | 10.03 490 | 9.86 624 | 18 | |
| 43 | 9.83 147 | 9.96 535 | 10.03 465 | 9.86 612 | 17 | |
| 44 | 9.83 161 | 9.96 560 | 10.03 440 | 9.86 600 | 16 | |
| 45 | 9.83 174 | 9.96 586 | 10.03 414 | 9.86 589 | 15 | |
| 46 | 9.83 188 | 9.96 611 | 10.03 389 | 9.86 577 | 14 | |
| 47 | 9.83 202 | 9.96 636 | 10.03 364 | 9.86 565 | 13 | |
| 48 | 9.83 215 | 9.96 662 | 10.03 338 | 9.86 554 | 12 | |
| 49 | 9.83 229 | 9.96 687 | 10.03 313 | 9.86 542 | 11 | |
| 50 | 9.83 242 | 9.96 712 | 10.03 288 | 9.86 530 | 10 | |
| 51 | 9.83 256 | 9.96 738 | 10.03 262 | 9.86 518 | 9 | |
| 52 | 9.83 270 | 9.96 763 | 10.03 237 | 9.86 507 | 8 | |
| 53 | 9.83 283 | 9.96 788 | 10.03 212 | 9.86 495 | 7 | |
| 54 | 9.83 297 | 9.96 814 | 10.03 186 | 9.86 483 | 6 | |
| 55 | 9.83 310 | 9.96 839 | 10.03 161 | 9.86 472 | 5 | |
| 56 | 9.83 324 | 9.96 864 | 10.03 136 | 9.86 460 | 4 | |
| 57 | 9.83 338 | 9.96 890 | 10.03 110 | 9.86 448 | 3 | |
| 58 | 9.83 351 | 9.96 915 | 10.03 085 | 9.86 436 | 2 | |
| 59 | 9.83 365 | 9.96 940 | 10.03 060 | 9.86 425 | 1 | |
| 60 | 9.83 378 | 9.96 966 | 10.03 034 | 9.86 413 | 0 | |
| | cos 47° | cot 47° | tang 47° | sin 47° | M | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 14 | 13 |
|----|------|------|
| 10 | 2.3 | 2.2 |
| 20 | 4.7 | 4.3 |
| 30 | 7.0 | 6.5 |
| 40 | 9.3 | 8.7 |
| 50 | 11.7 | 10.8 |
| 6 | 1.4 | 1.3 |
| 7 | 1.6 | 1.5 |
| 8 | 1.9 | 1.7 |
| 9 | 2.1 | 2.0 |

| | 12 | 11 |
|----|------|-----|
| 10 | 2.0 | 1.8 |
| 20 | 4.0 | 3.7 |
| 30 | 6.0 | 5.5 |
| 40 | 8.0 | 7.3 |
| 50 | 10.0 | 9.2 |
| 6 | 1.2 | 1.1 |
| 7 | 1.4 | 1.3 |
| 8 | 1.6 | 1.5 |
| 9 | 1.8 | 1.7 |

| M | sin 43° | tang 43° | cot 43° | cos 43° | ' | P. P. | |
|----|----------|----------|-----------|----------|----|-------|--|
| 0 | 9.83 378 | 9.96 966 | 10.03 034 | 9.86 413 | 60 | | |
| 1 | 9.83 392 | 9.96 991 | 10.03 009 | 9.86 401 | 59 | | |
| 2 | 9.83 405 | 9.97 016 | 10.02 984 | 9.86 389 | 58 | | |
| 3 | 9.83 419 | 9.97 042 | 10.02 958 | 9.86 377 | 57 | | |
| 4 | 9.83 432 | 9.97 067 | 10.02 933 | 9.86 366 | 56 | | |
| 5 | 9.83 446 | 9.97 092 | 10.02 908 | 9.86 354 | 55 | | |
| 6 | 9.83 459 | 9.97 118 | 10.02 882 | 9.86 342 | 54 | | |
| 7 | 9.83 473 | 9.97 143 | 10.02 857 | 9.86 330 | 53 | | |
| 8 | 9.83 486 | 9.97 168 | 10.02 832 | 9.86 318 | 52 | | |
| 9 | 9.83 500 | 9.97 193 | 10.02 807 | 9.86 306 | 51 | | |
| 10 | 9.83 513 | 9.97 219 | 10.02 781 | 9.86 295 | 50 | | |
| 11 | 9.83 527 | 9.97 244 | 10.02 756 | 9.86 283 | 49 | | |
| 12 | 9.83 540 | 9.97 269 | 10.02 731 | 9.86 271 | 48 | | |
| 13 | 9.83 554 | 9.97 295 | 10.02 705 | 9.86 259 | 47 | | |
| 14 | 9.83 567 | 9.97 320 | 10.02 680 | 9.86 247 | 46 | | |
| 15 | 9.83 581 | 9.97 345 | 10.02 655 | 9.86 235 | 45 | | |
| 16 | 9.83 594 | 9.97 371 | 10.02 629 | 9.86 223 | 44 | | |
| 17 | 9.83 608 | 9.97 396 | 10.02 604 | 9.86 211 | 43 | | |
| 18 | 9.83 621 | 9.97 421 | 10.02 579 | 9.86 200 | 42 | | |
