# LOS ALAMOS SCIENTIFIC LABORATORY

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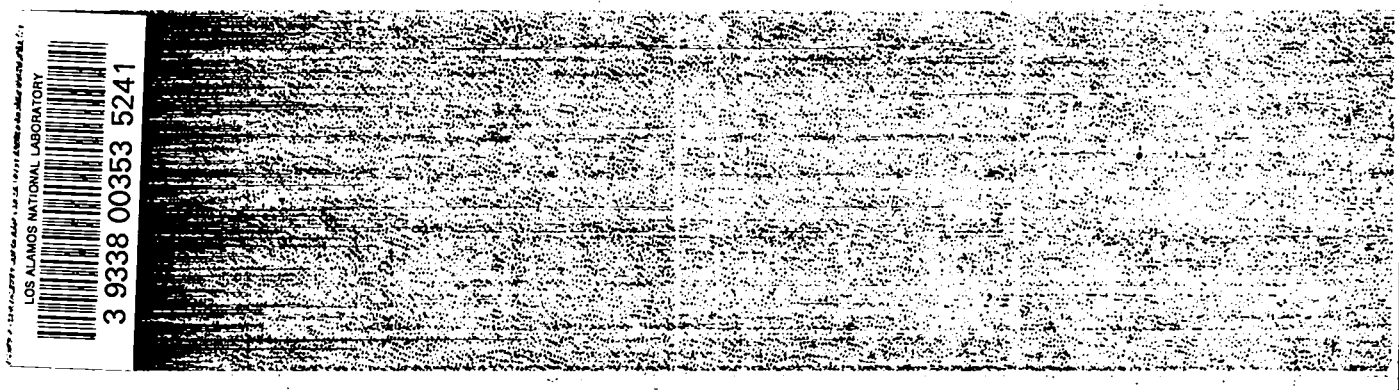

LOS ALAMOS SCIENTIFIC LABORATORY

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# TABLES OF FUNCTIONS ASSOCIATED WITH THE SERBER-WILSON METHOD FOR NEUTRON DIFFUSION CALCULATIONS IN A SPHERICAL GEOMETRY

Volume I

by

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Max Goldstein
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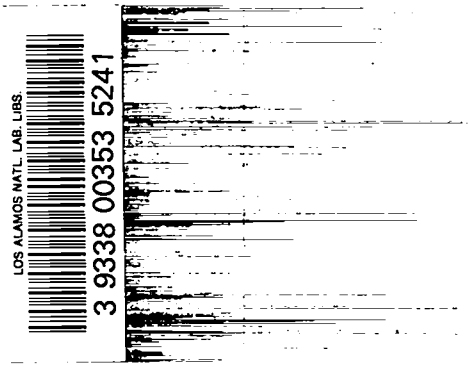


PHYSICS

# INDEX






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M. Goldstein assisted by Josephine Elliott, Lois Cook, Mary Wagner, Margaret Johnson, Alice Snowden, Bertha Fagan, Joan Houston, Marian Peterson, Francoise Ulam, and C. Latour computed starting values and check values. The same group also differenced and proof read the entire manuscript.
Kathleen Jenkins, Bernice Kelly, and Jessie Moore typed the major portion of the manuscript.

## The quantities $k$ and $\varphi$.

The quantities $k$ and $\varphi$ tabulated in this report are functions of a parameter $f$, $-1 \leq f \leq \infty$, the functional relations being transcendental equations.

For the case $0 \leq f \leq \infty$ we have:

$$\frac{k}{\arctan k} = \frac{\tan \varphi}{\varphi} = 1+f, \text{ and}$$

for the case $-1 \leq f \leq 0$ we have:

$$\frac{k}{\operatorname{arctanh} k} = \frac{\tanh \varphi}{\varphi} = 1+f.$$

For an earlier tabulation of $k$ we refer to LAMS-796 which also gives a number of expansions for $k$.

## The functions $Q(y,\varphi)$ and $S(y)$.

The function $Q(y,\varphi)$ is defined as the solution of the following differential equation with the condition $Q(0,\varphi) = 1$:

$$Q'_y(y,\varphi) = \frac{1}{\tan\varphi} Q(y,\varphi) - \frac{1}{\varphi}\frac{\sin y}{y}.$$

This differential equation was solved numerically starting at $y = 3.00$ and "proceeding" by intervals of 0.01 to $y = 0.00$, using standard integration methods. In this case the function value and the derivative last obtained, together with the previous three derivatives, were used to calculate the next function value. The corresponding derivative was then computed from the differential equation.

The solution of the above differential equation can also be written in terms of well-known functions and obtained from tabulations of these. We have

$$Q(y,\varphi) = -\frac{1}{\varphi} e^{\frac{iy}{\tan\varphi}} \operatorname{Im} E_1\left(\frac{y}{\tan\varphi} + iy\right),$$

where

$$\lim_{\varphi\to 0} Q(y,\varphi) = \frac{\sin y}{y}, \text{ and}$$

$$\lim_{\varphi\to \pi/2} Q(y,\varphi) = 1 - \frac{2}{\pi} Si(y).$$

The function $S(y)$ is defined below and is readily obtained from existing tabulations:

$$S(y) = \frac{\sin y - y\cos y}{y^2}.$$

## The functions $R(y,\varphi)$ and $T(y)$.

The function $R(y,\varphi)$ is defined as the solution of the following differential equation:

$$R'_y(y,\varphi) = \frac{1}{\tan\varphi} R(y,\varphi) - \frac{1}{\varphi}\frac{\cos y}{y}.$$

This differential equation was solved numerically by the method used for $Q(y,\varphi)$, starting at $y = 3.00$ and terminating at $y = 0.50$.

The solution of the above differential equation can also be written in terms of well-known functions. We have

$$R(y,\varphi) = \frac{1}{\varphi} e^{\frac{y}{\tan\varphi}} \operatorname{Re} E_1\left(\frac{y}{\tan\varphi} + iy\right),$$

where

$$\lim_{\varphi\to 0} R(y,\varphi) = \frac{\cos y}{y}, \text{ and}$$

$$\lim_{\varphi\to \pi/2} R(y,\varphi) = -\frac{2}{\pi} Ci(y).$$

In the $y$-interval (0.00,0.50) the function $R^*(y,\varphi)$ rather than $R(y,\varphi)$ was tabulated to facilitate interpolation:

$$R^*(y,\varphi) = R(y,\varphi) - \frac{\tan\varphi}{y\varphi} U\left(\frac{y}{\tan\varphi}\right),$$

$$R^{*\prime}_y(y,\varphi) = \frac{1}{\tan\varphi} R^*(y,\varphi) - \frac{1}{\varphi}\left(\frac{\cos y}{y} - 1\right).$$

The function $U(x)$ is defined and tabulated in Volume II of these tables. The constant of integration for $R(y,\varphi)$ and $R^*(y,\varphi)$ was obtained from the condition: $R^*(0,\varphi) = -\frac{1}{2\varphi}\ln(1+\tan^2\varphi)$.

The functions $T(y)$ and $T^*(y)$ are defined below and readily obtained from existing tabulations:

$$T(y) = \frac{\cos y + y\sin y}{y^2}, \quad T^*(y) = y^2 T(y).$$

## Table of $k$ and $\varphi$ for positive and negative $f$

| $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\varphi(f\leq 0)$ | $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\varphi(f\leq 0)$ |
|---|---|---|---|---|---|---|---|---|---|
| 00 | .00000 | .00000 | .00000 | .00000 | .050 | .39498 | .37617 | .37949 | .39946 |
| 01 | .05479 | .05474 | .05475 | .05480 | .051 | .39906 | .37970 | .38310 | .40369 |
| 02 | .07752 | .07737 | .07740 | .07756 | .052 | .40311 | .38318 | .38668 | .40789 |
| 03 | .09498 | .09470 | .09475 | .09504 | .053 | .40713 | .38664 | .39022 | .41206 |
| 04 | .10972 | .10928 | .10937 | .10981 | .054 | .41111 | .39005 | .39372 | .41619 |
| 05 | .12272 | .12211 | .12223 | .12284 | .055 | .41506 | .39342 | .39718 | .42030 |
| 06 | .13449 | .13369 | .13384 | .13465 | .056 | .41897 | .39675 | .40061 | .42438 |
| 07 | .14532 | .14431 | .14451 | .14553 | .057 | .42286 | .40006 | .40400 | .42842 |
| 08 | .15541 | .15418 | .15442 | .15567 | .058 | .42671 | .40332 | .40736 | .43244 |
| 09 | .16491 | .16344 | .16372 | .16521 | .059 | .43054 | .40655 | .41068 | .43643 |
| 10 | .17390 | .17218 | .17251 | .17425 | .060 | .43434 | .40976 | .41398 | .44040 |
| 11 | .18246 | .18047 | .18086 | .18287 | .061 | .43812 | .41293 | .41724 | .44435 |
| 12 | .19065 | .18839 | .18882 | .19111 | .062 | .44186 | .41606 | .42047 | .44826 |
| 13 | .19851 | .19596 | .19645 | .19904 | .063 | .44558 | .41917 | .42367 | .45216 |
| 14 | .20608 | .20323 | .20379 | .20668 | .064 | .44927 | .42225 | .42684 | .45603 |
| 15 | .21340 | .21025 | .21086 | .21407 | .065 | .45294 | .42530 | .42998 | .45987 |
| 16 | .22049 | .21702 | .21768 | .22122 | .066 | .45659 | .42832 | .43309 | .46369 |
| 17 | .22736 | .22356 | .22429 | .22817 | .067 | .46021 | .43131 | .43617 | .46749 |
| 18 | .23405 | .22991 | .23070 | .23493 | .068 | .46381 | .43428 | .43923 | .47128 |
| 19 | .24056 | .23607 | .23693 | .24152 | .069 | .46738 | .43721 | .44226 | .47504 |
| 20 | .24690 | .24206 | .24298 | .24794 | .070 | .47094 | .44013 | .44527 | .47878 |
| 21 | .25310 | .24789 | .24888 | .25422 | .071 | .47447 | .44302 | .44825 | .48251 |
| 22 | .25916 | .25358 | .25464 | .26037 | .072 | .47798 | .44588 | .45121 | .48622 |
| 23 | .26509 | .25913 | .26025 | .26638 | .073 | .48147 | .44871 | .45414 | .48990 |
| 24 | .27089 | .26454 | .26574 | .27227 | .074 | .48494 | .45153 | .45704 | .49356 |
| 25 | .27659 | .26984 | .27111 | .27806 | .075 | .48839 | .45432 | .45993 | .49722 |
| 26 | .28218 | .27503 | .27637 | .28375 | .076 | .49182 | .45708 | .46278 | .50084 |
| 27 | .28766 | .28010 | .28152 | .28933 | .077 | .49524 | .45983 | .46562 | .50446 |
| 28 | .29306 | .28508 | .28657 | .29483 | .078 | .49863 | .46255 | .46844 | .50807 |
| 29 | .29836 | .28995 | .29152 | .30023 | .079 | .50201 | .46525 | .47123 | .51165 |
| 30 | .30358 | .29473 | .29638 | .30555 | .080 | .50536 | .46793 | .47400 | .51522 |
| 31 | .30872 | .29944 | .30116 | .31079 | .081 | .50870 | .47058 | .47675 | .51877 |
| 32 | .31378 | .30405 | .30585 | .31596 | .082 | .51203 | .47323 | .47948 | .52231 |
| 33 | .31877 | .30859 | .31047 | .32107 | .083 | .51534 | .47584 | .48219 | .52583 |
| 34 | .32369 | .31305 | .31500 | .32609 | .084 | .51863 | .47844 | .48488 | .52934 |
| 35 | .32855 | .31744 | .31947 | .33106 | .085 | .52190 | .48101 | .48755 | .53284 |
| 36 | .33334 | .32176 | .32387 | .33596 | .086 | .52516 | .48357 | .49020 | .53632 |
| 37 | .33807 | .32601 | .32820 | .34081 | .087 | .52840 | .48611 | .49283 | .53979 |
| 38 | .34274 | .33019 | .33247 | .34560 | .088 | .53163 | .48863 | .49544 | .54325 |
| 39 | .34735 | .33431 | .33668 | .35034 | .089 | .53484 | .49113 | .49804 | .54670 |
| 40 | .35191 | .33838 | .34083 | .35503 | .090 | .53804 | .49361 | .50061 | .55013 |
| 41 | .35643 | .34239 | .34492 | .35967 | .091 | .54122 | .49608 | .50317 | .55354 |
| 42 | .36089 | .34634 | .34896 | .36426 | .092 | .54439 | .49853 | .50571 | .55695 |
| 43 | .36530 | .35024 | .35294 | .36880 | .093 | .54755 | .50096 | .50824 | .56035 |
| 44 | .36967 | .35409 | .35687 | .37329 | .094 | .55069 | .50337 | .51074 | .56373 |
| 45 | .37399 | .35789 | .36076 | .37776 | .095 | .55381 | .50576 | .51323 | .56710 |
| 46 | .37827 | .36163 | .36459 | .38217 | .096 | .55693 | .50815 | .51570 | .57046 |
| 47 | .38250 | .36533 | .36838 | .38655 | .097 | .56003 | .51051 | .51816 | .57382 |
| 48 | .38670 | .36899 | .37213 | .39089 | .098 | .56313 | .51287 | .52060 | .57716 |
| 49 | .39086 | .37260 | .37583 | .39519 | .099 | .56620 | .51520 | .52302 | .58049 |
| 50 | .39498 | .37617 | .37949 | .39946 | .100 | .56926 | .51751 | .52543 | .58381 |

## Table of $k$ and $\varphi$ for positive and negative $f$

| $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\varphi(f\leq 0)$ | $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\varphi(f\leq 0)$ |
|---|---|---|---|---|---|---|---|---|---|
| .100 | .56926 | .51751 | .52543 | .58381 | .150 | .71007 | .61745 | .62950 | .74059 |
| .101 | .57232 | .51982 | .52782 | .58712 | .151 | .71269 | .61919 | .63131 | .74359 |
| .102 | .57536 | .52211 | .53020 | .59042 | .152 | .71530 | .62092 | .63311 | .74659 |
| .103 | .57839 | .52438 | .53256 | .59371 | .153 | .71791 | .62265 | .63492 | .74961 |
| .104 | .58140 | .52663 | .53491 | .59700 | .154 | .72051 | .62436 | .63669 | .75259 |
| .105 | .58441 | .52888 | .53724 | .60027 | .155 | .72310 | .62606 | .63847 | .75558 |
| .106 | .58740 | .53110 | .53956 | .60353 | .156 | .72569 | .62776 | .64023 | .75857 |
| .107 | .59038 | .53332 | .54186 | .60679 | .157 | .72827 | .62945 | .64199 | .76155 |
| .108 | .59336 | .53552 | .54415 | .61003 | .158 | .73085 | .63113 | .64374 | .76454 |
| .109 | .59632 | .53771 | .54643 | .61328 | .159 | .73342 | .63280 | .64549 | .76753 |
| .110 | .59927 | .53988 | .54869 | .61651 | .160 | .73599 | .63448 | .64722 | .77050 |
| .111 | .60221 | .54204 | .55094 | .61973 | .161 | .73855 | .63613 | .64894 | .77347 |
| .112 | .60514 | .54419 | .55318 | .62295 | .162 | .74111 | .63779 | .65066 | .77644 |
| .113 | .60806 | .54633 | .55540 | .62616 | .163 | .74365 | .63942 | .65237 | .77941 |
| .114 | .61097 | .54845 | .55761 | .62936 | .164 | .74620 | .64107 | .65407 | .78238 |
| .115 | .61387 | .55056 | .55980 | .63254 | .165 | .74874 | .64270 | .65576 | .78534 |
| .116 | .61676 | .55265 | .56198 | .63572 | .166 | .75127 | .64431 | .65745 | .78831 |
| .117 | .61964 | .55474 | .56415 | .63890 | .167 | .75379 | .64592 | .65913 | .79127 |
| .118 | .62251 | .55681 | .56631 | .64207 | .168 | .75632 | .64753 | .66080 | .79423 |
| .119 | .62537 | .55887 | .56846 | .64524 | .169 | .75883 | .64913 | .66246 | .79718 |
| .120 | .62822 | .56091 | .57059 | .64840 | .170 | .76135 | .65072 | .66411 | .80013 |
| .121 | .63107 | .56295 | .57271 | .65155 | .171 | .76386 | .65231 | .66576 | .80309 |
| .122 | .63390 | .56497 | .57482 | .65469 | .172 | .76636 | .65389 | .66740 | .80604 |
| .123 | .63673 | .56699 | .57692 | .65783 | .173 | .76885 | .65546 | .66903 | .80898 |
| .124 | .63955 | .56899 | .57900 | .66096 | .174 | .77134 | .65702 | .67065 | .81192 |
| .125 | .64235 | .57098 | .58108 | .66409 | .175 | .77383 | .65858 | .67227 | .81487 |
| .126 | .64515 | .57296 | .58314 | .66721 | .176 | .77632 | .66014 | .67388 | .81782 |
| .127 | .64795 | .57493 | .58519 | .67032 | .177 | .77879 | .66167 | .67548 | .82075 |
| .128 | .65073 | .57689 | .58723 | .67343 | .178 | .78126 | .66321 | .67707 | .82369 |
| .129 | .65350 | .57883 | .58926 | .67653 | .179 | .78373 | .66474 | .67866 | .82663 |
| .130 | .65627 | .58077 | .59128 | .67963 | .180 | .78619 | .66627 | .68024 | .82956 |
| .131 | .65903 | .58270 | .59329 | .68273 | .181 | .78865 | .66778 | .68181 | .83249 |
| .132 | .66178 | .58461 | .59528 | .68581 | .182 | .79111 | .66930 | .68338 | .83543 |
| .133 | .66453 | .58652 | .59727 | .68889 | .183 | .79355 | .67079 | .68494 | .83836 |
| .134 | .66726 | .58841 | .59925 | .69197 | .184 | .79600 | .67230 | .68649 | .84129 |
| .135 | .66999 | .59030 | .60121 | .69504 | .185 | .79844 | .67379 | .68803 | .84421 |
| .136 | .67271 | .59217 | .60317 | .69811 | .186 | .80087 | .67527 | .68957 | .84714 |
| .137 | .67542 | .59404 | .60511 | .70117 | .187 | .80331 | .67676 | .69110 | .85006 |
| .138 | .67813 | .59590 | .60704 | .70422 | .188 | .80574 | .67823 | .69263 | .85299 |
| .139 | .68083 | .59774 | .60897 | .70728 | .189 | .80816 | .67970 | .69414 | .85591 |
| .140 | .68352 | .59958 | .61088 | .71033 | .190 | .81058 | .68116 | .69566 | .85883 |
| .141 | .68621 | .60141 | .61279 | .71338 | .191 | .81299 | .68261 | .69716 | .86176 |
| .142 | .68889 | .60323 | .61468 | .71641 | .192 | .81541 | .68407 | .69866 | .86468 |
| .143 | .69156 | .60504 | .61657 | .71945 | .193 | .81781 | .68551 | .70015 | .86760 |
| .144 | .69423 | .60684 | .61844 | .72248 | .194 | .82021 | .68694 | .70163 | .87051 |
| .145 | .69688 | .60863 | .62031 | .72551 | .195 | .82261 | .68838 | .70311 | .87343 |
| .146 | .69953 | .61041 | .62217 | .72854 | .196 | .82501 | .68981 | .70458 | .87634 |
| .147 | .70218 | .61219 | .62401 | .73155 | .197 | .82739 | .69122 | .70605 | .87927 |
| .148 | .70481 | .61395 | .62585 | .73457 | .198 | .82978 | .69264 | .70751 | .88218 |
| .149 | .70745 | .61571 | .62768 | .73758 | .199 | .83216 | .69405 | .70896 | .88509 |
| .150 | .71007 | .61745 | .62950 | .74059 | .200 | .83454 | .69545 | .71041 | .88802 |