| 19 | 9.83 634 | 9.97 447 | 10.02 553 | 9.86 188 | 41 | | |
| 20 | 9.83 648 | 9.97 472 | 10.02 528 | 9.86 176 | 40 | | |
| 21 | 9.83 661 | 9.97 497 | 10.02 503 | 9.86 164 | 39 | | |
| 22 | 9.83 674 | 9.97 523 | 10.02 477 | 9.86 152 | 38 | | |
| 23 | 9.83 688 | 9.97 548 | 10.02 452 | 9.86 140 | 37 | | |
| 24 | 9.83 701 | 9.97 573 | 10.02 427 | 9.86 128 | 36 | | |
| 25 | 9.83 715 | 9.97 598 | 10.02 402 | 9.86 116 | 35 | | |
| 26 | 9.83 728 | 9.97 624 | 10.02 376 | 9.86 104 | 34 | | |
| 27 | 9.83 741 | 9.97 649 | 10.02 351 | 9.86 092 | 33 | | |
| 28 | 9.83 755 | 9.97 674 | 10.02 326 | 9.86 080 | 32 | | |
| 29 | 9.83 768 | 9.97 700 | 10.02 300 | 9.86 068 | 31 | | |
| 30 | 9.83 781 | 9.97 725 | 10.02 275 | 9.86 056 | 30 | | |
| 31 | 9.83 795 | 9.97 750 | 10.02 250 | 9.86 044 | 29 | | |
| 32 | 9.83 808 | 9.97 776 | 10.02 224 | 9.86 032 | 28 | | |
| 33 | 9.83 821 | 9.97 801 | 10.02 199 | 9.86 020 | 27 | | |
| 34 | 9.83 834 | 9.97 826 | 10.02 174 | 9.86 008 | 26 | | |
| 35 | 9.83 848 | 9.97 851 | 10.02 149 | 9.85 996 | 25 | | |
| 36 | 9.83 861 | 9.97 877 | 10.02 123 | 9.85 984 | 24 | | |
| 37 | 9.83 874 | 9.97 902 | 10.02 098 | 9.85 972 | 23 | | |
| 38 | 9.83 887 | 9.97 927 | 10.02 073 | 9.85 960 | 22 | | |
| 39 | 9.83 901 | 9.97 953 | 10.02 047 | 9.85 948 | 21 | | |
| 40 | 9.83 914 | 9.97 978 | 10.02 022 | 9.85 936 | 20 | | |
| 41 | 9.83 927 | 9.98 003 | 10.01 997 | 9.85 924 | 19 | | |
| 42 | 9.83 940 | 9.98 029 | 10.01 971 | 9.85 912 | 18 | | |
| 43 | 9.83 954 | 9.98 054 | 10.01 946 | 9.85 900 | 17 | | |
| 44 | 9.83 967 | 9.98 079 | 10.01 921 | 9.85 888 | 16 | | |
| 45 | 9.83 980 | 9.98 104 | 10.01 896 | 9.85 876 | 15 | | |
| 46 | 9.83 993 | 9.98 130 | 10.01 870 | 9.85 864 | 14 | | |
| 47 | 9.84 006 | 9.98 155 | 10.01 845 | 9.85 851 | 13 | | |
| 48 | 9.84 020 | 9.98 180 | 10.01 820 | 9.85 839 | 12 | | |
| 49 | 9.84 033 | 9.98 206 | 10.01 794 | 9.85 827 | 11 | | |
| 50 | 9.84 046 | 9.98 231 | 10.01 769 | 9.85 815 | 10 | | |
| 51 | 9.84 059 | 9.98 256 | 10.01 744 | 9.85 803 | 9 | | |
| 52 | 9.84 072 | 9.98 281 | 10.01 719 | 9.85 791 | 8 | | |
| 53 | 9.84 085 | 9.98 307 | 10.01 693 | 9.85 779 | 7 | | |
| 54 | 9.84 098 | 9.98 332 | 10.01 668 | 9.85 766 | 6 | | |
| 55 | 9.84 112 | 9.98 357 | 10.01 643 | 9.85 754 | 5 | | |
| 56 | 9.84 125 | 9.98 383 | 10.01 617 | 9.85 742 | 4 | | |
| 57 | 9.84 138 | 9.98 408 | 10.01 592 | 9.85 730 | 3 | | |
| 58 | 9.84 151 | 9.98 433 | 10.01 567 | 9.85 718 | 2 | | |
| 59 | 9.84 164 | 9.98 458 | 10.01 542 | 9.85 706 | 1 | | |
| 60 | 9.84 177 | 9.98 484 | 10.01 516 | 9.85 693 | 0 | | |
| | cos 46° | cot 46° | tang 46° | sin 46° | M | | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 14 | 13 |
|----|------|------|
| 10 | 2.3 | 2.2 |
| 20 | 4.7 | 4.3 |
| 30 | 7.0 | 6.5 |
| 40 | 9.3 | 8.7 |
| 50 | 11.7 | 10.8 |
| 6 | 1.4 | 1.3 |
| 7 | 1.6 | 1.5 |
| 8 | 1.9 | 1.7 |
| 9 | 2.1 | 2.0 |

| | 12 | 11 |
|----|------|-----|
| 10 | 2.0 | 1.8 |
| 20 | 4.0 | 3.7 |
| 30 | 6.0 | 5.5 |
| 40 | 8.0 | 7.3 |
| 50 | 10.0 | 9.2 |
| 6 | 1.2 | 1.1 |
| 7 | 1.4 | 1.3 |
| 8 | 1.6 | 1.5 |
| 9 | 1.8 | 1.7 |

| M | sin 44° | tang 44° | cot 44° | cos 44° | ' | P. P. | |
|----|----------|-----------|-----------|----------|----|-------|--|
| 0 | 9.84 177 | 9.98 484 | 10.01 516 | 9.85 693 | 60 | | |
| 1 | 9.84 190 | 9.98 509 | 10.01 491 | 9.85 681 | 59 | | |
| 2 | 9.84 203 | 9.98 534 | 10.01 466 | 9.85 669 | 58 | | |
| 3 | 9.84 216 | 9.98 560 | 10.01 440 | 9.85 657 | 57 | | |
| 4 | 9.84 229 | 9.98 585 | 10.01 415 | 9.85 645 | 56 | | |
| 5 | 9.84 242 | 9.98 610 | 10.01 390 | 9.85 632 | 55 | | |
| 6 | 9.84 255 | 9.98 635 | 10.01 365 | 9.85 620 | 54 | | |
| 7 | 9.84 269 | 9.98 661 | 10.01 339 | 9.85 608 | 53 | | |
| 8 | 9.84 282 | 9.98 686 | 10.01 314 | 9.85 596 | 52 | | |
| 9 | 9.84 295 | 9.98 711 | 10.01 289 | 9.85 583 | 51 | | |
| 10 | 9.84 308 | 9.98 737 | 10.01 263 | 9.85 571 | 50 | | |
| 11 | 9.84 321 | 9.98 762 | 10.01 238 | 9.85 559 | 49 | | |
| 12 | 9.84 334 | 9.98 787 | 10.01 213 | 9.85 547 | 48 | | |
| 13 | 9.84 347 | 9.98 812 | 10.01 188 | 9.85 534 | 47 | | |
| 14 | 9.84 360 | 9.98 838 | 10.01 162 | 9.85 522 | 46 | | |
| 15 | 9.84 373 | 9.98 863 | 10.01 137 | 9.85 510 | 45 | | |
| 16 | 9.84 385 | 9.98 888 | 10.01 112 | 9.85 497 | 44 | | |
| 17 | 9.84 398 | 9.98 913 | 10.01 087 | 9.85 485 | 43 | | |
| 18 | 9.84 411 | 9.98 939 | 10.01 061 | 9.85 473 | 42 | | |
| 19 | 9.84 424 | 9.98 964 | 10.01 036 | 9.85 460 | 41 | | |
| 20 | 9.84 437 | 9.98 989 | 10.01 011 | 9.85 448 | 40 | | |
| 21 | 9.84 450 | 9.99 015 | 10.00 985 | 9.85 436 | 39 | | |
| 22 | 9.84 463 | 9.99 040 | 10.00 960 | 9.85 423 | 38 | | |
| 23 | 9.84 476 | 9.99 065 | 10.00 935 | 9.85 411 | 37 | | |
| 24 | 9.84 489 | 9.99 090 | 10.00 910 | 9.85 399 | 36 | | |
| 25 | 9.84 502 | 9.99 116 | 10.00 884 | 9.85 386 | 35 | | |
| 26 | 9.84 515 | 9.99 141 | 10.00 859 | 9.85 374 | 34 | | |
| 27 | 9.84 528 | 9.99 166 | 10.00 834 | 9.85 361 | 33 | | |
| 28 | 9.84 540 | 9.99 191 | 10.00 809 | 9.85 349 | 32 | | |
| 29 | 9.84 553 | 9.99 217 | 10.00 783 | 9.85 337 | 31 | | |
| 30 | 9.84 566 | 9.99 242 | 10.00 758 | 9.85 324 | 30 | | |
| 31 | 9.84 579 | 9.99 267 | 10.00 733 | 9.85 312 | 29 | | |
| 32 | 9.84 592 | 9.99 293 | 10.00 707 | 9.85 299 | 28 | | |
| 33 | 9.84 605 | 9.99 318 | 10.00 682 | 9.85 287 | 27 | | |
| 34 | 9.84 618 | 9.99 343 | 10.00 657 | 9.85 274 | 26 | | |
| 35 | 9.84 630 | 9.99 368 | 10.00 632 | 9.85 262 | 25 | | |
| 36 | 9.84 643 | 9.99 394 | 10.00 606 | 9.85 250 | 24 | | |
| 37 | 9.84 656 | 9.99 419 | 10.00 581 | 9.85 237 | 23 | | |
| 38 | 9.84 669 | 9.99 444 | 10.00 556 | 9.85 225 | 22 | | |
| 39 | 9.84 682 | 9.99 469 | 10.00 531 | 9.85 212 | 21 | | |
| 40 | 9.84 694 | 9.99 495 | 10.00 505 | 9.85 200 | 20 | | |
| 41 | 9.84 707 | 9.99 520 | 10.00 480 | 9.85 187 | 19 | | |
| 42 | 9.84 720 | 9.99 545 | 10.00 455 | 9.85 175 | 18 | | |
| 43 | 9.84 733 | 9.99 570 | 10.00 430 | 9.85 162 | 17 | | |
| 44 | 9.84 745 | 9.99 596 | 10.00 404 | 9.85 150 | 16 | | |
| 45 | 9.84 758 | 9.99 621 | 10.00 379 | 9.85 137 | 15 | | |
| 46 | 9.84 771 | 9.99 646 | 10.00 354 | 9.85 125 | 14 | | |
| 47 | 9.84 784 | 9.99 672 | 10.00 328 | 9.85 112 | 13 | | |
| 48 | 9.84 796 | 9.99 697 | 10.00 303 | 9.85 100 | 12 | | |
| 49 | 9.84 809 | 9.99 722 | 10.00 278 | 9.85 087 | 11 | | |
| 50 | 9.84 822 | 9.99 747 | 10.00 253 | 9.85 074 | 10 | | |
| 51 | 9.84 835 | 9.99 773 | 10.00 227 | 9.85 062 | 9 | | |
| 52 | 9.84 847 | 9.99 798 | 10.00 202 | 9.85 049 | 8 | | |
| 53 | 9.84 860 | 9.99 823 | 10.00 177 | 9.85 037 | 7 | | |
| 54 | 9.84 873 | 9.99 848 | 10.00 152 | 9.85 024 | 6 | | |
| 55 | 9.84 885 | 9.99 874 | 10.00 126 | 9.85 012 | 5 | | |
| 56 | 9.84 898 | 9.99 899 | 10.00 101 | 9.84 999 | 4 | | |
| 57 | 9.84 911 | 9.99 924 | 10.00 076 | 9.84 986 | 3 | | |
| 58 | 9.84 923 | 9.99 949 | 10.00 051 | 9.84 974 | 2 | | |
| 59 | 9.84 936 | 9.99 975 | 10.00 025 | 9.84 961 | 1 | | |
| 60 | 9.84 949 | 10.00 000 | 10.00 000 | 9.84 949 | 0 | | |
| | cos 45° | cot 45° | tang 45° | sin 45° | M | | |

| | 26 | 25 |
|----|------|------|
| 10 | 4.3 | 4.2 |
| 20 | 8.7 | 8.3 |
| 30 | 13.0 | 12.5 |
| 40 | 17.3 | 16.7 |
| 50 | 21.7 | 20.8 |
| 6 | 2.6 | 2.5 |
| 7 | 3.0 | 2.9 |
| 8 | 3.5 | 3.3 |
| 9 | 3.9 | 3.8 |

| | 14 | 13 |
|----|------|------|
| 10 | 2.3 | 2.2 |
| 20 | 4.7 | 4.3 |
| 30 | 7.0 | 6.5 |
| 40 | 9.3 | 8.7 |
| 50 | 11.7 | 10.8 |
| 6 | 1.4 | 1.3 |
| 7 | 1.6 | 1.5 |
| 8 | 1.9 | 1.7 |
| 9 | 2.1 | 2.0 |

| | 12 |
|----|------|
| 10 | 2.0 |
| 20 | 4.0 |
| 30 | 6.0 |
| 40 | 8.0 |
| 50 | 10.0 |
| 6 | 1.2 |
| 7 | 1.4 |
| 8 | 1.6 |
| 9 | 1.8 |