## Table of $k$ and $\varphi$ for positive and negative $f$

| $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\varphi(f\leq 0)$ | $f$ | $k(f\geq 0)$ | $\varphi(f\geq 0)$ | $k(f\leq 0)$ | $\frac{1}{\varphi}(f\leq 0)$ |
|---|---|---|---|---|---|---|---|---|---|
| 0 | .00000 | .00000 | .00000 | .00000 | .50 | 1.45110 | .96740 | .95750 | .52219 |
| 1 | .17390 | .17218 | .17251 | .17425 | .51 | 1.46978 | .97336 | .96122 | .50977 |
| 2 | .24690 | .24206 | .24298 | .24794 | .52 | 1.48838 | .97920 | .96472 | .49755 |
| 3 | .30358 | .29474 | .29638 | .30555 | .53 | 1.50692 | .98492 | .96800 | .48554 |
| 4 | .35192 | .33838 | .34083 | .35503 | .54 | 1.52540 | .99052 | .97109 | .47369 |
| 5 | .39498 | .37617 | .37949 | .39946 | .55 | 1.54381 | .99601 | .97398 | .46202 |
| 6 | .43434 | .40976 | .41398 | .44040 | .56 | 1.56216 | 1.00138 | .97667 | .45051 |
| 7 | .47094 | .44013 | .44527 | .47878 | .57 | 1.58045 | 1.00666 | .97918 | .43914 |
| 8 | .50536 | .46793 | .47400 | .51522 | .58 | 1.59869 | 1.01183 | .98150 | .42792 |
| 9 | .53804 | .49361 | .50061 | .55013 | .59 | 1.61687 | 1.01690 | .98365 | .41681 |
| 0 | .56926 | .51751 | .52543 | .58381 | .60 | 1.63500 | 1.02188 | .98562 | .40584 |
| 1 | .59927 | .53988 | .54869 | .61651 | .61 | 1.65308 | 1.02676 | .98744 | .39496 |
| 2 | .62822 | .56091 | .57059 | .64840 | .62 | 1.67111 | 1.03155 | .98909 | .38419 |
| 3 | .65627 | .58077 | .59128 | .67963 | .63 | 1.68910 | 1.03626 | .99059 | .37351 |
| 4 | .68352 | .59958 | .61088 | .71033 | .64 | 1.70704 | 1.04088 | .99195 | .36292 |
| 5 | .71007 | .61745 | .62950 | .74059 | .65 | 1.72493 | 1.04541 | .99316 | .35241 |
| 6 | .73599 | .63448 | .64722 | .77050 | .66 | 1.74278 | 1.04987 | .99425 | .34197 |
| 7 | .76135 | .65072 | .66411 | .80014 | .67 | 1.76059 | 1.05424 | .99521 | .33159 |
| 8 | .78619 | .66627 | .68024 | .82956 | .68 | 1.77836 | 1.05855 | .99605 | .32127 |
| 9 | .81058 | .68116 | .69566 | .85884 | .69 | 1.79609 | 1.06277 | .99678 | .31100 |
| 0 | .83454 | .69545 | .71041 | .88802 | .70 | 1.81378 | 1.06693 | .99741 | .30078 |
| . | .85812 | .70919 | .72454 | .91714 | .71 | 1.83143 | 1.07101 | .99795 | .29060 |
| 2 | .88134 | .72241 | .73809 | .94627 | .72 | 1.84905 | 1.07503 | .99840 | .28045 |
| | .90423 | .73515 | .75108 | .97543 | .73 | 1.86664 | 1.07898 | .99878 | .27033 |
| 4 | .92682 | .74744 | .76355 | 1.00467 | .74 | 1.88419 | 1.08287 | .99908 | .26024 |
| 5 | .94914 | .75931 | .77552 | 1.03402 | .75 | 1.90170 | 1.08669 | .99933 | .25017 |
| 6 | .97118 | .77078 | .78701 | 1.06353 | .76 | 1.91919 | 1.09045 | .99952 | .24012 |
| 7 | .99299 | .78188 | .79805 | 1.09322 | .77 | 1.93664 | 1.09415 | .99966 | .23008 |
| 8 | 1.01456 | .79263 | .80866 | 1.12313 | .78 | 1.95407 | 1.09779 | .99977 | .22005 |
| 9 | 1.03592 | .80304 | .81885 | 1.15330 | .79 | 1.97146 | 1.10138 | .99985 | .21003 |
| 0 | 1.05708 | .81314 | .82864 | 1.18376 | .80 | 1.98883 | 1.10490 | .99991 | .20002 |
| 1 | 1.07805 | .82294 | .83804 | 1.21455 | .81 | 2.00617 | 1.10838 | .99995 | .19001 |
| 2 | 1.09884 | .83246 | .84707 | 1.24569 | .82 | 2.02348 | 1.11180 | .99997 | .18001 |
| 3 | 1.11947 | .84171 | .85575 | 1.27723 | .83 | 2.04076 | 1.11517 | .99998 | .17000 |
| 4 | 1.13993 | .85070 | .86407 | 1.30920 | .84 | 2.05802 | 1.11849 | .99999 | .16000 |
| 5 | 1.16025 | .85944 | .87206 | 1.34164 | .85 | 2.07525 | 1.12176 | 1.00000 | .15000 |
| 6 | 1.18042 | .86796 | .87973 | 1.37458 | .86 | 2.09246 | 1.12498 | 1.00000 | .14000 |
| 7 | 1.20046 | .87624 | .88708 | 1.40807 | .87 | 2.10965 | 1.12815 | 1.00000 | .13000 |
| 8 | 1.22036 | .88432 | .89413 | 1.44214 | .88 | 2.12681 | 1.13128 | 1.00000 | .12000 |
| 9 | 1.24015 | .89219 | .90088 | 1.47684 | .89 | 2.14395 | 1.13436 | 1.00000 | .11000 |
| 0 | 1.25981 | .89987 | .90773 | 1.51222 | .90 | 2.16106 | 1.13740 | 1.00000 | .10000 |
| 1 | 1.27937 | .90735 | .91351 | 1.54832 | .91 | 2.17816 | 1.14040 | 1.00000 | .09000 |
| 2 | 1.29882 | .91466 | .91941 | 1.58519 | .92 | 2.19524 | 1.14335 | 1.00000 | .08000 |
| 3 | 1.31817 | .92180 | .92504 | 1.62288 | .93 | 2.21229 | 1.14626 | 1.00000 | .07000 |
| 4 | 1.33742 | .92876 | .93041 | 1.66145 | .94 | 2.22932 | 1.14913 | 1.00000 | .06000 |
| 5 | 1.35658 | .93557 | .93553 | 1.70096 | .95 | 2.24634 | 1.15197 | 1.00000 | .05000 |
| 6 | 1.37565 | .94222 | .94040 | 1.74148 | .96 | 2.26333 | 1.15476 | 1.00000 | .04000 |
| 7 | 1.39463 | .94873 | .94502 | 1.78306 | .97 | 2.28030 | 1.15752 | 1.00000 | .03000 |
| 8 | 1.41353 | .95509 | .94941 | 1.82579 | .98 | 2.29726 | 1.16023 | 1.00000 | .02000 |
| 9 | 1.43236 | .96131 | .95357 | 1.86975 | .99 | 2.31420 | 1.16292 | 1.00000 | .01000 |
| 0 | 1.45110 | .96740 | .95750 | 1.91501 | 1.00 | 2.33112 | 1.16556 | 1.00000 | .00000 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .999983 | .999817 | .999650 | .999483 | .999315 | .999147 | .003333 |
| .02 | .999933 | .999600 | .999266 | .998932 | .998597 | .998261 | .006666 |
| .03 | .999850 | .999350 | .998850 | .998349 | .997846 | .997342 | .009999 |
| .04 | .999733 | .999067 | .998400 | .997732 | .997063 | .996391 | .013331 |
| .05 | .999583 | .998750 | .997917 | .997083 | .996246 | .995407 | .016663 |
| .06 | .999400 | .998401 | .997401 | .996400 | .995397 | .994391 | .019993 |
| .07 | .999184 | .998018 | .996852 | .995685 | .994515 | .993342 | .023322 |
| .08 | .998934 | .997602 | .996270 | .994937 | .993601 | .992261 | .026650 |
| .09 | .998651 | .997152 | .995655 | .994156 | .992654 | .991148 | .029976 |
| .10 | .998334 | .996670 | .995006 | .993342 | .991674 | .990002 | .033300 |
| .11 | .997985 | .996154 | .994325 | .992495 | .990662 | .988824 | .036622 |
| .12 | .997602 | .995606 | .993611 | .991616 | .989618 | .987614 | .039942 |
| .13 | .997186 | .995024 | .992864 | .990704 | .988541 | .986373 | .043260 |
| .14 | .996737 | .994410 | .992085 | .989759 | .987431 | .985099 | .046575 |
| .15 | .996254 | .993762 | .991272 | .988782 | .986290 | .983793 | .049888 |
| .16 | .995739 | .993081 | .990427 | .987773 | .985116 | .982455 | .053197 |
| .17 | .995190 | .992368 | .989549 | .986731 | .983911 | .981086 | .056503 |
| .18 | .994609 | .991622 | .988639 | .985657 | .982673 | .979685 | .059806 |
| .19 | .993994 | .990842 | .987695 | .984550 | .981404 | .978252 | .063105 |
| .20 | .993347 | .990031 | .986720 | .983412 | .980102 | .976788 | .066400 |
| .21 | .992666 | .989186 | .985712 | .982241 | .978769 | .975293 | .069692 |
| .22 | .991953 | .988309 | .984671 | .981038 | .977404 | .973766 | .072979 |
| .23 | .991207 | .987399 | .983599 | .979803 | .976007 | .972208 | .076262 |
| .24 | .990428 | .986456 | .982494 | .978536 | .974579 | .970619 | .079540 |
| .25 | .989616 | .985481 | .981357 | .977237 | .973120 | .968999 | .082814 |
| .26 | .988771 | .984474 | .980187 | .975907 | .971629 | .967348 | .086082 |
| .27 | .987894 | .983434 | .978986 | .974545 | .970106 | .965666 | .089346 |
| .28 | .986984 | .982362 | .977753 | .973151 | .968553 | .963954 | .092604 |
| .29 | .986042 | .981258 | .976487 | .971726 | .966968 | .962211 | .095856 |
| .30 | .985067 | .980121 | .975190 | .970269 | .965353 | .960437 | .099103 |
| .31 | .984060 | .978953 | .973861 | .968781 | .963706 | .958633 | .102344 |
| .32 | .983021 | .977752 | .972501 | .967261 | .962029 | .956798 | .105578 |
| .33 | .981949 | .976519 | .971109 | .965711 | .960321 | .954934 | .108807 |
| .34 | .980844 | .975255 | .969685 | .964129 | .958582 | .953039 | .112029 |
| .35 | .979708 | .973958 | .968230 | .962517 | .956813 | .951114 | .115244 |
| .36 | .978540 | .972630 | .966743 | .960873 | .955014 | .949160 | .118452 |
| .37 | .977339 | .971270 | .965226 | .959199 | .953184 | .947175 | .121653 |
| .38 | .976106 | .969879 | .963677 | .957494 | .951324 | .945161 | .124847 |
| .39 | .974842 | .968456 | .962097 | .955758 | .949434 | .943118 | .128033 |
| .40 | .973546 | .967002 | .960486 | .953992 | .947514 | .941045 | .131212 |
| .41 | .972218 | .965516 | .958844 | .952196 | .945564 | .938943 | .134383 |
| .42 | .970858 | .963999 | .957172 | .950369 | .943585 | .936811 | .137546 |
| .43 | .969467 | .962451 | .955468 | .948512 | .941575 | .934651 | .140701 |
| .44 | .968044 | .960872 | .953735 | .946625 | .939537 | .932462 | .143847 |
| .45 | .966590 | .959262 | .951970 | .944708 | .937469 | .930244 | .146984 |
| .46 | .965105 | .957621 | .950176 | .942762 | .935371 | .927997 | .150113 |
| .47 | .963588 | .955949 | .948351 | .940785 | .933245 | .925722 | .153233 |
| .48 | .962040 | .954247 | .946496 | .938779 | .931089 | .923419 | .156344 |
| .49 | .960461 | .952514 | .944610 | .936744 | .928905 | .921087 | .159445 |
| .50 | .958851 | .950750 | .942695 | .934679 | .929692 | .918727 | .162537 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .958851 | .950750 | .942695 | .934679 | .926692 | .918727 | .162537 |
| .51 | .957210 | .948956 | .940750 | .932585 | .924450 | .916340 | .165619 |
| .52 | .955539 | .947132 | .938776 | .930461 | .922180 | .913924 | .168691 |
| .53 | .953836 | .945278 | .936772 | .928309 | .919882 | .911481 | .171754 |
| .54 | .952104 | .943394 | .934738 | .926128 | .917555 | .909010 | .174806 |
| .55 | .950340 | .941479 | .932675 | .923918 | .915200 | .906512 | .177847 |
| .56 | .948547 | .939535 | .930583 | .921680 | .912817 | .903987 | .180878 |
| .57 | .946723 | .937562 | .928461 | .919413 | .910407 | .901434 | .183898 |
| .58 | .944869 | .935558 | .926311 | .917118 | .907969 | .898855 | .186907 |
| .59 | .942985 | .933526 | .924132 | .914794 | .905503 | .896249 | .189905 |
| .60 | .941071 | .931463 | .921924 | .912443 | .903010 | .893616 | .192892 |
| .61 | .939127 | .929372 | .919688 | .910063 | .900490 | .890957 | .195867 |
| .62 | .937153 | .927252 | .917423 | .907656 | .897942 | .888272 | .198831 |
| .63 | .935150 | .925102 | .915129 | .905221 | .895368 | .885560 | .201782 |
| .64 | .933118 | .922924 | .912808 | .902759 | .892767 | .882822 | .204722 |
| .65 | .931056 | .920717 | .910459 | .900270 | .890140 | .880059 | .207650 |
| .66 | .928965 | .918482 | .908081 | .897753 | .887486 | .877270 | .210565 |
| .67 | .926845 | .916218 | .905676 | .895209 | .884805 | .874455 | .213467 |
| .68 | .924696 | .913926 | .903243 | .892638 | .882099 | .871615 | .216357 |
| .69 | .922518 | .911605 | .900783 | .890041 | .879366 | .868750 | .219234 |
| .70 | .920311 | .909257 | .898296 | .887416 | .876608 | .865860 | .222098 |
| .71 | .918076 | .906880 | .895781 | .884766 | .873824 | .862945 | .224949 |
| .72 | .915812 | .904476 | .893239 | .882089 | .871015 | .860005 | .227787 |
| .73 | .913520 | .902044 | .890670 | .879386 | .868180 | .857041 | .230610 |
| .74 | .911200 | .899585 | .888075 | .876657 | .865320 | .854052 | .233421 |
| .75 | .908852 | .897099 | .885453 | .873903 | .862435 | .851040 | .236217 |
| .76 | .906476 | .894585 | .882805 | .871122 | .859526 | .848003 | .238999 |
| .77 | .904072 | .892044 | .880130 | .868316 | .856591 | .844943 | .241768 |
| .78 | .901640 | .889477 | .877429 | .865485 | .853632 | .841859 | .244521 |
| .79 | .899181 | .886882 | .874703 | .862629 | .850649 | .838751 | .247261 |
| .80 | .896695 | .884261 | .871950 | .859748 | .847642 | .835621 | .249986 |
| .81 | .894182 | .881614 | .869172 | .856842 | .844611 | .832467 | .252695 |
| .82 | .891641 | .878941 | .866368 | .853911 | .841556 | .829290 | .255390 |
| .83 | .889074 | .876241 | .863539 | .850956 | .838477 | .826091 | .258070 |
| .84 | .886480 | .873515 | .860685 | .847977 | .835375 | .822869 | .260735 |
| .85 | .883859 | .870764 | .857806 | .844973 | .832250 | .819625 | .263384 |
| .86 | .881212 | .867987 | .854903 | .841945 | .829102 | .816359 | .266017 |
| .87 | .878539 | .865184 | .851974 | .838894 | .825931 | .813070 | .268635 |
| .88 | .875840 | .862357 | .849021 | .835819 | .822737 | .809760 | .271237 |
| .89 | .873114 | .859504 | .846044 | .832721 | .819521 | .806429 | .273823 |
| .90 | .870363 | .856626 | .843043 | .829600 | .816282 | .803076 | .276393 |
| .91 | .867587 | .853723 | .840018 | .826455 | .813021 | .799702 | .278946 |
| .92 | .864784 | .850796 | .836969 | .823288 | .809739 | .796307 | .281483 |
| .93 | .861957 | .847844 | .833896 | .820098 | .806434 | .792891 | .284003 |
| .94 | .859104 | .844868 | .830801 | .816885 | .803108 | .789454 | .286507 |
| .95 | .856227 | .841868 | .827682 | .813651 | .799761 | .785998 | .288993 |
| .96 | .853325 | .838844 | .824539 | .810394 | .796392 | .782521 | .291463 |
| .97 | .850398 | .835797 | .821375 | .807115 | .793003 | .779024 | .293916 |
| .98 | .847446 | .832725 | .818187 | .803815 | .789593 | .775507 | .296351 |
| .99 | .844471 | .829631 | .814977 | .800493 | .786162 | .771971 | .298769 |