*

III. Goniometrische Funktionen aller Winkel von 0° bis 90° von Grad zu Grad.

| Grade | Sinus | Tangente | Kotangente | Kosinus | Grade |
|-----------|---------|------------|------------|---------|-----------|
| 0 | 0·00000 | 0·00000 | ∞ | 1·00000 | 90 |
| 1 | 0·01745 | 0·01746 | 57·28996 | 0·99985 | 89 |
| 2 | 0·03490 | 0·03492 | 28·63625 | 0·99939 | 88 |
| 3 | 0·05234 | 0·05241 | 19·08114 | 0·99863 | 87 |
| 4 | 0·06976 | 0·06993 | 14·30067 | 0·99756 | 86 |
| 5 | 0·08716 | 0·08749 | 11·43005 | 0·99619 | 85 |
| 6 | 0·10453 | 0·10510 | 9·51436 | 0·99452 | 84 |
| 7 | 0·12187 | 0·12278 | 8·14435 | 0·99255 | 83 |
| 8 | 0·13917 | 0·14054 | 7·11537 | 0·99027 | 82 |
| 9 | 0·15643 | 0·15838 | 6·31375 | 0·98769 | 81 |
| 10 | 0·17365 | 0·17633 | 5·67128 | 0·98481 | 80 |
| 11 | 0·19081 | 0·19438 | 5·14455 | 0·98163 | 79 |
| 12 | 0·20791 | 0·21256 | 4·70463 | 0·97815 | 78 |
| 13 | 0·22495 | 0·23087 | 4·33148 | 0·97437 | 77 |
| 14 | 0·24192 | 0·24933 | 4·01078 | 0·97030 | 76 |
| 15 | 0·25882 | 0·26795 | 3·73205 | 0·96593 | 75 |
| 16 | 0·27564 | 0·28675 | 3·48741 | 0·96126 | 74 |
| 17 | 0·29237 | 0·30573 | 3·27085 | 0·95630 | 73 |
| 18 | 0·30902 | 0·32492 | 3·07768 | 0·95106 | 72 |
| 19 | 0·32557 | 0·34433 | 2·90421 | 0·94552 | 71 |
| 20 | 0·34202 | 0·36397 | 2·74748 | 0·93969 | 70 |
| 21 | 0·35837 | 0·38386 | 2·60509 | 0·93358 | 69 |
| 22 | 0·37461 | 0·40403 | 2·47509 | 0·92718 | 68 |
| 23 | 0·39073 | 0·42447 | 2·35585 | 0·92050 | 67 |
| 24 | 0·40674 | 0·44523 | 2·24604 | 0·91355 | 66 |
| 25 | 0·42262 | 0·46631 | 2·14451 | 0·90631 | 65 |
| 26 | 0·43837 | 0·48773 | 2·05030 | 0·89879 | 64 |
| 27 | 0·45399 | 0·50953 | 1·96261 | 0·89101 | 63 |
| 28 | 0·46947 | 0·53171 | 1·88073 | 0·88295 | 62 |
| 29 | 0·48481 | 0·55431 | 1·80405 | 0·87462 | 61 |
| 30 | 0·50000 | 0·57735 | 1·73205 | 0·86603 | 60 |
| 31 | 0·51504 | 0·60086 | 1·66428 | 0·85717 | 59 |
| 32 | 0·52992 | 0·62487 | 1·60033 | 0·84805 | 58 |
| 33 | 0·54464 | 0·64941 | 1·53987 | 0·83867 | 57 |
| 34 | 0·55919 | 0·67451 | 1·48256 | 0·82904 | 56 |
| 35 | 0·57358 | 0·70021 | 1·42815 | 0·81915 | 55 |
| 36 | 0·58779 | 0·72654 | 1·37638 | 0·80902 | 54 |
| 37 | 0·60182 | 0·75355 | 1·32704 | 0·79864 | 53 |
| 38 | 0·61566 | 0·78129 | 1·27994 | 0·78801 | 52 |
| 39 | 0·62932 | 0·80978 | 1·23490 | 0·77715 | 51 |
| 40 | 0·64279 | 0·83910 | 1·19175 | 0·76604 | 50 |
| 41 | 0·65606 | 0·86929 | 1·15037 | 0·75471 | 49 |
| 42 | 0·66913 | 0·90040 | 1·11061 | 0·74314 | 48 |
| 43 | 0·68200 | 0·93252 | 1·07237 | 0·73135 | 47 |
| 44 | 0·69466 | 0·96569 | 1·03553 | 0·71934 | 46 |
| 45 | 0·70711 | 1·00000 | 1·00000 | 0·70711 | 45 |
| Grade | Kosinus | Kotangente | Tangente | Sinus | Grade |

IV. Länge der Kreisbogen für den Halbmesser $r=1$.

| Grade | arc. | Grade | arc. | Min. | arc. | Sek. | arc. |
|-------|-----------|-------|-----------|------|-----------|------|-----------|
| 1 | 0·017 453 | 60 | 1·047 198 | 1 | 0·000 291 | 1 | 0·000 005 |
| 2 | 0·034 907 | 70 | 1·221 730 | 2 | 0·000 582 | 2 | 0·000 010 |
| 3 | 0·052 360 | 80 | 1·396 263 | 3 | 0·000 873 | 3 | 0·000 015 |
| 4 | 0·069 813 | 90 | 1·570 796 | 4 | 0·001 164 | 4 | 0·000 019 |
| 5 | 0·087 266 | 100 | 1·745 329 | 5 | 0·001 454 | 5 | 0·000 024 |
| 6 | 0·104 720 | 200 | 3·490 659 | 6 | 0·001 745 | 6 | 0·000 029 |
| 7 | 0·122 173 | 300 | 5·235 988 | 7 | 0·002 036 | 7 | 0·000 034 |
| 8 | 0·139 626 | | | 8 | 0·002 327 | 8 | 0·000 039 |
| 9 | 0·157 080 | | | 9 | 0·002 618 | 9 | 0·000 044 |
| 10 | 0·174 563 | | | 10 | 0·002 909 | 10 | 0·000 048 |
| 20 | 0·349 096 | | | 20 | 0·005 818 | 20 | 0·000 097 |
| 30 | 0·523 539 | | | 30 | 0·008 727 | 30 | 0·000 145 |
| 40 | 0·698 132 | | | 40 | 0·011 636 | 40 | 0·000 194 |
| 50 | 0·872 665 | | | 50 | 0·014 544 | 50 | 0·000 242 |

$$\text{arc } 1^\circ = 0\cdot017\ 453$$

$$\log \text{arc } 1^\circ = 8\cdot241\ 877 - 10$$

$$\text{arc } 1' = 0\cdot000\ 291$$

$$\log \text{arc } 1' = 6\cdot463\ 726 - 10$$

$$\text{arc } 1'' = 0\cdot000\ 005$$

$$\log \text{arc } 1'' = 4\cdot685\ 575 - 10.$$

V. Verwandlung der Minuten und Sekunden in Dezimalteile des Grades.

| Min. | 0' | 1' | 2' | 3' | 4' | 5' | 6' | 7' | 8' | 9' |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0 | 0.00000 | 0.01667 | 0.03333 | 0.05000 | 0.06667 | 0.08333 | 0.10000 | 0.11667 | 0.13333 | 0.15000 |
| 1 | 0.16667 | 0.18333 | 0.20000 | 0.21667 | 0.23333 | 0.25000 | 0.26667 | 0.28333 | 0.30000 | 0.31667 |
| 2 | 0.33333 | 0.35000 | 0.36667 | 0.38333 | 0.40000 | 0.41667 | 0.43333 | 0.45000 | 0.46667 | 0.48333 |
| 3 | 0.50000 | 0.51667 | 0.53333 | 0.55000 | 0.56667 | 0.58333 | 0.60000 | 0.61667 | 0.63333 | 0.65000 |
| 4 | 0.66667 | 0.68333 | 0.70000 | 0.71667 | 0.73333 | 0.75000 | 0.76667 | 0.78333 | 0.80000 | 0.81667 |
| 5 | 0.83333 | 0.85000 | 0.86667 | 0.88333 | 0.90000 | 0.91667 | 0.93333 | 0.95000 | 0.96667 | 0.98333 |
| | | | | | | | | | | |
| Sek. | 0" | 1" | 2" | 3" | 4" | 5" | 6" | 7" | 8" | 9" |
| 0 | 0.00000 | 0.00028 | 0.00056 | 0.00083 | 0.00111 | 0.00139 | 0.00167 | 0.00194 | 0.00222 | 0.00250 |
| 1 | 0.00278 | 0.00306 | 0.00333 | 0.00361 | 0.00389 | 0.00417 | 0.00444 | 0.00472 | 0.00500 | 0.00528 |
| 2 | 0.00556 | 0.00583 | 0.00611 | 0.00639 | 0.00667 | 0.00694 | 0.00722 | 0.00750 | 0.00778 | 0.00806 |
| 3 | 0.00833 | 0.00861 | 0.00889 | 0.00917 | 0.00944 | 0.00972 | 0.01000 | 0.01028 | 0.01056 | 0.01083 |
| 4 | 0.01111 | 0.01139 | 0.01167 | 0.01194 | 0.01222 | 0.01250 | 0.01278 | 0.01306 | 0.01333 | 0.01361 |
| 5 | 0.01389 | 0.01417 | 0.01444 | 0.01472 | 0.01500 | 0.01528 | 0.01556 | 0.01583 | 0.01611 | 0.01639 |

VI. Die Quadrate der ganzen Zahlen von 1 bis 1000.

| n | n ² | (100+n) ² | (200+n) ² | (300+n) ² | (400+n) ² | (500+n) ² | (600+n) ² | (700+n) ² | (800+n) ² | (900+n) ² |
|----|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 0 | 0 | 10000 | 40000 | 90000 | 160000 | 250000 | 360000 | 490000 | 640000 | 810000 |
| 1 | 1 | 10201 | 40401 | 90601 | 160801 | 251001 | 361201 | 491401 | 641601 | 811801 |
| 2 | 4 | 10404 | 40804 | 91204 | 161604 | 252004 | 362404 | 492804 | 643204 | 813604 |
| 3 | 9 | 10609 | 41209 | 91809 | 162409 | 253009 | 363609 | 494209 | 644809 | 815409 |
| 4 | 16 | 10816 | 41616 | 92416 | 163216 | 254016 | 364816 | 495616 | 646416 | 817216 |
| 5 | 25 | 11025 | 42025 | 93025 | 164025 | 255025 | 366025 | 497025 | 648025 | 819025 |
| 6 | 36 | 11236 | 42436 | 93636 | 164836 | 256036 | 367236 | 498436 | 649636 | 820836 |
| 7 | 49 | 11449 | 42849 | 94249 | 165649 | 257049 | 368449 | 499849 | 651249 | 822649 |
| 8 | 64 | 11664 | 43264 | 94864 | 166464 | 258064 | 369664 | 501264 | 652864 | 824464 |
| 9 | 81 | 11881 | 43681 | 95481 | 167281 | 259081 | 370881 | 502681 | 654481 | 826281 |
| 10 | 100 | 12100 | 44100 | 96100 | 168100 | 260100 | 372100 | 504100 | 656100 | 828100 |
| 11 | 121 | 12321 | 44521 | 96721 | 168921 | 261121 | 373321 | 505521 | 657721 | 829921 |
| 12 | 144 | 12544 | 44944 | 97344 | 169744 | 262144 | 374544 | 506944 | 659344 | 831744 |
| 13 | 169 | 12769 | 45369 | 97969 | 170569 | 263169 | 375769 | 508369 | 660969 | 833569 |
| 14 | 196 | 12996 | 45796 | 98596 | 171396 | 264196 | 376996 | 509796 | 662596 | 835396 |
| 15 | 225 | 13225 | 46225 | 99225 | 172225 | 265225 | 378225 | 511225 | 664225 | 837225 |
| 16 | 256 | 13456 | 46656 | 99856 | 173056 | 266256 | 379456 | 512656 | 665856 | 839056 |
| 17 | 289 | 13689 | 47089 | 100489 | 173889 | 267289 | 380689 | 514089 | 667489 | 840889 |
| 18 | 324 | 13924 | 47524 | 101124 | 174724 | 268324 | 381924 | 515524 | 669124 | 842724 |
| 19 | 361 | 14161 | 47961 | 101761 | 175561 | 269361 | 383161 | 516961 | 670761 | 844561 |
| 20 | 400 | 14400 | 48400 | 102400 | 176400 | 270400 | 384400 | 518400 | 672400 | 846400 |
| 21 | 441 | 14641 | 48841 | 103041 | 177241 | 271441 | 385641 | 519841 | 674041 | 848241 |
| 22 | 484 | 14884 | 49284 | 103684 | 178084 | 272484 | 386884 | 521284 | 675684 | 850084 |
| 23 | 529 | 15129 | 49729 | 104329 | 178929 | 273529 | 388129 | 522729 | 677329 | 851929 |
| 24 | 576 | 15376 | 50176 | 104976 | 179776 | 274576 | 389376 | 524176 | 678976 | 853776 |
| 25 | 625 | 15625 | 50625 | 105625 | 180625 | 275625 | 390625 | 525625 | 680625 | 855625 |
| 26 | 676 | 15876 | 51076 | 106276 | 181476 | 276676 | 391876 | 527076 | 682276 | 857476 |
| 27 | 729 | 16129 | 51529 | 106929 | 182329 | 277729 | 393129 | 528529 | 683929 | 859329 |
| 28 | 784 | 16384 | 51984 | 107584 | 183184 | 278784 | 394384 | 529984 | 685584 | 861184 |
| 29 | 841 | 16641 | 52441 | 108241 | 184041 | 279841 | 395641 | 531441 | 687241 | 863041 |
| 30 | 900 | 16900 | 52900 | 108900 | 184900 | 280900 | 396900 | 532900 | 688900 | 864900 |
| 31 | 961 | 17161 | 53361 | 109561 | 185761 | 281961 | 398161 | 534361 | 690561 | 866761 |
| 32 | 1024 | 17424 | 53824 | 110224 | 186624 | 283024 | 399424 | 535824 | 692224 | 868624 |
| 33 | 1089 | 17689 | 54289 | 110889 | 187489 | 284089 | 400689 | 537289 | 693889 | 870489 |
| 34 | 1156 | 17956 | 54756 | 111556 | 188356 | 285156 | 401956 | 538756 | 695556 | 872356 |
| 35 | 1225 | 18225 | 55225 | 112225 | 189225 | 286225 | 403225 | 540225 | 697225 | 874225 |
| 36 | 1296 | 18496 | 55696 | 112896 | 190096 | 287296 | 404496 | 541696 | 698896 | 876096 |
| 37 | 1369 | 18769 | 56169 | 113569 | 190969 | 288369 | 405769 | 543169 | 700569 | 877969 |
| 38 | 1444 | 19044 | 56644 | 114244 | 191844 | 289444 | 407044 | 544644 | 702244 | 879844 |
| 39 | 1521 | 19321 | 57121 | 114921 | 192721 | 290521 | 408321 | 546121 | 703921 | 881721 |
| 40 | 1600 | 19600 | 57600 | 115600 | 193600 | 291600 | 409600 | 547600 | 705600 | 883600 |
| 41 | 1681 | 19881 | 58081 | 116281 | 194481 | 292681 | 410881 | 549081 | 707281 | 885481 |
| 42 | 1764 | 20164 | 58564 | 116964 | 195364 | 293764 | 412164 | 550564 | 708964 | 887364 |
| 43 | 1849 | 20449 | 59049 | 117649 | 196249 | 294849 | 413449 | 552049 | 710649 | 889249 |
| 44 | 1936 | 20736 | 59536 | 118336 | 197136 | 295936 | 414736 | 553536 | 712336 | 891136 |