| 1.00 | .841471 | .826513 | .811745 | .797149 | .782711 | .768415 | .301169 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .841471 | .826513 | .811745 | .797149 | .782711 | .768415 | .301169 |
| 1.01 | .838447 | .823372 | .808490 | .793785 | .779240 | .764840 | .303551 |
| 1.02 | .835400 | .820208 | .805214 | .790399 | .775749 | .761247 | .305916 |
| 1.03 | .832329 | .817022 | .801916 | .786993 | .772238 | .757634 | .308262 |
| 1.04 | .829235 | .813813 | .798596 | .783566 | .768707 | .754003 | .310591 |
| 1.05 | .826117 | .810582 | .795255 | .780119 | .765157 | .750354 | .312901 |
| 1.06 | .822977 | .807329 | .791893 | .776652 | .761588 | .746686 | .315193 |
| 1.07 | .819814 | .804054 | .788511 | .773165 | .758000 | .743001 | .317467 |
| 1.08 | .816628 | .800757 | .785107 | .769658 | .754394 | .739298 | .319722 |
| 1.09 | .813419 | .797439 | .781683 | .766132 | .750768 | .735577 | .321958 |
| 1.10 | .810189 | .794100 | .778238 | .762586 | .747125 | .731839 | .324175 |
| 1.11 | .806936 | .790739 | .774774 | .759021 | .743463 | .728084 | .326373 |
| 1.12 | .803661 | .787357 | .771289 | .755437 | .739784 | .724313 | .328552 |
| 1.13 | .800365 | .783955 | .767785 | .751834 | .736087 | .720524 | .330712 |
| 1.14 | .797047 | .780532 | .764261 | .748213 | .732372 | .716720 | .332853 |
| 1.15 | .793708 | .777089 | .760718 | .744574 | .728640 | .712899 | .334974 |
| 1.16 | .790348 | .773626 | .757155 | .740917 | .724891 | .709062 | .337076 |
| 1.17 | .786966 | .770143 | .753574 | .737241 | .721125 | .705209 | .339158 |
| 1.18 | .783564 | .766640 | .749974 | .733548 | .717343 | .701341 | .341220 |
| 1.19 | .780142 | .763117 | .746356 | .729838 | .713544 | .697458 | .343262 |
| 1.20 | .776699 | .759576 | .742719 | .726110 | .709729 | .693559 | .345285 |
| 1.21 | .773236 | .756015 | .739065 | .722366 | .705899 | .689646 | .347287 |
| 1.22 | .769754 | .752435 | .735392 | .718604 | .702052 | .685718 | .349269 |
| 1.23 | .766251 | .748837 | .731702 | .714826 | .698190 | .681775 | .351230 |
| 1.24 | .762729 | .745220 | .727994 | .711032 | .694313 | .677819 | .353172 |
| 1.25 | .759188 | .741584 | .724269 | .707221 | .690420 | .673848 | .355092 |
| 1.26 | .755627 | .737931 | .720527 | .703394 | .686513 | .669864 | .356992 |
| 1.27 | .752048 | .734260 | .716768 | .699552 | .682591 | .665866 | .358872 |
| 1.28 | .748450 | .730571 | .712993 | .695694 | .678655 | .661855 | .360730 |
| 1.29 | .744833 | .726865 | .709202 | .691821 | .674704 | .657831 | .362568 |
| 1.30 | .741199 | .723142 | .705394 | .687933 | .670740 | .653794 | .364384 |
| 1.31 | .737546 | .719401 | .701570 | .684031 | .666762 | .649744 | .366180 |
| 1.32 | .733875 | .715644 | .697731 | .680113 | .662770 | .645682 | .367954 |
| 1.33 | .730187 | .711870 | .693876 | .676181 | .658765 | .641608 | .369707 |
| 1.34 | .726481 | .708080 | .690006 | .672235 | .654747 | .637522 | .371439 |
| 1.35 | .722758 | .704274 | .686121 | .668275 | .650717 | .633424 | .373149 |
| 1.36 | .719018 | .700452 | .682221 | .664302 | .646673 | .629315 | .374838 |
| 1.37 | .715261 | .696614 | .678306 | .660315 | .642618 | .625195 | .376505 |
| 1.38 | .711488 | .692761 | .674377 | .656314 | .638550 | .621064 | .378150 |
| 1.39 | .707698 | .688892 | .670434 | .652301 | .634470 | .616922 | .379774 |
| 1.40 | .703893 | .685009 | .666477 | .648275 | .630379 | .612769 | .381375 |
| 1.41 | .700071 | .681110 | .662506 | .644236 | .626276 | .608606 | .382955 |
| 1.42 | .696234 | .677197 | .658522 | .640185 | .622162 | .604433 | .384513 |
| 1.43 | .692381 | .673270 | .654525 | .636122 | .618037 | .600251 | .386048 |
| 1.44 | .688513 | .669328 | .650514 | .632047 | .613902 | .596059 | .387562 |
| 1.45 | .684630 | .665373 | .646491 | .627960 | .609756 | .591857 | .389053 |
| 1.46 | .680732 | .661404 | .642456 | .623862 | .605599 | .587646 | .390522 |
| 1.47 | .676819 | .657422 | .638408 | .619752 | .601433 | .583427 | .391968 |
| 1.48 | .672892 | .653426 | .634347 | .615632 | .597257 | .579198 | .393392 |
| 1.49 | .668952 | .649417 | .630275 | .611501 | .593071 | .574962 | .394794 |
| 1.50 | .664997 | .645396 | .626192 | .607360 | .588876 | .570717 | .396173 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .664997 | .645396 | .626192 | .607360 | .588876 | .570717 | .396173 |
| 1.51 | .661028 | .641362 | .622097 | .603208 | .584672 | .566464 | .397529 |
| 1.52 | .657046 | .637315 | .617991 | .599047 | .580459 | .562204 | .398863 |
| 1.53 | .653051 | .633257 | .613874 | .594875 | .576237 | .557936 | .400174 |
| 1.54 | .649043 | .629187 | .609746 | .590694 | .572007 | .553661 | .401462 |
| 1.55 | .645022 | .625105 | .605608 | .586504 | .567769 | .549379 | .402727 |
| 1.56 | .640988 | .621011 | .601459 | .582304 | .563523 | .545090 | .403969 |
| 1.57 | .636942 | .616907 | .597301 | .578096 | .559269 | .540795 | .405189 |
| 1.58 | .632885 | .612792 | .593132 | .573879 | .555008 | .536493 | .406385 |
| 1.59 | .628815 | .608666 | .588954 | .569654 | .550739 | .532186 | .407558 |
| 1.60 | .624734 | .604529 | .584767 | .565421 | .546464 | .527873 | .408708 |
| 1.61 | .620641 | .600382 | .580571 | .561180 | .542182 | .523554 | .409835 |
| 1.62 | .616537 | .596226 | .576366 | .556931 | .537893 | .519229 | .410939 |
| 1.63 | .612422 | .592059 | .572153 | .552674 | .533598 | .514900 | .412019 |
| 1.64 | .608297 | .587883 | .567931 | .548411 | .529297 | .510566 | .413076 |
| 1.65 | .604161 | .583698 | .563701 | .544140 | .524991 | .506227 | .414110 |
| 1.66 | .600014 | .579504 | .559463 | .539863 | .520679 | .501884 | .415120 |
| 1.67 | .595858 | .575300 | .555217 | .535580 | .516361 | .497537 | .416107 |
| 1.68 | .591692 | .571089 | .550964 | .531290 | .512039 | .493186 | .417071 |
| 1.69 | .587517 | .566869 | .546704 | .526994 | .507711 | .488831 | .418011 |
| 1.70 | .583332 | .562640 | .542437 | .522692 | .503380 | .484473 | .418927 |
| 1.71 | .579138 | .558404 | .538163 | .518385 | .499043 | .480111 | .419820 |
| 1.72 | .574936 | .554161 | .533883 | .514073 | .494703 | .475747 | .420690 |
| 1.73 | .570725 | .549910 | .529596 | .509755 | .490359 | .471380 | .421536 |
| 1.74 | .566505 | .545651 | .525304 | .505433 | .486011 | .467011 | .422358 |
| 1.75 | .562278 | .541386 | .521006 | .501106 | .481660 | .462639 | .423156 |
| 1.76 | .558042 | .537114 | .516702 | .496775 | .477305 | .458265 | .423931 |
| 1.77 | .553799 | .532836 | .512393 | .492440 | .472948 | .453890 | .424682 |
| 1.78 | .549549 | .528552 | .508079 | .488101 | .468588 | .449513 | .425410 |
| 1.79 | .545291 | .524261 | .503761 | .483758 | .464225 | .445135 | .426114 |
| 1.80 | .541026 | .519965 | .499437 | .479412 | .459861 | .440756 | .426794 |
| 1.81 | .536755 | .515663 | .495110 | .475063 | .455494 | .436376 | .427450 |
| 1.82 | .532478 | .511356 | .490778 | .470711 | .451126 | .431995 | .428082 |
| 1.83 | .528194 | .507044 | .486442 | .466356 | .446756 | .427614 | .428691 |
| 1.84 | .523904 | .502727 | .482103 | .461999 | .442385 | .423233 | .429276 |
| 1.85 | .519608 | .498406 | .477761 | .457639 | .438013 | .418852 | .429837 |
| 1.86 | .515307 | .494081 | .473415 | .453278 | .433640 | .414472 | .430374 |
| 1.87 | .511001 | .489751 | .469067 | .448915 | .429266 | .410092 | .430888 |
| 1.88 | .506689 | .485417 | .464715 | .444550 | .424892 | .405713 | .431377 |
| 1.89 | .502373 | .481080 | .460362 | .440185 | .420519 | .401335 | .431843 |
| 1.90 | .498053 | .476740 | .456006 | .435818 | .416145 | .396958 | .432285 |
| 1.91 | .493728 | .472396 | .451648 | .431450 | .411772 | .392583 | .432704 |
| 1.92 | .489399 | .468050 | .447289 | .427082 | .407399 | .388210 | .433098 |
| 1.93 | .485066 | .463701 | .442928 | .422714 | .403027 | .383838 | .433469 |
| 1.94 | .480729 | .459349 | .438566 | .418345 | .398656 | .379469 | .433816 |
| 1.95 | .476390 | .454996 | .434203 | .413977 | .394287 | .375102 | .434139 |
| 1.96 | .472047 | .450640 | .429839 | .409609 | .389919 | .370738 | .434438 |
| 1.97 | .467701 | .446283 | .425475 | .405242 | .385553 | .366377 | .434714 |
| 1.98 | .463353 | .441924 | .421110 | .400875 | .381189 | .362019 | .434965 |
| 1.99 | .459002 | .437564 | .416745 | .396510 | .376827 | .357665 | .435193 |
| 2.00 | .454649 | .433203 | .412381 | .392146 | .372467 | .353314 | .435398 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .454649 | .433203 | .412381 | .392146 | .372467 | .353314 | .435398 |
| 2.01 | .450294 | .428841 | .408017 | .387784 | .368111 | .348967 | .435578 |
| 2.02 | .445937 | .424479 | .403653 | .383423 | .363757 | .344624 | .435735 |
| 2.03 | .441579 | .420117 | .399291 | .379065 | .359407 | .340285 | .435869 |
| 2.04 | .437220 | .415754 | .394929 | .374708 | .355059 | .335951 | .435978 |
| 2.05 | .432860 | .411392 | .390569 | .370355 | .350716 | .331621 | .436065 |
| 2.06 | .428499 | .407030 | .386211 | .366004 | .346376 | .327297 | .436127 |
| 2.07 | .424137 | .402669 | .381854 | .361656 | .342041 | .322977 | .436166 |
| 2.08 | .419775 | .398308 | .377499 | .357311 | .337709 | .318663 | .436182 |
| 2.09 | .415414 | .393949 | .373147 | .352969 | .333383 | .314355 | .436173 |
| 2.10 | .411052 | .389591 | .368797 | .348631 | .329061 | .310053 | .436142 |
| 2.11 | .406691 | .385235 | .364450 | .344297 | .324744 | .305756 | .436087 |
| 2.12 | .402330 | .380881 | .360106 | .339967 | .320432 | .301466 | .436009 |
| 2.13 | .397971 | .376528 | .355765 | .335642 | .316126 | .297183 | .435907 |
| 2.14 | .393612 | .372178 | .351427 | .331321 | .311825 | .292906 | .435782 |
| 2.15 | .389255 | .367831 | .347093 | .327004 | .307530 | .288636 | .435634 |
| 2.16 | .384900 | .363486 | .342764 | .322693 | .303241 | .284373 | .435462 |
| 2.17 | .380546 | .359144 | .338438 | .318387 | .298959 | .280118 | .435268 |
| 2.18 | .376194 | .354806 | .334116 | .314087 | .294683 | .275870 | .435050 |
| 2.19 | .371845 | .350470 | .329799 | .309792 | .290414 | .271630 | .434809 |
| 2.20 | .367498 | .346139 | .325487 | .305503 | .286152 | .267399 | .434545 |
| 2.21 | .363154 | .341811 | .321180 | .301220 | .281897 | .263175 | .434258 |
| 2.22 | .358813 | .337488 | .316878 | .296942 | .277649 | .258960 | .433948 |
| 2.23 | .354475 | .333169 | .312581 | .292674 | .273409 | .254753 | .433616 |
| 2.24 | .350141 | .328854 | .308291 | .288411 | .269177 | .250556 | .433260 |
| 2.25 | .345810 | .324544 | .304006 | .284154 | .264953 | .246367 | .432882 |
| 2.26 | .341483 | .320240 | .299727 | .279905 | .260737 | .242188 | .432481 |
| 2.27 | .337161 | .315940 | .295455 | .275664 | .256530 | .238018 | .432057 |
| 2.28 | .332842 | .311646 | .291189 | .271430 | .252331 | .233858 | .431611 |
| 2.29 | .328529 | .307358 | .286930 | .267203 | .248141 | .229708 | .431142 |
| 2.30 | .324220 | .303075 | .282678 | .262985 | .243961 | .225568 | .430650 |
| 2.31 | .319916 | .298799 | .278433 | .258776 | .239789 | .221439 | .430137 |
| 2.32 | .315617 | .294529 | .274195 | .254574 | .235627 | .217320 | .429600 |
| 2.33 | .311324 | .290266 | .269966 | .250382 | .231475 | .213211 | .429042 |
| 2.34 | .307036 | .286009 | .265744 | .246198 | .227333 | .209114 | .428461 |
| 2.35 | .302755 | .281760 | .261530 | .242023 | .223201 | .205028 | .427859 |
| 2.36 | .298479 | .277517 | .257324 | .237858 | .219079 | .200953 | .427234 |
| 2.37 | .294210 | .273282 | .253127 | .233703 | .214968 | .196889 | .426587 |
| 2.38 | .289947 | .269055 | .248939 | .229557 | .210868 | .192837 | .425918 |
| 2.39 | .285692 | .264836 | .244760 | .225421 | .206779 | .188798 | .425228 |
| 2.40 | .281443 | .260624 | .240590 | .221295 | .202700 | .184770 | .424515 |
| 2.41 | .277201 | .256422 | .236429 | .217179 | .198633 | .180755 | .423781 |
| 2.42 | .272967 | .252227 | .232277 | .213074 | .194578 | .176752 | .423026 |
| 2.43 | .268741 | .248041 | .228136 | .208980 | .190534 | .172762 | .422248 |
| 2.44 | .264523 | .243865 | .224004 | .204897 | .186503 | .168784 | .421450 |
| 2.45 | .260312 | .239697 | .219883 | .200825 | .182483 | .164820 | .420630 |
| 2.46 | .256110 | .235539 | .215772 | .196764 | .178476 | .160869 | .419789 |
| 2.47 | .251916 | .231390 | .211671 | .192715 | .174481 | .156932 | .418926 |
| 2.48 | .247732 | .227251 | .207581 | .188678 | .170499 | .153008 | .418043 |
| 2.49 | .243556 | .223122 | .203503 | .184652 | .166530 | .149098 | .417138 |
| 2.50 | .239389 | .219003 | .199435 | .180639 | .162574 | .145202 | .416213 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | .239389 | .219003 | .199435 | .180639 | .162574 | .145202 | .416213 |
| 2.51 | .235231 | .214895 | .195379 | .176638 | .158631 | .141320 | .415267 |
| 2.52 | .231084 | .210797 | .191334 | .172650 | .154702 | .137452 | .414300 |
| 2.53 | .226946 | .206710 | .187301 | .168674 | .150786 | .133599 | .413312 |
| 2.54 | .222817 | .202634 | .183281 | .164712 | .146885 | .129761 | .412304 |