| n | n^2 | $(100+n)^2$ | $(200+n)^2$ | $(300+n)^2$ | $(400+n)^2$ | $(500+n)^2$ | $(600+n)^2$ | $(700+n)^2$ | $(800+n)^2$ | $(900+n)^2$ |
|-----|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 45 | 2025 | 21025 | 60025 | 119025 | 198025 | 297025 | 416025 | 555025 | 714025 | 893025 |
| 46 | 2116 | 21316 | 60516 | 119716 | 198916 | 298116 | 417316 | 556516 | 715716 | 894916 |
| 47 | 2209 | 21609 | 61009 | 120409 | 199809 | 299209 | 418609 | 558009 | 717409 | 896809 |
| 48 | 2304 | 21904 | 61504 | 121104 | 200704 | 300304 | 419904 | 559504 | 719104 | 898704 |
| 49 | 2401 | 22201 | 62001 | 121801 | 201601 | 301401 | 421201 | 561001 | 720801 | 900601 |
| 50 | 2500 | 22500 | 62500 | 122500 | 202500 | 302500 | 422500 | 562500 | 722500 | 902500 |
| 51 | 2601 | 22801 | 63001 | 123201 | 203401 | 303601 | 423801 | 564001 | 724201 | 904401 |
| 52 | 2704 | 23104 | 63504 | 123904 | 204304 | 304704 | 425104 | 565504 | 725904 | 906304 |
| 53 | 2809 | 23409 | 64009 | 124609 | 205209 | 305809 | 426409 | 567009 | 727609 | 908209 |
| 54 | 2916 | 23716 | 64516 | 125316 | 206116 | 306916 | 427716 | 568516 | 729316 | 910116 |
| 55 | 3025 | 24025 | 65025 | 126025 | 207025 | 308025 | 429025 | 570025 | 731025 | 912025 |
| 56 | 3136 | 24336 | 65536 | 126736 | 207936 | 309136 | 430336 | 571536 | 732736 | 913936 |
| 57 | 3249 | 24649 | 66049 | 127449 | 208849 | 310249 | 431649 | 573049 | 734449 | 915849 |
| 58 | 3364 | 24964 | 66564 | 128164 | 209764 | 311364 | 432964 | 574564 | 736164 | 917764 |
| 59 | 3481 | 25281 | 67081 | 128881 | 210681 | 312481 | 434281 | 576081 | 737881 | 919681 |
| 60 | 3600 | 25600 | 67600 | 129600 | 211600 | 313600 | 435600 | 577600 | 739600 | 921600 |
| 61 | 3721 | 25921 | 68121 | 130321 | 212521 | 314721 | 436921 | 579121 | 741321 | 923521 |
| 62 | 3844 | 26244 | 68644 | 131044 | 213444 | 315844 | 438244 | 580644 | 743044 | 925444 |
| 63 | 3969 | 26569 | 69169 | 131769 | 214369 | 316969 | 439569 | 582169 | 744769 | 927369 |
| 64 | 4096 | 26896 | 69696 | 132496 | 215296 | 318096 | 440896 | 583696 | 746496 | 929296 |
| 65 | 4225 | 27225 | 70225 | 133225 | 216225 | 319225 | 442225 | 585225 | 748225 | 931225 |
| 66 | 4356 | 27556 | 70756 | 133956 | 217156 | 320356 | 443556 | 586756 | 749956 | 933156 |
| 67 | 4489 | 27889 | 71289 | 134689 | 218089 | 321489 | 444889 | 588289 | 751689 | 935089 |
| 68 | 4624 | 28224 | 71824 | 135424 | 219024 | 322624 | 446224 | 589824 | 753424 | 937024 |
| 69 | 4761 | 28561 | 72361 | 136161 | 219961 | 323761 | 447561 | 591361 | 755161 | 938961 |
| 70 | 4900 | 28900 | 72900 | 136900 | 220900 | 324900 | 448900 | 592900 | 756900 | 940900 |
| 71 | 5041 | 29241 | 73441 | 137641 | 221841 | 326041 | 450241 | 594441 | 758641 | 942841 |
| 72 | 5184 | 29584 | 73984 | 138384 | 222784 | 327184 | 451584 | 595984 | 760384 | 944784 |
| 73 | 5329 | 29929 | 74529 | 139129 | 223729 | 328329 | 452929 | 597529 | 762129 | 946729 |
| 74 | 5476 | 30276 | 75076 | 139876 | 224676 | 329476 | 454276 | 599076 | 763876 | 948676 |
| 75 | 5625 | 30625 | 75625 | 140625 | 225625 | 330625 | 455625 | 600625 | 765625 | 950625 |
| 76 | 5776 | 30976 | 76176 | 141376 | 226576 | 331776 | 456976 | 602176 | 767376 | 952576 |
| 77 | 5929 | 31329 | 76729 | 142129 | 227529 | 332929 | 458329 | 603729 | 769129 | 954529 |
| 78 | 6084 | 31684 | 77284 | 142884 | 228484 | 334084 | 459684 | 605284 | 770884 | 956484 |
| 79 | 6241 | 32041 | 77841 | 143641 | 229441 | 335241 | 461041 | 606841 | 772641 | 958441 |
| 80 | 6400 | 32400 | 78400 | 144400 | 230400 | 336400 | 462400 | 608400 | 774400 | 960400 |
| 81 | 6561 | 32761 | 78961 | 145161 | 231361 | 337561 | 463761 | 609961 | 776161 | 962361 |
| 82 | 6724 | 33124 | 79524 | 145924 | 232324 | 338724 | 465124 | 611524 | 777924 | 964324 |
| 83 | 6889 | 33489 | 80089 | 146689 | 233289 | 339889 | 466489 | 613089 | 779689 | 966289 |
| 84 | 7056 | 33856 | 80656 | 147456 | 234256 | 341056 | 467856 | 614656 | 781456 | 968256 |
| 85 | 7225 | 34225 | 81225 | 148225 | 235225 | 342225 | 469225 | 616225 | 783225 | 970225 |
| 86 | 7396 | 34596 | 81796 | 148996 | 236196 | 343396 | 470596 | 617796 | 784996 | 972196 |
| 87 | 7569 | 34969 | 82369 | 149769 | 237169 | 344569 | 471969 | 619369 | 786769 | 974169 |
| 88 | 7744 | 35344 | 82944 | 150544 | 238144 | 345744 | 473344 | 620944 | 788544 | 976144 |
| 89 | 7921 | 35721 | 83521 | 151321 | 239121 | 346921 | 474721 | 622521 | 790321 | 978121 |
| 90 | 8100 | 36100 | 84100 | 152100 | 240100 | 348100 | 476100 | 624100 | 792100 | 980100 |
| 91 | 8281 | 36481 | 84681 | 152881 | 241081 | 349281 | 477481 | 625681 | 793881 | 982081 |
| 92 | 8464 | 36864 | 85264 | 153664 | 242064 | 350464 | 478864 | 627264 | 795664 | 984064 |
| 93 | 8649 | 37249 | 85849 | 154449 | 243049 | 351649 | 480249 | 628849 | 797449 | 986049 |
| 94 | 8836 | 37636 | 86436 | 155236 | 244036 | 352836 | 481636 | 630436 | 799236 | 988036 |
| 95 | 9025 | 38025 | 87025 | 156025 | 245025 | 354025 | 483025 | 632025 | 801025 | 990025 |
| 96 | 9216 | 38416 | 87616 | 156816 | 246016 | 355216 | 484416 | 633616 | 802816 | 992016 |
| 97 | 9409 | 38809 | 88209 | 157609 | 247009 | 356409 | 485809 | 635209 | 804609 | 994009 |
| 98 | 9604 | 39204 | 88804 | 158404 | 248004 | 357604 | 487204 | 636804 | 806404 | 996004 |
| 99 | 9801 | 39601 | 89401 | 159201 | 249001 | 358801 | 488601 | 638401 | 808201 | 998001 |
| 100 | 10000 | 40000 | 90000 | 160000 | 250000 | 360000 | 490000 | 640000 | 810000 | 1000000 |