| 2.55 | .218699 | .198569 | .179272 | .160762 | .142997 | .125938 | .411276 |
| 2.56 | .214592 | .194516 | .175276 | .156826 | .139123 | .122129 | .410227 |
| 2.57 | .210495 | .190474 | .171292 | .152903 | .135264 | .118336 | .409158 |
| 2.58 | .206409 | .186443 | .167321 | .148994 | .131419 | .114559 | .408069 |
| 2.59 | .202334 | .182425 | .163363 | .145098 | .127589 | .110797 | .406959 |
| 2.60 | .198270 | .178419 | .159418 | .141217 | .123774 | .107050 | .405830 |
| 2.61 | .194217 | .174426 | .155486 | .137350 | .119974 | .103320 | .404681 |
| 2.62 | .190176 | .170445 | .151568 | .133497 | .116190 | .099606 | .403513 |
| 2.63 | .186147 | .166476 | .147663 | .129659 | .112420 | .095908 | .402324 |
| 2.64 | .182130 | .162521 | .143772 | .125836 | .108667 | .092226 | .401117 |
| 2.65 | .178125 | .158579 | .139896 | .122027 | .104929 | .088561 | .399889 |
| 2.66 | .174132 | .154650 | .136033 | .118234 | .101207 | .084913 | .398643 |
| 2.67 | .170152 | .150735 | .132185 | .114456 | .097501 | .081282 | .397377 |
| 2.68 | .166185 | .146833 | .128352 | .110693 | .093812 | .077667 | .396093 |
| 2.69 | .162230 | .142945 | .124533 | .106946 | .090139 | .074070 | .394789 |
| 2.70 | .158289 | .139071 | .120729 | .103215 | .086482 | .070491 | .393467 |
| 2.71 | .154361 | .135212 | .116941 | .099499 | .082842 | .066929 | .392126 |
| 2.72 | .150446 | .131366 | .113167 | .095800 | .079219 | .063384 | .390766 |
| 2.73 | .146546 | .127536 | .109410 | .092117 | .075614 | .059858 | .389388 |
| 2.74 | .142659 | .123720 | .105667 | .088451 | .072025 | .056349 | .387992 |
| 2.75 | .138786 | .119919 | .101941 | .084801 | .068454 | .052858 | .386578 |
| 2.76 | .134927 | .116133 | .098230 | .081168 | .064901 | .049386 | .385145 |
| 2.77 | .131083 | .112363 | .094536 | .077552 | .061365 | .045933 | .383694 |
| 2.78 | .127253 | .108608 | .090858 | .073953 | .057847 | .042497 | .382226 |
| 2.79 | .123439 | .104869 | .087196 | .070371 | .054347 | .039081 | .380740 |
| 2.80 | .119639 | .101145 | .083552 | .066807 | .050865 | .035683 | .379236 |
| 2.81 | .115854 | .097438 | .079923 | .063260 | .047402 | .032305 | .377715 |
| 2.82 | .112084 | .093746 | .076312 | .059731 | .043956 | .028946 | .376176 |
| 2.83 | .108330 | .090071 | .072718 | .056220 | .040530 | .025605 | .374621 |
| 2.84 | .104592 | .086412 | .069141 | .052727 | .037122 | .022285 | .373048 |
| 2.85 | .100869 | .082770 | .065582 | .049252 | .033733 | .018984 | .371458 |
| 2.86 | .097163 | .079145 | .062040 | .045795 | .030364 | .015702 | .369852 |
| 2.87 | .093472 | .075537 | .058516 | .042357 | .027013 | .012440 | .368229 |
| 2.88 | .089798 | .071946 | .055010 | .038937 | .023682 | .009199 | .366589 |
| 2.89 | .086141 | .068372 | .051521 | .035537 | .020370 | .005977 | .364934 |
| 2.90 | .082500 | .064816 | .048051 | .032155 | .017077 | .002776 | .363261 |
| 2.91 | .078876 | .061277 | .044600 | .028792 | .013805 | -.000405 | .361573 |
| 2.92 | .075268 | .057756 | .041167 | .025448 | .010552 | -.003566 | .359869 |
| 2.93 | .071678 | .054253 | .037752 | .022124 | .007319 | -.006706 | .358149 |
| 2.94 | .068105 | .050767 | .034356 | .018819 | .004106 | -.009825 | .356413 |
| 2.95 | .064550 | .047300 | .030979 | .015533 | .000914 | -.012924 | .354662 |
| 2.96 | .061012 | .043852 | .027622 | .012268 | -.002259 | -.016002 | .352895 |
| 2.97 | .057492 | .040422 | .024283 | .009022 | -.005411 | -.019058 | .351113 |
| 2.98 | .053990 | .037010 | .020963 | .005796 | -.008542 | -.022094 | .349316 |
| 2.99 | .050506 | .033617 | .017664 | .002590 | -.011652 | -.025108 | .347504 |
| 3.00 | .047040 | .030244 | .014383 | -.000595 | -.014742 | -.028101 | .345677 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .999147 | .998978 | .998808 | .998636 | .998464 | .998289 | .003333 |
| .02 | .998261 | .997923 | .997583 | .997241 | .996896 | .996548 | .006666 |
| .03 | .997342 | .996836 | .996326 | .995814 | .995297 | .994775 | .009999 |
| .04 | .996391 | .995716 | .995038 | .994355 | .993667 | .992972 | .013331 |
| .05 | .995407 | .994564 | .993717 | .992864 | .992005 | .991139 | .016663 |
| .06 | .994391 | .993381 | .992365 | .991342 | .990313 | .989274 | .019993 |
| .07 | .993342 | .992164 | .990980 | .989789 | .988589 | .987380 | .023322 |
| .08 | .992261 | .990916 | .989565 | .988205 | .986835 | .985455 | .026650 |
| .09 | .991148 | .989636 | .988117 | .986589 | .985051 | .983500 | .029976 |
| .10 | .990002 | .988324 | .986638 | .984942 | .983235 | .981515 | .033300 |
| .11 | .988824 | .986980 | .985128 | .983265 | .981389 | .979499 | .036622 |
| .12 | .987614 | .985605 | .983586 | .981556 | .979513 | .977454 | .039942 |
| .13 | .986373 | .984197 | .982013 | .979816 | .977606 | .975380 | .043260 |
| .14 | .985099 | .982758 | .980408 | .978046 | .975670 | .973275 | .046575 |
| .15 | .983793 | .981288 | .978773 | .976246 | .973703 | .971142 | .049888 |
| .16 | .982455 | .979786 | .977107 | .974414 | .971706 | .968979 | .053197 |
| .17 | .981086 | .978253 | .975410 | .972553 | .969679 | .966786 | .056503 |
| .18 | .979685 | .976689 | .973682 | .970661 | .967623 | .964565 | .059806 |
| .19 | .978252 | .975093 | .971923 | .968739 | .965537 | .962314 | .063105 |
| .20 | .976788 | .973467 | .970134 | .966787 | .963422 | .960035 | .066400 |
| .21 | .975293 | .971809 | .968315 | .964805 | .961277 | .957727 | .069692 |
| .22 | .973766 | .970121 | .966465 | .962793 | .959103 | .955391 | .072979 |
| .23 | .972208 | .968402 | .964584 | .960752 | .956900 | .953026 | .076262 |
| .24 | .970619 | .966652 | .962674 | .958681 | .954668 | .950633 | .079540 |
| .25 | .968999 | .964872 | .960734 | .956580 | .952408 | .948211 | .082814 |
| .26 | .967348 | .963061 | .958763 | .954451 | .950118 | .945762 | .086082 |
| .27 | .965666 | .961220 | .956763 | .952292 | .947800 | .943284 | .089346 |
| .28 | .963954 | .959349 | .954734 | .950104 | .945454 | .940779 | .092604 |
| .29 | .962211 | .957447 | .952674 | .947887 | .943079 | .938247 | .095856 |
| .30 | .960437 | .955516 | .950586 | .945641 | .940676 | .935687 | .099103 |
| .31 | .958633 | .953555 | .948468 | .943366 | .938245 | .933099 | .102344 |
| .32 | .956798 | .951564 | .946321 | .941063 | .935787 | .930485 | .105578 |
| .33 | .954934 | .949543 | .944144 | .938732 | .933300 | .927843 | .108807 |
| .34 | .953039 | .947493 | .941939 | .936372 | .930786 | .925175 | .112029 |
| .35 | .951114 | .945413 | .939705 | .933984 | .928245 | .922480 | .115244 |
| .36 | .949160 | .943304 | .937443 | .931568 | .925676 | .919759 | .118452 |
| .37 | .947175 | .941166 | .935151 | .929125 | .923080 | .917011 | .121653 |
| .38 | .945161 | .938999 | .932832 | .926653 | .920457 | .914237 | .124847 |
| .39 | .943118 | .936803 | .930484 | .924154 | .917807 | .911437 | .128033 |
| .40 | .941045 | .934578 | .928108 | .921628 | .915131 | .908611 | .131212 |
| .41 | .938943 | .932325 | .925704 | .919074 | .912428 | .905759 | .134383 |
| .42 | .936811 | .930043 | .923272 | .916493 | .909698 | .902882 | .137546 |
| .43 | .934651 | .927733 | .920813 | .913885 | .906943 | .899979 | .140701 |
| .44 | .932462 | .925394 | .918326 | .911251 | .904161 | .897051 | .143847 |
| .45 | .930244 | .923027 | .915811 | .908589 | .901354 | .894098 | .146984 |
| .46 | .927997 | .920633 | .913270 | .905902 | .898521 | .891120 | .150113 |
| .47 | .925722 | .918210 | .910701 | .903187 | .895662 | .888117 | .153233 |
| .48 | .923419 | .915760 | .908105 | .900447 | .892778 | .885090 | .156344 |
| .49 | .921087 | .913282 | .905483 | .897681 | .889869 | .882039 | .159445 |
| .50 | .918727 | .910777 | .902833 | .894888 | .886934 | .878963 | .162537 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .918727 | .910777 | .902833 | .894888 | .886934 | .878963 | .162537 |
| .51 | .916340 | .908245 | .900158 | .892070 | .883975 | .875864 | .165619 |
| .52 | .913924 | .905685 | .897456 | .889227 | .880991 | .872740 | .168691 |
| .53 | .911481 | .903099 | .894727 | .886358 | .877982 | .869593 | .171754 |
| .54 | .909010 | .900486 | .891973 | .883464 | .874950 | .866422 | .174806 |
| .55 | .906512 | .897846 | .889193 | .880544 | .871892 | .863228 | .177847 |
| .56 | .903987 | .895180 | .886387 | .877600 | .868811 | .860011 | .180878 |
| .57 | .901434 | .892487 | .883556 | .874632 | .865706 | .856771 | .183898 |
| .58 | .898855 | .889768 | .880699 | .871638 | .862578 | .853509 | .186907 |
| .59 | .896249 | .887023 | .877817 | .868621 | .859426 | .850223 | .189905 |
| .60 | .893616 | .884253 | .874910 | .865579 | .856250 | .846916 | .192892 |
| .61 | .890957 | .881456 | .871978 | .862513 | .853052 | .843586 | .195867 |
| .62 | .888272 | .878634 | .869021 | .859423 | .849830 | .840234 | .198831 |
| .63 | .885560 | .875787 | .866040 | .856310 | .846586 | .836861 | .201782 |
| .64 | .882822 | .872915 | .863035 | .853173 | .843320 | .833465 | .204722 |
| .65 | .880059 | .870017 | .860005 | .850013 | .840031 | .830049 | .207650 |
| .66 | .877270 | .867095 | .856951 | .846829 | .836719 | .826611 | .210565 |
| .67 | .874455 | .864148 | .853874 | .843623 | .833386 | .823152 | .213467 |
| .68 | .871615 | .861176 | .850773 | .840394 | .830031 | .819673 | .216357 |
| .69 | .868750 | .858181 | .847648 | .837143 | .826654 | .816173 | .219234 |
| .70 | .865860 | .855161 | .844501 | .833869 | .823256 | .812652 | .222098 |
| .71 | .862945 | .852117 | .841330 | .830573 | .819837 | .809111 | .224949 |
| .72 | .860005 | .849049 | .838136 | .827255 | .816397 | .805550 | .227787 |
| .73 | .857041 | .845957 | .834919 | .823916 | .812936 | .801970 | .230610 |
| .74 | .854052 | .842843 | .831680 | .820554 | .809454 | .798370 | .233421 |
| .75 | .851040 | .839705 | .828419 | .817172 | .805952 | .794750 | .236217 |
| .76 | .848003 | .836543 | .825135 | .813768 | .802430 | .791111 | .238999 |
| .77 | .844943 | .833359 | .821830 | .810343 | .798888 | .787454 | .241768 |
| .78 | .841859 | .830152 | .818502 | .806897 | .795325 | .783777 | .244521 |
| .79 | .838751 | .826923 | .815153 | .803430 | .791744 | .780082 | .247261 |
| .80 | .835621 | .823671 | .811783 | .799944 | .788143 | .776368 | .249986 |
| .81 | .832467 | .820398 | .808391 | .796437 | .784522 | .772637 | .252695 |
| .82 | .829290 | .817102 | .804979 | .792910 | .780883 | .768887 | .255390 |
| .83 | .826091 | .813784 | .801545 | .789363 | .777225 | .765120 | .258070 |
| .84 | .822869 | .810445 | .798092 | .785796 | .773548 | .761335 | .260735 |
| .85 | .819625 | .807085 | .794617 | .782211 | .769853 | .757533 | .263384 |
| .86 | .816359 | .803703 | .791123 | .778606 | .766140 | .753714 | .266017 |
| .87 | .813070 | .800300 | .787608 | .774982 | .762409 | .749878 | .268635 |
| .88 | .809760 | .796877 | .784074 | .771339 | .758660 | .746025 | .271237 |
| .89 | .806429 | .793433 | .780520 | .767677 | .754894 | .742156 | .273823 |
| .90 | .803076 | .789968 | .776946 | .763998 | .751110 | .738271 | .276393 |
| .91 | .799702 | .786484 | .773354 | .760300 | .747309 | .734370 | .278946 |
| .92 | .796307 | .782979 | .769742 | .756584 | .743492 | .730453 | .281483 |
| .93 | .792891 | .779455 | .766112 | .752850 | .739657 | .726520 | .284003 |
| .94 | .789454 | .775911 | .762463 | .749099 | .735807 | .722572 | .286507 |
| .95 | .785998 | .772347 | .758796 | .745331 | .731940 | .718609 | .288993 |
| .96 | .782521 | .768765 | .755111 | .741546 | .728057 | .714631 | .291463 |
| .97 | .779024 | .765163 | .751407 | .737743 | .724158 | .710639 | .293916 |
| .98 | .775507 | .761543 | .747686 | .733924 | .720244 | .706632 | .296351 |
| .99 | .771971 | .757904 | .743948 | .730089 | .716314 | .702611 | .298769 |
| 1.00 | .768415 | .754247 | .740192 | .726237 | .712369 | .698575 | .301169 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .768415 | .754247 | .740192 | .726237 | .712369 | .698575 | .301169 |
| 1.01 | .764840 | .750571 | .736419 | .722370 | .708410 | .694527 | .303551 |
| 1.02 | .761247 | .746878 | .732629 | .718486 | .704436 | .690464 | .305916 |
| 1.03 | .757634 | .743167 | .728823 | .714587 | .700447 | .686388 | .308262 |
| 1.04 | .754003 | .739439 | .725000 | .710673 | .696444 | .682300 | .310591 |
| 1.05 | .750354 | .735693 | .721161 | .706744 | .692427 | .678198 | .312901 |
| 1.06 | .746686 | .731930 | .717306 | .702799 | .688396 | .674084 | .315193 |
| 1.07 | .743001 | .728151 | .713435 | .698840 | .684352 | .669957 | .317467 |
| 1.08 | .739298 | .724354 | .709549 | .694867 | .680295 | .665818 | .319722 |
| 1.09 | .735577 | .720542 | .705647 | .690879 | .676224 | .661667 | .321958 |
| 1.10 | .731839 | .716713 | .701731 | .686878 | .672141 | .657505 | .324175 |
| 1.11 | .728084 | .712868 | .697799 | .682863 | .668044 | .653331 | .326373 |
| 1.12 | .724313 | .709007 | .693853 | .678834 | .663936 | .649146 | .328552 |
| 1.13 | .720524 | .705131 | .689892 | .674791 | .659815 | .644950 | .330712 |
| 1.14 | .716720 | .701240 | .685917 | .670736 | .655683 | .640743 | .332853 |
| 1.15 | .712899 | .697333 | .681928 | .666668 | .651538 | .636525 | .334974 |
| 1.16 | .709062 | .693412 | .677925 | .662587 | .647383 | .632298 | .337076 |
| 1.17 | .705209 | .689476 | .673909 | .658494 | .643216 | .628060 | .339158 |
| 1.18 | .701341 | .685525 | .669880 | .654389 | .639038 | .623812 | .341220 |
| 1.19 | .697458 | .681560 | .665837 | .650271 | .634849 | .619555 | .343262 |
| 1.20 | .693559 | .677582 | .661781 | .646142 | .630649 | .615288 | .345285 |
| 1.21 | .689646 | .673589 | .657713 | .642002 | .626440 | .611012 | .347287 |
| 1.22 | .685718 | .669583 | .653633 | .637850 | .622220 | .606728 | .349269 |
| 1.23 | .681775 | .665564 | .649540 | .633687 | .617990 | .602435 | .351230 |
| 1.24 | .677819 | .661532 | .645436 | .629514 | .613751 | .598133 | .353172 |
| 1.25 | .673848 | .657487 | .641319 | .625330 | .609503 | .593823 | .355092 |
| 1.26 | .669864 | .653429 | .637192 | .621135 | .605245 | .589505 | .356992 |
| 1.27 | .665866 | .649359 | .633053 | .616931 | .600978 | .585180 | .358872 |
| 1.28 | .661855 | .645276 | .628903 | .612717 | .596703 | .580847 | .360730 |
| 1.29 | .657831 | .641182 | .624742 | .608493 | .592419 | .576506 | .362568 |
| 1.30 | .653794 | .637076 | .620571 | .604260 | .588127 | .572159 | .364384 |
| 1.31 | .649744 | .632959 | .616389 | .600017 | .583828 | .567805 | .366180 |
| 1.32 | .645682 | .628830 | .612197 | .595766 | .579520 | .563445 | .367954 |
| 1.33 | .641608 | .624691 | .607996 | .591506 | .575205 | .559078 | .369707 |
| 1.34 | .637522 | .620540 | .603785 | .587237 | .570883 | .554705 | .371439 |
| 1.35 | .633424 | .616380 | .599564 | .582961 | .566553 | .550326 | .373149 |
| 1.36 | .629315 | .612208 | .595334 | .578676 | .562217 | .545942 | .374838 |
| 1.37 | .625195 | .608027 | .591096 | .574384 | .557875 | .541552 | .376505 |
| 1.38 | .621064 | .603836 | .586849 | .570084 | .553526 | .537158 | .378150 |
| 1.39 | .616922 | .599635 | .582593 | .565777 | .549171 | .532758 | .379774 |
| 1.40 | .612769 | .595425 | .578329 | .561463 | .544810 | .528354 | .381375 |
| 1.41 | .608606 | .591206 | .574058 | .557142 | .540443 | .523945 | .382955 |
| 1.42 | .604433 | .586978 | .569778 | .552815 | .536072 | .519533 | .384513 |
| 1.43 | .600251 | .582742 | .565491 | .548481 | .531695 | .515116 | .386048 |
| 1.44 | .596059 | .578497 | .561197 | .544142 | .527313 | .510696 | .387562 |
| 1.45 | .591857 | .574243 | .556896 | .539796 | .522927 | .506272 | .389053 |
| 1.46 | .587646 | .569982 | .552588 | .535445 | .518536 | .501845 | .390522 |
| 1.47 | .583427 | .565713 | .548273 | .531088 | .514141 | .497415 | .391968 |
| 1.48 | .579198 | .561437 | .543953 | .526727 | .509742 | .492983 | .393392 |
| 1.49 | .574962 | .557153 | .539626 | .522360 | .505340 | .488548 | .394794 |
| 1.50 | .570717 | .552863 | .535293 | .517989 | .500934 | .484110 | .396173 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .570717 | .552863 | .535293 | .517989 | .500934 | .484110 | .396173 |
| 1.51 | .566464 | .548565 | .530955 | .513614 | .496525 | .479671 | .397529 |
| 1.52 | .562204 | .544262 | .526611 | .509234 | .492113 | .475230 | .398863 |
| 1.53 | .557936 | .539951 | .522263 | .504851 | .487698 | .470787 | .400174 |
| 1.54 | .553661 | .535635 | .517909 | .500463 | .483281 | .466343 | .401462 |
| 1.55 | .549379 | .531313 | .513551 | .496073 | .478861 | .461898 | .402727 |
| 1.56 | .545090 | .526986 | .509188 | .491679 | .474439 | .457453 | .403969 |
| 1.57 | .540795 | .522653 | .504822 | .487282 | .470016 | .453006 | .405189 |
| 1.58 | .536493 | .518315 | .500451 | .482882 | .465591 | .448559 | .406385 |
| 1.59 | .532186 | .513972 | .496077 | .478480 | .461165 | .444113 | .407558 |
| 1.60 | .527873 | .509625 | .491699 | .474076 | .456737 | .439666 | .408708 |
| 1.61 | .523554 | .505273 | .487318 | .469670 | .452309 | .435219 | .409835 |
| 1.62 | .519229 | .500917 | .482934 | .465261 | .447880 | .430774 | .410939 |
| 1.63 | .514900 | .496557 | .478547 | .460852 | .443451 | .426328 | .412019 |
| 1.64 | .510566 | .492193 | .474158 | .456441 | .439022 | .421884 | .413076 |
| 1.65 | .506227 | .487826 | .469767 | .452029 | .434593 | .417442 | .414110 |
| 1.66 | .501884 | .483456 | .465374 | .447616 | .430164 | .413001 | .415120 |
| 1.67 | .497537 | .479083 | .460978 | .443202 | .425736 | .408561 | .416107 |
| 1.68 | .493186 | .474707 | .456582 | .438788 | .421308 | .404124 | .417071 |
| 1.69 | .488831 | .470329 | .452184 | .434374 | .416882 | .399688 | .418011 |
| 1.70 | .484473 | .465949 | .447785 | .429961 | .412457 | .395256 | .418927 |
| 1.71 | .480111 | .461566 | .443385 | .425547 | .408033 | .390825 | .419820 |
| 1.72 | .475747 | .457182 | .438984 | .421134 | .403611 | .386398 | .420690 |
| 1.73 | .471380 | .452796 | .434583 | .416722 | .399191 | .381974 | .421536 |
| 1.74 | .467011 | .448409 | .430182 | .412311 | .394774 | .377553 | .422358 |
| 1.75 | .462639 | .444021 | .425782 | .407901 | .390358 | .373136 | .423156 |
| 1.76 | .458265 | .439632 | .421381 | .403492 | .385946 | .368723 | .423931 |
| 1.77 | .453890 | .435242 | .416981 | .399086 | .381536 | .364313 | .424682 |
| 1.78 | .449513 | .430852 | .412582 | .394681 | .377129 | .359908 | .425410 |
| 1.79 | .445135 | .426462 | .408184 | .390278 | .372726 | .355507 | .426114 |
| 1.80 | .440756 | .422072 | .403787 | .385878 | .368326 | .351112 | .426794 |
| 1.81 | .436376 | .417683 | .399392 | .381481 | .363930 | .346721 | .427450 |
| 1.82 | .431995 | .413294 | .394998 | .377086 | .359538 | .342335 | .428082 |
| 1.83 | .427614 | .408906 | .390607 | .372695 | .355151 | .337954 | .428691 |
| 1.84 | .423233 | .404519 | .386217 | .368307 | .350767 | .333580 | .429276 |
| 1.85 | .418852 | .400133 | .381830 | .363922 | .346389 | .329211 | .429837 |
| 1.86 | .414472 | .395749 | .377446 | .359542 | .342015 | .324848 | .430374 |
| 1.87 | .410092 | .391366 | .373065 | .355165 | .337647 | .320491 | .430888 |
| 1.88 | .405713 | .386985 | .368686 | .350793 | .333284 | .316141 | .431377 |
| 1.89 | .401335 | .382607 | .364311 | .346425 | .328926 | .311797 | .431843 |
| 1.90 | .396958 | .378231 | .359940 | .342061 | .324575 | .307461 | .432285 |
| 1.91 | .392583 | .373858 | .355572 | .337703 | .320229 | .303131 | .432704 |
| 1.92 | .388210 | .369488 | .351209 | .333350 | .315890 | .298809 | .433098 |
| 1.93 | .383838 | .365121 | .346850 | .329002 | .311557 | .294495 | .433469 |
| 1.94 | .379469 | .360757 | .342495 | .324660 | .307231 | .290188 | .433816 |
| 1.95 | .375102 | .356397 | .338145 | .320324 | .302912 | .285889 | .434139 |
| 1.96 | .370738 | .352040 | .333800 | .315993 | .298600 | .281599 | .434438 |
| 1.97 | .366377 | .347688 | .329460 | .311669 | .294295 | .277317 | .434714 |
| 1.98 | .362019 | .343340 | .325125 | .307352 | .289998 | .273043 | .434965 |
| 1.99 | .357665 | .338996 | .320796 | .303041 | .285708 | .268779 | .435193 |
| 2.00 | .353314 | .334658 | .316473 | .298737 | .281427 | .264523 | .435398 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .353314 | .334658 | .316473 | .298737 | .281427 | .264523 | .435398 |
| 2.01 | .348967 | .330324 | .312156 | .294440 | .277154 | .260277 | .435578 |
| 2.02 | .344624 | .325995 | .307845 | .290151 | .272889 | .256040 | .435735 |
| 2.03 | .340285 | .321672 | .303541 | .285869 | .268633 | .251813 | .435869 |
| 2.04 | .335951 | .317354 | .299243 | .281595 | .264386 | .247596 | .435978 |
| 2.05 | .331621 | .313042 | .294953 | .277329 | .260147 | .243389 | .436065 |
| 2.06 | .327297 | .308736 | .290669 | .273071 | .255918 | .239192 | .436127 |
| 2.07 | .322977 | .304437 | .286393 | .268821 | .251699 | .235006 | .436166 |
| 2.08 | .318663 | .300144 | .282124 | .264580 | .247489 | .230830 | .436182 |
| 2.09 | .314355 | .295858 | .277864 | .260348 | .243289 | .226665 | .436173 |
| 2.10 | .310053 | .291578 | .273611 | .256125 | .239099 | .222512 | .436142 |
| 2.11 | .305756 | .287306 | .269366 | .251912 | .234920 | .218370 | .436087 |
| 2.12 | .301466 | .283041 | .265130 | .247707 | .230751 | .214239 | .436009 |
| 2.13 | .297183 | .278784 | .260902 | .243513 | .226592 | .210120 | .435907 |
| 2.14 | .292906 | .274535 | .256684 | .239328 | .222445 | .206012 | .435782 |
| 2.15 | .288636 | .270293 | .252474 | .235154 | .218308 | .201917 | .435634 |
| 2.16 | .284373 | .266060 | .248274 | .230989 | .214183 | .197834 | .435462 |
| 2.17 | .280118 | .261835 | .244083 | .226835 | .210070 | .193764 | .435268 |
| 2.18 | .275870 | .257619 | .239902 | .222692 | .205968 | .189706 | .435050 |
| 2.19 | .271630 | .253412 | .235730 | .218560 | .201878 | .185661 | .434809 |
| 2.20 | .267399 | .249214 | .231569 | .214439 | .197800 | .181630 | .434545 |
| 2.21 | .263175 | .245025 | .227418 | .210329 | .193734 | .177611 | .434258 |
| 2.22 | .258960 | .240846 | .223278 | .206231 | .189681 | .173606 | .433948 |
| 2.23 | .254753 | .236676 | .219148 | .202144 | .185640 | .169614 | .433616 |
| 2.24 | .250556 | .232516 | .215029 | .198069 | .181612 | .165636 | .433260 |
| 2.25 | .246367 | .228366 | .210922 | .194007 | .177598 | .161672 | .432882 |
| 2.26 | .242188 | .224227 | .206825 | .189956 | .173596 | .157723 | .432481 |
| 2.27 | .238018 | .220098 | .202740 | .185918 | .169608 | .153787 | .432057 |
| 2.28 | .233858 | .215980 | .198667 | .181893 | .165634 | .149866 | .431611 |
| 2.29 | .229708 | .211873 | .194606 | .177881 | .161673 | .145960 | .431142 |
| 2.30 | .225568 | .207777 | .190557 | .173881 | .157726 | .142069 | .430650 |
| 2.31 | .221439 | .203692 | .186520 | .169895 | .153794 | .138193 | .430137 |
| 2.32 | .217320 | .199619 | .182495 | .165922 | .149875 | .134332 | .429600 |
| 2.33 | .213211 | .195557 | .178484 | .161963 | .145972 | .130486 | .429042 |
| 2.34 | .209114 | .191508 | .174485 | .158018 | .142082 | .126656 | .428461 |
| 2.35 | .205028 | .187470 | .170499 | .154086 | .138208 | .122841 | .427859 |
| 2.36 | .200953 | .183445 | .166526 | .150169 | .134349 | .119043 | .427234 |
| 2.37 | .196889 | .179432 | .162567 | .146266 | .130505 | .115260 | .426587 |
| 2.38 | .192837 | .175432 | .158621 | .142378 | .126676 | .111494 | .425918 |
| 2.39 | .188798 | .171445 | .154689 | .138504 | .122863 | .107744 | .425228 |
| 2.40 | .184770 | .167471 | .150772 | .134645 | .119066 | .104011 | .424515 |
| 2.41 | .180755 | .163510 | .146868 | .130801 | .115285 | .100294 | .423781 |
| 2.42 | .176752 | .159562 | .142978 | .126973 | .111519 | .096595 | .423026 |
| 2.43 | .172762 | .155628 | .139104 | .123159 | .107770 | .092912 | .422248 |
| 2.44 | .168784 | .151708 | .135243 | .119362 | .104037 | .089247 | .421450 |
| 2.45 | .164820 | .147802 | .131398 | .115580 | .100321 | .085599 | .420630 |
| 2.46 | .160869 | .143910 | .127568 | .111813 | .096621 | .081968 | .419789 |
| 2.47 | .156932 | .140033 | .123753 | .108063 | .092939 | .078355 | .418926 |
| 2.48 | .153008 | .136170 | .119953 | .104330 | .089273 | .074760 | .418043 |
| 2.49 | .149098 | .132321 | .116169 | .100612 | .085625 | .071183 | .417138 |
| 2.50 | .145202 | .128488 | .112401 | .096911 | .081994 | .067624 | .416213 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | .145202 | .128488 | .112401 | .096911 | .081994 | .067624 | .416213 |
| 2.51 | .141320 | .124669 | .108648 | .093227 | .078380 | .064083 | .415267 |
| 2.52 | .137452 | .120866 | .104912 | .089560 | .074784 | .060561 | .414300 |
| 2.53 | .133599 | .117078 | .101191 | .085910 | .071206 | .057057 | .413312 |
| 2.54 | .129761 | .113306 | .097488 | .082276 | .067646 | .053572 | .412304 |
| 2.55 | .125938 | .109550 | .093800 | .078661 | .064104 | .050105 | .411276 |
| 2.56 | .122129 | .105809 | .090130 | .075063 | .060580 | .046658 | .410227 |
| 2.57 | .118336 | .102085 | .086476 | .071482 | .057075 | .043230 | .409158 |
| 2.58 | .114559 | .098376 | .082840 | .067919 | .053588 | .039821 | .408069 |
| 2.59 | .110797 | .094685 | .079220 | .064374 | .050120 | .036431 | .406959 |
| 2.60 | .107050 | .091009 | .075618 | .060848 | .046670 | .033061 | .405830 |
| 2.61 | .103320 | .087351 | .072034 | .057339 | .043240 | .029711 | .404681 |
| 2.62 | .099606 | .083709 | .068467 | .053849 | .039829 | .026380 | .403513 |
| 2.63 | .095908 | .080085 | .064918 | .050378 | .036437 | .023070 | .402324 |
| 2.64 | .092226 | .076477 | .061387 | .046925 | .033064 | .019779 | .401117 |
| 2.65 | .088561 | .072887 | .057874 | .043491 | .029711 | .016509 | .399889 |
| 2.66 | .084913 | .069315 | .054380 | .040076 | .026378 | .013259 | .398643 |
| 2.67 | .081282 | .065760 | .050903 | .036680 | .023064 | .010029 | .397377 |