VII. Die 3. Potenz, 2. und 3. Wurzel der ganzen
Zahlen von 1 bis 100.

| n | n^3 | \sqrt{n} | $\sqrt[3]{n}$ | n | n^3 | \sqrt{n} | $\sqrt[3]{n}$ |
|----|--------|------------|---------------|-----|---------|------------|---------------|
| 1 | 1 | 1.00000 | 1.00000 | 51 | 132651 | 7.14143 | 3.70843 |
| 2 | 8 | 1.41421 | 1.25992 | 52 | 140608 | 7.21110 | 3.73251 |
| 3 | 27 | 1.73205 | 1.44225 | 53 | 148877 | 7.28011 | 3.75629 |
| 4 | 64 | 2.00000 | 1.58740 | 54 | 157464 | 7.34847 | 3.77976 |
| 5 | 125 | 2.23607 | 1.70998 | 55 | 166375 | 7.41620 | 3.80295 |
| 6 | 216 | 2.44949 | 1.81712 | 56 | 175616 | 7.48331 | 3.82586 |
| 7 | 343 | 2.64575 | 1.91293 | 57 | 185193 | 7.54983 | 3.84850 |
| 8 | 512 | 2.82843 | 2.00000 | 58 | 195112 | 7.61577 | 3.87088 |
| 9 | 729 | 3.00000 | 2.08008 | 59 | 205379 | 7.68115 | 3.89300 |
| 10 | 1000 | 3.16228 | 2.15443 | 60 | 216000 | 7.74597 | 3.91487 |
| 11 | 1331 | 3.31662 | 2.22398 | 61 | 226981 | 7.81025 | 3.93650 |
| 12 | 1728 | 3.46410 | 2.28943 | 62 | 238328 | 7.87401 | 3.95789 |
| 13 | 2197 | 3.60555 | 2.35133 | 63 | 250047 | 7.93725 | 3.97906 |
| 14 | 2744 | 3.74166 | 2.41014 | 64 | 262144 | 8.00000 | 4.00000 |
| 15 | 3375 | 3.87298 | 2.46621 | 65 | 274625 | 8.06226 | 4.02073 |
| 16 | 4096 | 4.00000 | 2.51984 | 66 | 287496 | 8.12404 | 4.04124 |
| 17 | 4913 | 4.12311 | 2.57128 | 67 | 300763 | 8.18535 | 4.06155 |
| 18 | 5832 | 4.24264 | 2.62074 | 68 | 314432 | 8.24621 | 4.08166 |
| 19 | 6859 | 4.35890 | 2.66840 | 69 | 328509 | 8.30662 | 4.10157 |
| 20 | 8000 | 4.47214 | 2.71442 | 70 | 343000 | 8.36660 | 4.12129 |
| 21 | 9261 | 4.58258 | 2.75892 | 71 | 357911 | 8.42615 | 4.14082 |
| 22 | 10648 | 4.69042 | 2.80204 | 72 | 373248 | 8.48528 | 4.16017 |
| 23 | 12167 | 4.79583 | 2.84387 | 73 | 389017 | 8.54400 | 4.17934 |
| 24 | 13824 | 4.89898 | 2.88450 | 74 | 405224 | 8.60233 | 4.19834 |
| 25 | 15625 | 5.00000 | 2.92402 | 75 | 421875 | 8.66025 | 4.21716 |
| 26 | 17576 | 5.09902 | 2.96250 | 76 | 438976 | 8.71780 | 4.23582 |
| 27 | 19683 | 5.19615 | 3.00000 | 77 | 456533 | 8.77496 | 4.25432 |
| 28 | 21952 | 5.29150 | 3.03659 | 78 | 474552 | 8.83176 | 4.27266 |
| 29 | 24389 | 5.38516 | 3.07232 | 79 | 493039 | 8.88819 | 4.29084 |
| 30 | 27000 | 5.47723 | 3.10723 | 80 | 512000 | 8.94427 | 4.30887 |
| 31 | 29791 | 5.56776 | 3.14138 | 81 | 531441 | 9.00000 | 4.32675 |
| 32 | 32768 | 5.65685 | 3.17480 | 82 | 551368 | 9.05539 | 4.34448 |
| 33 | 35937 | 5.74456 | 3.20753 | 83 | 571787 | 9.11043 | 4.36207 |
| 34 | 39304 | 5.83095 | 3.23961 | 84 | 592704 | 9.16515 | 4.37952 |
| 35 | 42875 | 5.91608 | 3.27107 | 85 | 614125 | 9.21954 | 4.39683 |
| 36 | 46656 | 6.00000 | 3.30193 | 86 | 636056 | 9.27362 | 4.41400 |
| 37 | 50653 | 6.08276 | 3.33222 | 87 | 658503 | 9.32738 | 4.43105 |
| 38 | 54872 | 6.16441 | 3.36198 | 88 | 681472 | 9.38083 | 4.44796 |
| 39 | 59319 | 6.24500 | 3.39121 | 89 | 704969 | 9.43398 | 4.46475 |
| 40 | 64000 | 6.32456 | 3.41995 | 90 | 729000 | 9.48683 | 4.48140 |
| 41 | 68921 | 6.40312 | 3.44822 | 91 | 753571 | 9.53939 | 4.49794 |
| 42 | 74088 | 6.48074 | 3.47603 | 92 | 778688 | 9.59166 | 4.51436 |
| 43 | 79507 | 6.55744 | 3.50340 | 93 | 804357 | 9.64365 | 4.53065 |
| 44 | 85184 | 6.63325 | 3.53035 | 94 | 830584 | 9.69536 | 4.54684 |
| 45 | 91125 | 6.70820 | 3.55689 | 95 | 857375 | 9.74679 | 4.56290 |
| 46 | 97336 | 6.78233 | 3.58305 | 96 | 884736 | 9.79796 | 4.57886 |
| 47 | 103823 | 6.85565 | 3.60883 | 97 | 912673 | 9.84886 | 4.59470 |
| 48 | 110592 | 6.92820 | 3.63424 | 98 | 941192 | 9.89949 | 4.61044 |
| 49 | 117649 | 7.00000 | 3.65931 | 99 | 970299 | 9.94987 | 4.62607 |
| 50 | 125000 | 7.07107 | 3.68403 | 100 | 1000000 | 10.00000 | 4.64159 |