| 2.68 | .077667 | .062223 | .047446 | .033304 | .019770 | .006820 | .396093 |
| 2.69 | .074070 | .058704 | .044007 | .029947 | .016497 | .003631 | .394789 |
| 2.70 | .070491 | .055203 | .040586 | .026609 | .013243 | .000464 | .393467 |
| 2.71 | .066929 | .051721 | .037185 | .023291 | .010010 | -.002683 | .392126 |
| 2.72 | .063384 | .048257 | .033803 | .019993 | .006797 | -.005809 | .390766 |
| 2.73 | .059858 | .044811 | .030441 | .016715 | .003605 | -.008914 | .389388 |
| 2.74 | .056349 | .041384 | .027097 | .013456 | .000433 | -.011997 | .387992 |
| 2.75 | .052858 | .037976 | .023773 | .010218 | -.002717 | -.015059 | .386578 |
| 2.76 | .049386 | .034587 | .020469 | .007000 | -.005847 | -.018100 | .385145 |
| 2.77 | .045933 | .031217 | .017185 | .003803 | -.008956 | -.021119 | .383694 |
| 2.78 | .042497 | .027867 | .013920 | .000626 | -.012044 | -.024116 | .382226 |
| 2.79 | .039081 | .024536 | .010676 | -.002530 | -.015111 | -.027092 | .380740 |
| 2.80 | .035683 | .021224 | .007452 | -.005665 | -.018156 | -.030046 | .379236 |
| 2.81 | .032305 | .017932 | .004248 | -.008780 | -.021180 | -.032977 | .377715 |
| 2.82 | .028946 | .014660 | .001064 | -.011873 | -.024182 | -.035887 | .376176 |
| 2.83 | .025605 | .011408 | -.002099 | -.014946 | -.027162 | -.038775 | .374621 |
| 2.84 | .022285 | .008175 | -.005241 | -.017997 | -.030121 | -.041640 | .373048 |
| 2.85 | .018984 | .004963 | -.008363 | -.021027 | -.033058 | -.044483 | .371458 |
| 2.86 | .015702 | .001772 | -.011463 | -.024035 | -.035973 | -.047303 | .369852 |
| 2.87 | .012440 | -.001400 | -.014543 | -.027022 | -.038866 | -.050101 | .368229 |
| 2.88 | .009199 | -.004550 | -.017601 | -.029987 | -.041736 | -.052876 | .366589 |
| 2.89 | .005977 | -.007680 | -.020639 | -.032930 | -.044585 | -.055629 | .364934 |
| 2.90 | .002776 | -.010789 | -.023654 | -.035852 | -.047411 | -.058358 | .363261 |
| 2.91 | -.000405 | -.013878 | -.026649 | -.038751 | -.050214 | -.061065 | .361573 |
| 2.92 | -.003566 | -.016945 | -.029622 | -.041628 | -.052995 | -.063749 | .359869 |
| 2.93 | -.006706 | -.019991 | -.032573 | -.044484 | -.055754 | -.066410 | .358149 |
| 2.94 | -.009825 | -.023016 | -.035502 | -.047317 | -.058489 | -.069047 | .356413 |
| 2.95 | -.012924 | -.026020 | -.038410 | -.050127 | -.061202 | -.071662 | .354662 |
| 2.96 | -.016002 | -.029002 | -.041295 | -.052915 | -.063892 | -.074253 | .352895 |
| 2.97 | -.019058 | -.031962 | -.044159 | -.055681 | -.066559 | -.076820 | .351113 |
| 2.98 | -.022094 | -.034901 | -.047000 | -.058424 | -.069203 | -.079365 | .349316 |
| 2.99 | -.025108 | -.037818 | -.049819 | -.061144 | -.071824 | -.081886 | .347504 |
| 3.00 | -.028101 | -.040713 | -.052615 | -.063841 | -.074421 | -.084383 | .345677 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .998289 | .998113 | .997935 | .997755 | .997572 | .997387 | .003333 |
| .02 | .996548 | .996196 | .995841 | .995481 | .995116 | .994746 | .006666 |
| .03 | .994775 | .994249 | .993717 | .993178 | .992632 | .992078 | .009999 |
| .04 | .992972 | .992271 | .991563 | .990846 | .990119 | .989382 | .013331 |
| .05 | .991139 | .990264 | .989379 | .988485 | .987578 | .986659 | .016663 |
| .06 | .989274 | .988226 | .987167 | .986095 | .985009 | .983909 | .019993 |
| .07 | .987380 | .986159 | .984925 | .983677 | .982413 | .981131 | .023322 |
| .08 | .985455 | .984062 | .982654 | .981230 | .979789 | .978327 | .026650 |
| .09 | .983500 | .981935 | .980354 | .978755 | .977137 | .975496 | .029976 |
| .10 | .981515 | .979779 | .978025 | .976252 | .974458 | .972639 | .033300 |
| .11 | .979499 | .977593 | .975668 | .973721 | .971751 | .969755 | .036622 |
| .12 | .977454 | .975378 | .973282 | .971163 | .969018 | .966845 | .039942 |
| .13 | .975380 | .973134 | .970867 | .968576 | .966258 | .963909 | .043260 |
| .14 | .973275 | .970861 | .968424 | .965962 | .963471 | .960948 | .046575 |
| .15 | .971142 | .968560 | .965954 | .963320 | .960657 | .957960 | .049888 |
| .16 | .968979 | .966229 | .963455 | .960652 | .957817 | .954947 | .053197 |
| .17 | .966786 | .963870 | .960928 | .957956 | .954951 | .951908 | .056503 |
| .18 | .964565 | .961483 | .958373 | .955233 | .952058 | .948845 | .059806 |
| .19 | .962314 | .959067 | .955791 | .952484 | .949140 | .945756 | .063105 |
| .20 | .960035 | .956623 | .953182 | .949707 | .946196 | .942642 | .066400 |
| .21 | .957727 | .954151 | .950545 | .946905 | .943226 | .939504 | .069692 |
| .22 | .955391 | .951651 | .947881 | .944076 | .940231 | .936341 | .072979 |
| .23 | .953026 | .949124 | .945190 | .941221 | .937210 | .933154 | .076262 |
| .24 | .950633 | .946569 | .942473 | .938339 | .934164 | .929942 | .079540 |
| .25 | .948211 | .943986 | .939728 | .935432 | .931094 | .926707 | .082814 |
| .26 | .945762 | .941376 | .936957 | .932500 | .927998 | .923447 | .086082 |
| .27 | .943284 | .938739 | .934160 | .929542 | .924878 | .920165 | .089346 |
| .28 | .940779 | .936075 | .931337 | .926558 | .921734 | .916858 | .092604 |
| .29 | .938247 | .933385 | .928487 | .923549 | .918565 | .913529 | .095856 |
| .30 | .935687 | .930667 | .925612 | .920515 | .915372 | .910176 | .099103 |
| .31 | .933099 | .927923 | .922711 | .917457 | .912156 | .906800 | .102344 |
| .32 | .930485 | .925153 | .919785 | .914374 | .908916 | .903402 | .105578 |
| .33 | .927843 | .922356 | .916833 | .911267 | .905652 | .899981 | .108807 |
| .34 | .925175 | .919534 | .913856 | .908135 | .902364 | .896538 | .112029 |
| .35 | .922480 | .916685 | .910854 | .904979 | .899054 | .893073 | .115244 |
| .36 | .919759 | .913811 | .907827 | .901799 | .895721 | .889586 | .118452 |
| .37 | .917011 | .910911 | .904775 | .898595 | .892365 | .886077 | .121653 |
| .38 | .914237 | .907986 | .901699 | .895368 | .888986 | .882546 | .124847 |
| .39 | .911437 | .905036 | .898598 | .892117 | .885585 | .878994 | .128033 |
| .40 | .908611 | .902061 | .895474 | .888843 | .882161 | .875421 | .131212 |
| .41 | .905759 | .899060 | .892325 | .885546 | .878716 | .871827 | .134383 |
| .42 | .902882 | .896035 | .889153 | .882226 | .875249 | .868212 | .137546 |
| .43 | .899979 | .892986 | .885957 | .878884 | .871760 | .864577 | .140701 |
| .44 | .897051 | .889912 | .882737 | .875519 | .868250 | .860921 | .143847 |
| .45 | .894098 | .886814 | .879494 | .872132 | .864718 | .857245 | .146984 |
| .46 | .891120 | .883692 | .876229 | .868722 | .861165 | .853549 | .150113 |
| .47 | .888117 | .880546 | .872940 | .865291 | .857592 | .849833 | .153233 |
| .48 | .885090 | .877377 | .869629 | .861838 | .853998 | .846098 | .156344 |
| .49 | .882039 | .874184 | .866295 | .858364 | .850383 | .842344 | .159445 |
| .50 | .878963 | .870967 | .862938 | .854868 | .846748 | .838570 | .162537 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .878963 | .870967 | .862938 | .854868 | .846748 | .838570 | .162537 |
| .51 | .875864 | .867728 | .859560 | .851351 | .843093 | .834777 | .165619 |
| .52 | .872740 | .864466 | .856160 | .847814 | .839419 | .830966 | .168691 |
| .53 | .869593 | .861181 | .852738 | .844255 | .835724 | .827136 | .171754 |
| .54 | .866422 | .857873 | .849294 | .840676 | .832010 | .823287 | .174806 |
| .55 | .863228 | .854543 | .845829 | .837077 | .828277 | .819421 | .177847 |
| .56 | .860011 | .851191 | .842343 | .833457 | .824525 | .815537 | .180878 |
| .57 | .856771 | .847817 | .838836 | .829818 | .820754 | .811635 | .183898 |
| .58 | .853509 | .844422 | .835308 | .826159 | .816965 | .807716 | .186907 |
| .59 | .850223 | .841004 | .831760 | .822480 | .813157 | .803779 | .189905 |
| .60 | .846916 | .837566 | .828191 | .818783 | .809331 | .799825 | .192892 |
| .61 | .843586 | .834106 | .824602 | .815066 | .805486 | .795855 | .195867 |
| .62 | .840234 | .830625 | .820993 | .811330 | .801625 | .791868 | .198831 |
| .63 | .836861 | .827123 | .817365 | .807575 | .797745 | .787865 | .201782 |
| .64 | .833465 | .823601 | .813716 | .803802 | .793848 | .783845 | .204722 |
| .65 | .830049 | .820058 | .810049 | .800011 | .789935 | .779809 | .207650 |
| .66 | .826611 | .816495 | .806362 | .796202 | .786004 | .775758 | .210565 |
| .67 | .823152 | .812913 | .802657 | .792375 | .782056 | .771691 | .213467 |
| .68 | .819673 | .809310 | .798932 | .788530 | .778092 | .767609 | .216357 |
| .69 | .816173 | .805688 | .795189 | .784668 | .774112 | .763512 | .219234 |
| .70 | .812652 | .802046 | .791428 | .780788 | .770116 | .759401 | .222098 |
| .71 | .809111 | .798385 | .787649 | .776892 | .766104 | .755274 | .224949 |
| .72 | .805550 | .794706 | .783852 | .772979 | .762076 | .751133 | .227787 |
| .73 | .801970 | .791007 | .780037 | .769049 | .758033 | .746978 | .230610 |
| .74 | .798370 | .787290 | .776205 | .765103 | .753975 | .742809 | .233421 |
| .75 | .794750 | .783555 | .772355 | .761141 | .749902 | .738627 | .236217 |
| .76 | .791111 | .779801 | .768489 | .757163 | .745814 | .734431 | .238999 |
| .77 | .787454 | .776030 | .764605 | .753170 | .741712 | .730221 | .241768 |
| .78 | .783777 | .772241 | .760706 | .749161 | .737596 | .725999 | .244521 |
| .79 | .780082 | .768434 | .756789 | .745137 | .733465 | .721764 | .247261 |
| .80 | .776368 | .764610 | .752857 | .741097 | .729321 | .717516 | .249986 |
| .81 | .772637 | .760769 | .748908 | .737043 | .725163 | .713256 | .252695 |
| .82 | .768887 | .756911 | .744944 | .732975 | .720992 | .708984 | .255390 |
| .83 | .765120 | .753037 | .740965 | .728892 | .716807 | .704700 | .258070 |
| .84 | .761335 | .749146 | .736970 | .724795 | .712610 | .700404 | .260735 |
| .85 | .757533 | .745239 | .732960 | .720684 | .708400 | .696097 | .263384 |
| .86 | .753714 | .741316 | .728935 | .716560 | .704178 | .691779 | .266017 |
| .87 | .749878 | .737378 | .724896 | .712422 | .699943 | .687450 | .268635 |
| .88 | .746025 | .733423 | .720842 | .708271 | .695697 | .683110 | .271237 |
| .89 | .742156 | .729454 | .716774 | .704107 | .691439 | .678759 | .273823 |
| .90 | .738271 | .725469 | .712693 | .699930 | .687169 | .674399 | .276393 |
| .91 | .734370 | .721470 | .708597 | .695741 | .682888 | .670028 | .278946 |
| .92 | .730453 | .717456 | .704488 | .691539 | .678596 | .665648 | .281483 |
| .93 | .726520 | .713427 | .700366 | .687325 | .674293 | .661258 | .284003 |
| .94 | .722572 | .709384 | .696231 | .683100 | .669980 | .656858 | .286507 |
| .95 | .718609 | .705328 | .692083 | .678863 | .665656 | .652450 | .288993 |
| .96 | .714631 | .701257 | .687922 | .674615 | .661322 | .648033 | .291463 |
| .97 | .710639 | .697173 | .683750 | .670355 | .656978 | .643607 | .293916 |
| .98 | .706632 | .693076 | .679565 | .666085 | .652625 | .639173 | .296351 |
| .99 | .702611 | .688966 | .675368 | .661804 | .648262 | .634731 | .298769 |
| 1.00 | .698575 | .684843 | .671159 | .657512 | .643890 | .630281 | .301169 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .698575 | .684843 | .671159 | .657512 | .643890 | .630281 | .301169 |
| 1.01 | .694527 | .680707 | .666939 | .653211 | .639509 | .625823 | .303551 |
| 1.02 | .690464 | .676559 | .662708 | .648899 | .635120 | .621357 | .305916 |
| 1.03 | .686388 | .672399 | .658466 | .644578 | .630722 | .616885 | .308262 |
| 1.04 | .682300 | .668227 | .654214 | .640247 | .626315 | .612406 | .310591 |
| 1.05 | .678198 | .664043 | .649950 | .635907 | .621901 | .607920 | .312901 |
| 1.06 | .674084 | .659848 | .645677 | .631558 | .617479 | .603427 | .315193 |
| 1.07 | .669957 | .655642 | .641394 | .627200 | .613049 | .598928 | .317467 |
| 1.08 | .665818 | .651424 | .637100 | .622834 | .608612 | .594424 | .319722 |
| 1.09 | .661667 | .647196 | .632798 | .618459 | .604169 | .589913 | .321958 |
| 1.10 | .657505 | .642958 | .628486 | .614077 | .599718 | .585397 | .324175 |
| 1.11 | .653331 | .638709 | .624165 | .609686 | .595261 | .580876 | .326373 |
| 1.12 | .649146 | .634450 | .619835 | .605288 | .590797 | .576349 | .328552 |
| 1.13 | .644950 | .630181 | .615496 | .600883 | .586327 | .571818 | .330712 |
| 1.14 | .640743 | .625903 | .611149 | .596470 | .581852 | .567283 | .332853 |
| 1.15 | .636525 | .621615 | .606794 | .592050 | .577371 | .562742 | .334974 |
| 1.16 | .632298 | .617318 | .602432 | .587624 | .572884 | .558198 | .337076 |
| 1.17 | .628060 | .613013 | .598061 | .583192 | .568392 | .553650 | .339158 |
| 1.18 | .623812 | .608698 | .593683 | .578753 | .563896 | .549099 | .341220 |
| 1.19 | .619555 | .604376 | .589298 | .574308 | .559395 | .544544 | .343262 |
| 1.20 | .615288 | .600045 | .584906 | .569858 | .554889 | .539986 | .345285 |
| 1.21 | .611012 | .595706 | .580507 | .565402 | .550379 | .535424 | .347287 |
| 1.22 | .606728 | .591360 | .576102 | .560941 | .545865 | .530861 | .349269 |
| 1.23 | .602435 | .587006 | .571690 | .556475 | .541348 | .526295 | .351230 |
| 1.24 | .598133 | .582645 | .567273 | .552005 | .536826 | .521726 | .353172 |
| 1.25 | .593823 | .578277 | .562850 | .547529 | .532302 | .517156 | .355092 |
| 1.26 | .589505 | .573902 | .558421 | .543050 | .527775 | .512584 | .356992 |
| 1.27 | .585180 | .569521 | .553987 | .538566 | .523245 | .508010 | .358872 |
| 1.28 | .580847 | .565133 | .549548 | .534079 | .518712 | .503436 | .360730 |
| 1.29 | .576506 | .560739 | .545104 | .529588 | .514177 | .498860 | .362568 |
| 1.30 | .572159 | .556340 | .540656 | .525094 | .509640 | .494283 | .364384 |
| 1.31 | .567805 | .551935 | .536203 | .520597 | .505102 | .489706 | .366180 |
| 1.32 | .563445 | .547525 | .531747 | .516096 | .500561 | .485129 | .367954 |
| 1.33 | .559078 | .543109 | .527286 | .511594 | .496020 | .480551 | .369707 |
| 1.34 | .554705 | .538689 | .522822 | .507089 | .491477 | .475974 | .371439 |
| 1.35 | .550326 | .534265 | .518354 | .502581 | .486933 | .471397 | .373149 |
| 1.36 | .545942 | .529835 | .513883 | .498072 | .482389 | .466821 | .374838 |
| 1.37 | .541552 | .525402 | .509410 | .493561 | .477844 | .462245 | .376505 |
| 1.38 | .537158 | .520965 | .504933 | .489049 | .473299 | .457671 | .378150 |
| 1.39 | .532758 | .516524 | .500455 | .484536 | .468754 | .453098 | .379774 |
| 1.40 | .528354 | .512080 | .495974 | .480022 | .464210 | .448526 | .381375 |
| 1.41 | .523945 | .507633 | .491491 | .475506 | .459666 | .443956 | .382955 |
| 1.42 | .519533 | .503182 | .487006 | .470991 | .455123 | .439389 | .384513 |
| 1.43 | .515116 | .498729 | .482520 | .466475 | .450580 | .434823 | .386048 |
| 1.44 | .510696 | .494274 | .478033 | .461959 | .446039 | .430260 | .387562 |
| 1.45 | .506272 | .489816 | .473545 | .457444 | .441500 | .425700 | .389053 |
| 1.46 | .501845 | .485357 | .469056 | .452929 | .436962 | .421143 | .390522 |
| 1.47 | .497415 | .480895 | .464566 | .448414 | .432426 | .416589 | .391968 |
| 1.48 | .492983 | .476432 | .460076 | .443901 | .427892 | .412038 | .393392 |
| 1.49 | .488548 | .471968 | .455586 | .439388 | .423361 | .407491 | .394794 |
| 1.50 | .484110 | .467503 | .451097 | .434877 | .418832 | .402948 | .396173 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .484110 | .467503 | .451097 | .434877 | .418832 | .402948 | .396173 |
| 1.51 | .479671 | .463037 | .446607 | .430368 | .414306 | .398408 | .397529 |
| 1.52 | .475230 | .458570 | .442118 | .425861 | .409783 | .393873 | .398863 |
| 1.53 | .470787 | .454103 | .437631 | .421355 | .405264 | .389343 | .400174 |
| 1.54 | .466343 | .449636 | .433144 | .416852 | .400748 | .384817 | .401462 |
| 1.55 | .461898 | .445169 | .428658 | .412352 | .396235 | .380297 | .402727 |
| 1.56 | .457453 | .440703 | .424175 | .407854 | .391727 | .375781 | .403969 |
| 1.57 | .453006 | .436237 | .419693 | .403359 | .387223 | .371271 | .405189 |
| 1.58 | .448559 | .431772 | .415212 | .398868 | .382723 | .366767 | .406385 |
| 1.59 | .444113 | .427308 | .410735 | .394379 | .378228 | .362268 | .407558 |
| 1.60 | .439666 | .422845 | .406259 | .389895 | .373738 | .357776 | .408708 |
| 1.61 | .435219 | .418384 | .401787 | .385415 | .369253 | .353290 | .409835 |
| 1.62 | .430774 | .413924 | .397317 | .380938 | .364773 | .348810 | .410939 |
| 1.63 | .426328 | .409467 | .392851 | .376466 | .360299 | .344337 | .412019 |
| 1.64 | .421884 | .405012 | .388388 | .371999 | .355831 | .339871 | .413076 |
| 1.65 | .417442 | .400559 | .383929 | .367536 | .351369 | .335413 | .414110 |
| 1.66 | .413001 | .396109 | .379473 | .363079 | .346913 | .330961 | .415120 |
| 1.67 | .408561 | .391662 | .375022 | .358627 | .342463 | .326518 | .416107 |
| 1.68 | .404124 | .387218 | .370575 | .354180 | .338020 | .322082 | .417071 |
| 1.69 | .399688 | .382777 | .366132 | .349739 | .333584 | .317654 | .418011 |
| 1.70 | .395256 | .378340 | .361694 | .345304 | .329155 | .313234 | .418927 |
| 1.71 | .390825 | .373907 | .357261 | .340875 | .324733 | .308823 | .419820 |
| 1.72 | .386398 | .369478 | .352834 | .336452 | .320319 | .304421 | .420690 |
| 1.73 | .381974 | .365053 | .348412 | .332036 | .315912 | .300027 | .421536 |
| 1.74 | .377553 | .360632 | .343995 | .327627 | .311513 | .295643 | .422358 |
| 1.75 | .373136 | .356217 | .339585 | .323225 | .307123 | .291267 | .423156 |
| 1.76 | .368723 | .351806 | .335180 | .318830 | .302741 | .286902 | .423931 |
| 1.77 | .364313 | .347401 | .330782 | .314442 | .298368 | .282546 | .424682 |
| 1.78 | .359908 | .343000 | .326390 | .310062 | .294003 | .278200 | .425410 |
| 1.79 | .355507 | .338606 | .322005 | .305690 | .289647 | .273864 | .426114 |
| 1.80 | .351112 | .334217 | .317627 | .301326 | .285301 | .269538 | .426794 |
| 1.81 | .346721 | .329835 | .313257 | .296971 | .280964 | .265223 | .427450 |
| 1.82 | .342335 | .325459 | .308893 | .292624 | .276637 | .260918 | .428082 |
| 1.83 | .337954 | .321089 | .304538 | .288286 | .272319 | .256625 | .428691 |
| 1.84 | .333580 | .316726 | .300190 | .283956 | .268012 | .252343 | .429276 |
| 1.85 | .329211 | .312370 | .295850 | .279636 | .263714 | .248072 | .429837 |
| 1.86 | .324848 | .308021 | .291518 | .275325 | .259428 | .243812 | .430374 |
| 1.87 | .320491 | .303679 | .287195 | .271024 | .255151 | .239565 | .430888 |
| 1.88 | .316141 | .299345 | .282881 | .266733 | .250886 | .235329 | .431377 |
| 1.89 | .311797 | .295019 | .278575 | .262451 | .246632 | .231105 | .431843 |
| 1.90 | .307461 | .290701 | .274279 | .258180 | .242389 | .226894 | .432285 |
| 1.91 | .303131 | .286391 | .269992 | .253919 | .238157 | .222695 | .432704 |
| 1.92 | .298809 | .282090 | .265714 | .249668 | .233937 | .218509 | .433098 |
| 1.93 | .294495 | .277797 | .261447 | .245429 | .229729 | .214335 | .433469 |
| 1.94 | .290188 | .273513 | .257189 | .241200 | .225533 | .210175 | .433816 |
| 1.95 | .285889 | .269238 | .252941 | .236983 | .221350 | .206028 | .434139 |
| 1.96 | .281599 | .264972 | .248704 | .232777 | .217178 | .201895 | .434438 |
| 1.97 | .277317 | .260716 | .244477 | .228583 | .213020 | .197775 | .434714 |
| 1.98 | .273043 | .256470 | .240261 | .224400 | .208874 | .193669 | .434965 |
| 1.99 | .268779 | .252233 | .236056 | .220229 | .204741 | .189576 | .435193 |
| 2.00 | .264523 | .248007 | .231862 | .216071 | .200621 | .185498 | .435398 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .264523 | .248007 | .231862 | .216071 | .200621 | .185498 | .435398 |
| 2.01 | .260277 | .243791 | .227679 | .211925 | .196514 | .181435 | .435578 |
| 2.02 | .256040 | .239586 | .223508 | .207791 | .192422 | .177386 | .435735 |
| 2.03 | .251813 | .235391 | .219348 | .203670 | .188342 | .173351 | .435869 |
| 2.04 | .247596 | .231207 | .215201 | .199563 | .184277 | .169332 | .435978 |
| 2.05 | .243389 | .227034 | .211066 | .195468 | .180226 | .165328 | .436065 |
| 2.06 | .239192 | .222873 | .206943 | .191386 | .176189 | .161339 | .436127 |
| 2.07 | .235006 | .218723 | .202832 | .187318 | .172167 | .157365 | .436166 |
| 2.08 | .230830 | .214584 | .198734 | .183264 | .168159 | .153407 | .436182 |
| 2.09 | .226665 | .210458 | .194649 | .179224 | .164166 | .149464 | .436173 |
| 2.10 | .222512 | .206344 | .190578 | .175197 | .160188 | .145538 | .436142 |
| 2.11 | .218370 | .202242 | .186519 | .171185 | .156226 | .141627 | .436087 |
| 2.12 | .214239 | .198152 | .182474 | .167188 | .152278 | .137733 | .436009 |
| 2.13 | .210120 | .194076 | .178443 | .163204 | .148346 | .133856 | .435907 |
| 2.14 | .206012 | .190012 | .174425 | .159236 | .144430 | .129994 | .435782 |
| 2.15 | .201917 | .185961 | .170421 | .155283 | .140530 | .126150 | .435634 |
| 2.16 | .197834 | .181923 | .166432 | .151344 | .136646 | .122323 | .435462 |
| 2.17 | .193764 | .177899 | .162457 | .147421 | .132777 | .118512 | .435268 |
| 2.18 | .189706 | .173888 | .158496 | .143514 | .128926 | .114719 | .435050 |
| 2.19 | .185661 | .169892 | .154551 | .139622 | .125090 | .110943 | .434809 |
| 2.20 | .181630 | .165909 | .150620 | .135746 | .121272 | .107185 | .434545 |
| 2.21 | .177611 | .161940 | .146704 | .131885 | .117470 | .103444 | .434258 |
| 2.22 | .173606 | .157986 | .142803 | .128041 | .113685 | .099722 | .433948 |
| 2.23 | .169614 | .154046 | .138918 | .124214 | .109918 | .096017 | .433616 |
| 2.24 | .165636 | .150121 | .135049 | .120402 | .106167 | .092330 | .433260 |
| 2.25 | .161672 | .146211 | .131195 | .116608 | .102435 | .088662 | .432882 |
| 2.26 | .157723 | .142316 | .127357 | .112830 | .098720 | .085012 | .432481 |
| 2.27 | .153787 | .138436 | .123535 | .109069 | .095022 | .081381 | .432057 |
| 2.28 | .149866 | .134571 | .119730 | .105325 | .091343 | .077769 | .431611 |
| 2.29 | .145960 | .130722 | .115941 | .101599 | .087681 | .074175 | .431142 |
| 2.30 | .142069 | .126889 | .112168 | .097890 | .084038 | .070600 | .430650 |
| 2.31 | .138193 | .123072 | .108413 | .094198 | .080413 | .067045 | .430137 |
| 2.32 | .134332 | .119271 | .104674 | .090524 | .076807 | .063509 | .429600 |
| 2.33 | .130486 | .115486 | .100952 | .086869 | .073220 | .059992 | .429042 |
| 2.34 | .126656 | .111717 | .097248 | .083231 | .069651 | .056495 | .428461 |
| 2.35 | .122841 | .107965 | .093561 | .079611 | .066101 | .053017 | .427859 |
| 2.36 | .119043 | .104230 | .089891 | .076010 | .062570 | .049559 | .427234 |
| 2.37 | .115260 | .100511 | .086239 | .072427 | .059059 | .046122 | .426587 |
| 2.38 | .111494 | .096810 | .082605 | .068863 | .055567 | .042704 | .425918 |
| 2.39 | .107744 | .093126 | .078989 | .065317 | .052094 | .039307 | .425228 |
| 2.40 | .104011 | .089459 | .075391 | .061791 | .048641 | .035929 | .424515 |
| 2.41 | .100294 | .085810 | .071812 | .058283 | .045208 | .032573 | .423781 |
| 2.42 | .096595 | .082178 | .068251 | .054795 | .041795 | .029237 | .423026 |
| 2.43 | .092912 | .078565 | .064708 | .051326 | .038401 | .025921 | .422248 |
| 2.44 | .089247 | .074969 | .061184 | .047876 | .035028 | .022627 | .421450 |
| 2.45 | .085599 | .071391 | .057680 | .044446 | .031675 | .019353 | .420630 |
| 2.46 | .081968 | .067832 | .054194 | .041036 | .028343 | .016101 | .419789 |
| 2.47 | .078355 | .064291 | .050727 | .037645 | .025031 | .012869 | .418926 |
| 2.48 | .074760 | .060769 | .047279 | .034275 | .021740 | .009659 | .418043 |
| 2.49 | .071183 | .057265 | .043851 | .030925 | .018469 | .006471 | .417138 |
| 2.50 | .067624 | .053780 | .040443 | .027595 | .015219 | .003303 | .416213 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | .067624 | .053780 | .040443 | .027595 | .015219 | .003303 | .416213 |
| 2.51 | .064083 | .050314 | .037054 | .024285 | .011991 | .000158 | .415267 |
| 2.52 | .060561 | .046867 | .033685 | .020996 | .008783 | -.002966 | .414300 |
| 2.53 | .057057 | .043440 | .030336 | .017727 | .005597 | -.006068 | .413312 |
| 2.54 | .053572 | .040032 | .027007 | .014479 | .002432 | -.009148 | .412304 |
| 2.55 | .050105 | .036644 | .023698 | .011252 | -.000711 | -.012206 | .411276 |
| 2.56 | .046658 | .033275 | .020410 | .008046 | -.003833 | -.015242 | .410227 |
| 2.57 | .043230 | .029926 | .017142 | .004861 | -.006934 | -.018256 | .409158 |
| 2.58 | .039821 | .026597 | .013895 | .001697 | -.010012 | -.021247 | .408069 |
| 2.59 | .036431 | .023288 | .010668 | -.001445 | -.013069 | -.024216 | .406959 |
| 2.60 | .033061 | .019999 | .007462 | -.004566 | -.016103 | -.027163 | .405830 |
| 2.61 | .029711 | .016730 | .004277 | -.007666 | -.019116 | -.030087 | .404681 |
| 2.62 | .026380 | .013482 | .001113 | -.010744 | -.022106 | -.032988 | .403513 |
| 2.63 | .023070 | .010254 | -.002029 | -.013800 | -.025074 | -.035866 | .402324 |
| 2.64 | .019779 | .007048 | -.005151 | -.016835 | -.028020 | -.038722 | .401117 |
| 2.65 | .016509 | .003862 | -.008251 | -.019847 | -.030943 | -.041554 | .399889 |
| 2.66 | .013259 | .000696 | -.011330 | -.022838 | -.033844 | -.044364 | .398643 |
| 2.67 | .010029 | -.002448 | -.014387 | -.025806 | -.036722 | -.047150 | .397377 |
| 2.68 | .006820 | -.005571 | -.017422 | -.028752 | -.039577 | -.049913 | .396093 |
| 2.69 | .003631 | -.008673 | -.020435 | -.031676 | -.042410 | -.052653 | .394789 |
| 2.70 | .000464 | -.011753 | -.023427 | -.034577 | -.045220 | -.055370 | .393467 |
| 2.71 | -.002683 | -.014812 | -.026396 | -.037456 | -.048006 | -.058063 | .392126 |
| 2.72 | -.005809 | -.017849 | -.029344 | -.040312 | -.050770 | -.060733 | .390766 |
| 2.73 | -.008914 | -.020865 | -.032269 | -.043145 | -.053510 | -.063379 | .389388 |
| 2.74 | -.011997 | -.023859 | -.035172 | -.045956 | -.056227 | -.066001 | .387992 |
| 2.75 | -.015059 | -.026831 | -.038053 | -.048744 | -.058921 | -.068600 | .386578 |
| 2.76 | -.018100 | -.029781 | -.040911 | -.051509 | -.061592 | -.071175 | .385145 |
| 2.77 | -.021119 | -.032709 | -.043746 | -.054251 | -.064239 | -.073726 | .383694 |
| 2.78 | -.024116 | -.035614 | -.046559 | -.056969 | -.066862 | -.076253 | .382226 |