VIII. Dichte einiger Körper.

Dichte des Wassers bei 4° C. = 1.

a) Feste Körper.

| | | | |
|--------------------|-----------|-------------------|-------|
| Ahornholz | 0·65 | Kalkstein | 2·25 |
| Aluminium | 2·67 | Kork | 0·24 |
| Antimon | 6·71 | Kupfer, gehämmert | 8·88 |
| Bergkristall | 2·68 | „ gegossen | 8·79 |
| Bernstein | 1·08 | „ -draht | 8·78 |
| Blei | 11·35 | Lindenholz | 0·44 |
| Buchenholz | 0·59 | Marmor | 2·84 |
| Diamant | 3·52 | Messing | 8·39 |
| Ebenholz | 1·22 | Nickel | 8·28 |
| Eichenholz | 1·17 | Nußbaumholz | 0·68 |
| Eisen, geschmiedet | 7·79 | Platin, gewalzt | 21·50 |
| „ gegossen | 7·21 | Sandstein | 2·35 |
| Elfenbein | 1·92 | Schwefel | 2·03 |
| Eschenholz | 0·64 | Schwerspat | 4·43 |
| Fensterglas | 2·50—2·70 | Silber | 10·48 |
| Flintglas | 3·20—3·78 | Smaragd | 2·77 |
| Flußspat | 3·15 | Spiegelglas | 2·37 |
| Gips | 2·31 | Stahl | 7·82 |
| Gold, gemünzt | 19·32 | Steinkohle | 1·33 |
| „ geschmolzen | 19·25 | Steinsalz | 2·28 |
| Graphit | 1·80—2·40 | Tannenholz | 0·45 |
| Iridium | 18·60 | Wismut | 9·82 |
| Jod | 4·95 | Zink | 7·00 |
| Kalium | 0·86 | Zinn | 7·29 |

b) Tropfbar flüssige Körper (bei 0° C.).

| | | | |
|-------------------|---------|---------------------|---------|
| Alkohol (absolut) | 0·793 | Salpetersäure | 1·530 |
| Baumöl | 0·917 | Salzsäure | 1·210 |
| Glycerin | 1·260 | Schwefeläther | 0·715 |
| Chloroform | 1·480 | Schwefelsäure | 1·848 |
| Leinöl | 0·953 | Schwefelkohlenstoff | 1·272 |
| Meerwasser | 1·026 | Petroleum | 0·836 |
| Milch | 1·030 | Wasser | 0·99987 |
| Quecksilber | 13·5956 | | |

c) Dichte einiger Gase.

Die Dichte der atmosphärischen Luft*) bei 0° C. und 760 mm
Barometerstand = 1.

| | |
|------------------|---------|
| Ammoniak | 0·5935 |
| Chlor | 2·47 |
| Chlorwasserstoff | 1·2612 |
| Kohlendioxyd | 1·5291 |
| Leuchtgas | 0·56 |
| Quecksilberdampf | 6·98 |
| Sauerstoff | 1·1056 |
| Stickstoff | 0·9714 |
| Wasserstoff | 0·06925 |
| Wasserdampf | 0·6225 |

*) 1 cm³ Luft wiegt bei 0° C. und 760 mm Barometerstand 0·001293 g.

IX. Die wichtigsten Elemente des Sonnensystems.

| | Mittlere Entfernung von der Sonne in Millionen | | Durchmesser (Erddurchm. = 1) | Siderische Umlaufzeit in Tagen | Dauer einer Umdrehung um die Achse | Masse (Erde = 1) | Volumen | | Dichte | |
|---------|---|------|---------------------------------|--|--|---------------------|----------|---------------------------|----------|------------|
| | geogr. Meilen | km | | | | | Erde = 1 | 10^{12} km ³ | Erde = 1 | Wasser = 1 |
| Merkur | 7.8 | 58 | 0.373 | 87.97 | 24h 0' 50" | 0.061 | 0.052 | 0.05627 | 1.17 | 6.552 |
| Venus | 14.6 | 108 | 0.999 | 224.70 | 23h 21' 22" | 0.787 | 0.975 | 1.0561 | 0.81 | 4.536 |
| Erde | 20.0 | 149 | 1 | 365.26 | 23h 56' 4" | 1 | 1 | 1.0832 | 1 | 5.57 |
| Mars | 30.6 | 227 | 0.528 | 686.98 | 24h 37' 23" | 0.105 | 0.147 | 0.1592 | 0.71 | 3.976 |
| Jupiter | 104.7 | 777 | 11.061 | 4332.59 | 9h 55' 37" | 309.816 | 1279.412 | 1386 | 0.24 | 1.344 |
| Saturn | 192.0 | 1424 | 9.299 | 10759.24 | 10h 14' 24" | 91.916 | 718.883 | 778.7 | 0.13 | 0.728 |
| Uranus | 386.0 | 2864 | 3.863 | 30688.39 | ? | 13.518 | 69.237 | 75 | 0.20 | 1.12 |
| Neptun | 604.7 | 4487 | 3.798 | 60181.11 | ? | 16.469 | 54.995 | 59.51 | 0.30 | 1.68 |
| Erdmond | ... | ... | 0.273 | 27 ^{Tg.} 7 ^h 43' 11.5" | 27 ^{Tg.} 7 ^h 43' 11.5" | 0.012 | 0.02 | 0.0217 | 0.6 | 3.4 |
| Sonne | ... | ... | 108.558 | ... | 25 ^{Tg.} 4 ^h 29' 0" | 324439 | 1283700 | 1390600 | 0.25 | 1.4 |

Beschleunigung der Schwere:

Halbmesser des Erdäquators 6378.32 km.
Halbe Erdachse 6356.53 km.

Kugelhalbmesser der Erde 6370 km.

Umfang eines Meridians 40007760 m.

Siderisches Jahr 365.25637 mittlere Sonnentage.

Tropisches Jahr 365.24220 "

Geographische Meile 7420 Meter.

a) am Pol $g_{90} = 9.832$ m (pro Sekunde).

b) am Äquator $g_0 = 9.780$ m (pro Sekunde).

c) an einem Orte der Breite 45° :

$g_{45} = 9.806$ m (pro Sekunde).

d) an einem Orte der geographischen Breite φ :

$g_\varphi = 9.780 (1 + 0.005310 \sin^2 \varphi)$ Meter.