| 2.79 | -.027092 | -.038498 | -.049349 | -.059665 | -.069462 | -.078756 | .380740 |
| 2.80 | -.030046 | -.041359 | -.052116 | -.062337 | -.072038 | -.081235 | .379236 |
| 2.81 | -.032977 | -.044197 | -.054860 | -.064986 | -.074591 | -.083691 | .377715 |
| 2.82 | -.035887 | -.047013 | -.057582 | -.067611 | -.077120 | -.086122 | .376176 |
| 2.83 | -.038775 | -.049807 | -.060280 | -.070213 | -.079625 | -.088528 | .374621 |
| 2.84 | -.041640 | -.052577 | -.062955 | -.072792 | -.082105 | -.090911 | .373048 |
| 2.85 | -.044483 | -.055325 | -.065607 | -.075347 | -.084562 | -.093269 | .371458 |
| 2.86 | -.047303 | -.058050 | -.068235 | -.077878 | -.086995 | -.095603 | .369852 |
| 2.87 | -.050101 | -.060752 | -.070840 | -.080385 | -.089404 | -.097913 | .368229 |
| 2.88 | -.052876 | -.063431 | -.073422 | -.082869 | -.091789 | -.100198 | .366589 |
| 2.89 | -.055629 | -.066087 | -.075980 | -.085328 | -.094149 | -.102458 | .364934 |
| 2.90 | -.058358 | -.068719 | -.078514 | -.087764 | -.096486 | -.104694 | .363261 |
| 2.91 | -.061065 | -.071328 | -.081025 | -.090176 | -.098798 | -.106906 | .361573 |
| 2.92 | -.063749 | -.073914 | -.083512 | -.092563 | -.101085 | -.109093 | .359869 |
| 2.93 | -.066410 | -.076476 | -.085975 | -.094927 | -.103348 | -.111255 | .358149 |
| 2.94 | -.069047 | -.079015 | -.088415 | -.097266 | -.105587 | -.113393 | .356413 |
| 2.95 | -.071662 | -.081530 | -.090830 | -.099581 | -.107801 | -.115506 | .354662 |
| 2.96 | -.074253 | -.084022 | -.093222 | -.101872 | -.109991 | -.117594 | .352895 |
| 2.97 | -.076820 | -.086490 | -.095589 | -.104139 | -.112156 | -.119657 | .351113 |
| 2.98 | -.079365 | -.088934 | -.097933 | -.106381 | -.114297 | -.121696 | .349316 |
| 2.99 | -.081886 | -.091354 | -.100252 | -.108599 | -.116413 | -.123710 | .347504 |
| 3.00 | -.084383 | -.093751 | -.102547 | -.110792 | -.118504 | -.125699 | .345677 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .997387 | .997199 | .997007 | .996812 | .996613 | .996409 | .003333 |
| .02 | .994746 | .994370 | .993988 | .993599 | .993202 | .992796 | .006666 |
| .03 | .992078 | .991515 | .990943 | .990361 | .989767 | .989160 | .009999 |
| .04 | .989382 | .988634 | .987873 | .987098 | .986308 | .985502 | .013331 |
| .05 | .986659 | .985726 | .984777 | .983811 | .982826 | .981821 | .016663 |
| .06 | .983909 | .982791 | .981655 | .980499 | .979321 | .978119 | .019993 |
| .07 | .981131 | .979831 | .978509 | .977163 | .975793 | .974394 | .023322 |
| .08 | .978327 | .976844 | .975337 | .973804 | .972241 | .970648 | .026650 |
| .09 | .975496 | .973832 | .972141 | .970420 | .968668 | .966881 | .029976 |
| .10 | .972639 | .970794 | .968919 | .967013 | .965071 | .963092 | .033300 |
| .11 | .969755 | .967730 | .965674 | .963582 | .961453 | .959282 | .036622 |
| .12 | .966845 | .964642 | .962404 | .960129 | .957812 | .955451 | .039942 |
| .13 | .963909 | .961528 | .959110 | .956652 | .954150 | .951600 | .043260 |
| .14 | .960948 | .958389 | .955792 | .953152 | .950465 | .947728 | .046575 |
| .15 | .957960 | .955226 | .952450 | .949630 | .946760 | .943835 | .049888 |
| .16 | .954947 | .952038 | .949085 | .946085 | .943032 | .939923 | .053197 |
| .17 | .951908 | .948825 | .945696 | .942518 | .939284 | .935991 | .056503 |
| .18 | .948845 | .945588 | .942284 | .938928 | .935515 | .932039 | .059806 |
| .19 | .945756 | .942327 | .938849 | .935317 | .931725 | .928068 | .063105 |
| .20 | .942642 | .939042 | .935391 | .931684 | .927915 | .924078 | .066400 |
| .21 | .939504 | .935734 | .931911 | .928029 | .924084 | .920068 | .069692 |
| .22 | .936341 | .932402 | .928408 | .924353 | .920233 | .916040 | .072979 |
| .23 | .933154 | .929046 | .924882 | .920656 | .916362 | .911993 | .076262 |
| .24 | .929942 | .925668 | .921335 | .916939 | .912472 | .907927 | .079540 |
| .25 | .926707 | .922266 | .917766 | .913200 | .908561 | .903844 | .082814 |
| .26 | .923447 | .918842 | .914175 | .909441 | .904632 | .899742 | .086082 |
| .27 | .920165 | .915395 | .910562 | .905661 | .900684 | .895623 | .089346 |
| .28 | .916858 | .911925 | .906928 | .901861 | .896716 | .891486 | .092604 |
| .29 | .913529 | .908434 | .903274 | .898041 | .892730 | .887331 | .095856 |
| .30 | .910176 | .904920 | .899598 | .894202 | .888725 | .883160 | .099103 |
| .31 | .906800 | .901384 | .895901 | .890343 | .884703 | .878972 | .102344 |
| .32 | .903402 | .897827 | .892184 | .886465 | .880662 | .874767 | .105578 |
| .33 | .899981 | .894249 | .888447 | .882567 | .876603 | .870545 | .108807 |
| .34 | .896538 | .890649 | .884689 | .878651 | .872527 | .866307 | .112029 |
| .35 | .893073 | .887028 | .880911 | .874716 | .868433 | .862053 | .115244 |
| .36 | .889586 | .883386 | .877114 | .870762 | .864322 | .857783 | .118452 |
| .37 | .886077 | .879724 | .873298 | .866791 | .860194 | .853498 | .121653 |
| .38 | .882546 | .876041 | .869462 | .862801 | .856049 | .849197 | .124847 |
| .39 | .878994 | .872337 | .865607 | .858793 | .851888 | .844881 | .128033 |
| .40 | .875421 | .868614 | .861733 | .854768 | .847710 | .840550 | .131212 |
| .41 | .871827 | .864871 | .857840 | .850725 | .843516 | .836204 | .134383 |
| .42 | .868212 | .861108 | .853929 | .846665 | .839306 | .831844 | .137546 |
| .43 | .864577 | .857326 | .849999 | .842588 | .835081 | .827470 | .140701 |
| .44 | .860921 | .853525 | .846052 | .838494 | .830840 | .823081 | .143847 |
| .45 | .857245 | .849704 | .842087 | .834383 | .826584 | .818679 | .146984 |
| .46 | .853549 | .845865 | .838104 | .830256 | .822313 | .814263 | .150113 |
| .47 | .849833 | .842007 | .834104 | .826114 | .818027 | .809834 | .153233 |
| .48 | .846098 | .838131 | .830086 | .821955 | .813727 | .805391 | .156344 |
| .49 | .842344 | .834236 | .826052 | .817780 | .809412 | .800936 | .159445 |
| .50 | .838570 | .830324 | .822000 | .813590 | .805083 | .796467 | .162537 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .838570 | .830324 | .822000 | .813590 | .805083 | .796467 | .162537 |
| .51 | .834777 | .826393 | .817933 | .809385 | .800740 | .791987 | .165619 |
| .52 | .830966 | .822446 | .813849 | .805165 | .796384 | .787494 | .168691 |
| .53 | .827136 | .818480 | .809748 | .800930 | .792014 | .782989 | .171754 |
| .54 | .823287 | .814498 | .805632 | .796680 | .787630 | .778472 | .174806 |
| .55 | .819421 | .810499 | .801501 | .792416 | .783234 | .773944 | .177847 |
| .56 | .815537 | .806483 | .797354 | .788138 | .778825 | .769404 | .180878 |
| .57 | .811635 | .802451 | .793191 | .783846 | .774404 | .764854 | .183898 |
| .58 | .807716 | .798402 | .789014 | .779540 | .769970 | .760292 | .186907 |
| .59 | .803779 | .794337 | .784822 | .775221 | .765524 | .755720 | .189905 |
| .60 | .799825 | .790257 | .780615 | .770889 | .761067 | .751137 | .192892 |
| .61 | .795855 | .786161 | .776394 | .766543 | .756597 | .746545 | .195867 |
| .62 | .791868 | .782050 | .772159 | .762185 | .752117 | .741942 | .198831 |
| .63 | .787865 | .777923 | .767910 | .757814 | .747625 | .737329 | .201782 |
| .64 | .783845 | .773781 | .763647 | .753431 | .743122 | .732708 | .204722 |
| .65 | .779809 | .769625 | .759371 | .749036 | .738609 | .728076 | .207650 |
| .66 | .775758 | .765455 | .755082 | .744629 | .734085 | .723436 | .210565 |
| .67 | .771691 | .761270 | .750780 | .740211 | .729551 | .718788 | .213467 |
| .68 | .767609 | .757071 | .746465 | .735781 | .725006 | .714130 | .216357 |
| .69 | .763512 | .752858 | .742137 | .731339 | .720453 | .709464 | .219234 |
| .70 | .759401 | .748631 | .737798 | .726887 | .715889 | .704791 | .222098 |
| .71 | .755274 | .744392 | .733446 | .722425 | .711316 | .700109 | .224949 |
| .72 | .751133 | .740139 | .729082 | .717951 | .706735 | .695420 | .227787 |
| .73 | .746978 | .735873 | .724707 | .713468 | .702144 | .690723 | .230610 |
| .74 | .742809 | .731595 | .720320 | .708974 | .697545 | .686020 | .233421 |
| .75 | .738627 | .727304 | .715923 | .704471 | .692938 | .681309 | .236217 |
| .76 | .734431 | .723001 | .711514 | .699958 | .688322 | .676592 | .238999 |
| .77 | .730221 | .718686 | .707095 | .695436 | .683698 | .671869 | .241768 |
| .78 | .725999 | .714359 | .702665 | .690905 | .679067 | .667139 | .244521 |
| .79 | .721764 | .710021 | .698225 | .686365 | .674429 | .662403 | .247261 |
| .80 | .717516 | .705671 | .693776 | .681817 | .669783 | .657662 | .249986 |
| .81 | .713256 | .701311 | .689316 | .677260 | .665131 | .652915 | .252695 |
| .82 | .708984 | .696939 | .684847 | .672695 | .660471 | .648163 | .255390 |
| .83 | .704700 | .692557 | .680369 | .668122 | .655805 | .643406 | .258070 |
| .84 | .700404 | .688165 | .675882 | .663542 | .651133 | .638644 | .260735 |
| .85 | .696097 | .683763 | .671386 | .658954 | .646455 | .633878 | .263384 |
| .86 | .691779 | .679350 | .666881 | .654359 | .641772 | .629107 | .266017 |
| .87 | .687450 | .674928 | .662368 | .649757 | .637082 | .624332 | .268635 |
| .88 | .683110 | .670497 | .657847 | .645148 | .632388 | .619554 | .271237 |
| .89 | .678759 | .666056 | .653318 | .640533 | .627688 | .614772 | .273823 |
| .90 | .674399 | .661607 | .648782 | .635912 | .622984 | .609986 | .276393 |
| .91 | .670028 | .657149 | .644238 | .631284 | .618275 | .605198 | .278946 |
| .92 | .665648 | .652682 | .639687 | .626651 | .613562 | .600407 | .281483 |
| .93 | .661258 | .648207 | .635129 | .622012 | .608844 | .595613 | .284003 |
| .94 | .656858 | .643724 | .630565 | .617369 | .604123 | .590816 | .286507 |
| .95 | .652450 | .639233 | .625994 | .612720 | .599398 | .586018 | .288993 |
| .96 | .648033 | .634735 | .621417 | .608066 | .594670 | .581217 | .291463 |
| .97 | .643607 | .630230 | .616834 | .603408 | .589939 | .576415 | .293916 |
| .98 | .639173 | .625717 | .612245 | .598745 | .585205 | .571612 | .296351 |
| .99 | .634731 | .621198 | .607651 | .594078 | .580468 | .566807 | .298769 |
| 1.00 | .630281 | .616672 | .603051 | .589408 | .575728 | .562001 | .301169 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .630281 | .616672 | .603051 | .589408 | .575728 | .562001 | .301169 |
| 1.01 | .625823 | .612139 | .598447 | .584733 | .570987 | .557195 | .303551 |
| 1.02 | .621357 | .607601 | .593838 | .580056 | .566243 | .552388 | .305916 |
| 1.03 | .616885 | .603057 | .589224 | .575375 | .561498 | .547581 | .308262 |
| 1.04 | .612406 | .598507 | .584606 | .570692 | .556751 | .542773 | .310591 |
| 1.05 | .607920 | .593951 | .579984 | .566005 | .552003 | .537966 | .312901 |
| 1.06 | .603427 | .589391 | .575358 | .561317 | .547254 | .533160 | .315193 |
| 1.07 | .598928 | .584825 | .570729 | .556626 | .542505 | .528354 | .317467 |
| 1.08 | .594424 | .580255 | .566096 | .551933 | .537754 | .523548 | .319722 |
| 1.09 | .589913 | .575681 | .561460 | .547238 | .533004 | .518744 | .321958 |
| 1.10 | .585397 | .571102 | .556821 | .542542 | .528253 | .513942 | .324175 |
| 1.11 | .580876 | .566520 | .552180 | .537845 | .523502 | .509141 | .326373 |
| 1.12 | .576349 | .561933 | .547536 | .533146 | .518752 | .504341 | .328552 |
| 1.13 | .571818 | .557343 | .542890 | .528447 | .514003 | .499544 | .330712 |
| 1.14 | .567283 | .552750 | .538242 | .523748 | .509254 | .494749 | .332853 |
| 1.15 | .562742 | .548154 | .533593 | .519048 | .504506 | .489957 | .334974 |
| 1.16 | .558198 | .543555 | .528942 | .514348 | .499760 | .485167 | .337076 |
| 1.17 | .553650 | .538953 | .524290 | .509648 | .495015 | .480380 | .339158 |
| 1.18 | .549099 | .534350 | .519637 | .504948 | .490272 | .475597 | .341220 |
| 1.19 | .544544 | .529744 | .514983 | .500249 | .485531 | .470817 | .343262 |
| 1.20 | .539986 | .525136 | .510329 | .495551 | .480792 | .466040 | .345285 |
| 1.21 | .535424 | .520527 | .505674 | .490854 | .476056 | .461268 | .347287 |
| 1.22 | .530861 | .515916 | .501019 | .486159 | .471322 | .456499 | .349269 |
| 1.23 | .526295 | .511304 | .496365 | .481464 | .466592 | .451735 | .351230 |
| 1.24 | .521726 | .506692 | .491711 | .476772 | .461864 | .446975 | .353172 |
| 1.25 | .517156 | .502078 | .487058 | .472082 | .457140 | .442220 | .355092 |
| 1.26 | .512584 | .497465 | .482405 | .467394 | .452419 | .437471 | .356992 |
| 1.27 | .508010 | .492851 | .477754 | .462708 | .447703 | .432726 | .358872 |
| 1.28 | .503436 | .488237 | .473104 | .458025 | .442990 | .427987 | .360730 |
| 1.29 | .498860 | .483623 | .468455 | .453345 | .438282 | .423253 | .362568 |
| 1.30 | .494283 | .479010 | .463809 | .448669 | .433578 | .418525 | .364384 |
| 1.31 | .489706 | .474398 | .459165 | .443995 | .428879 | .413804 | .366180 |
| 1.32 | .485129 | .469786 | .454522 | .439325 | .424184 | .409089 | .367954 |
| 1.33 | .480551 | .465176 | .449883 | .434660 | .419495 | .404380 | .369707 |
| 1.34 | .475974 | .460567 | .445246 | .429998 | .414812 | .399678 | .371439 |
| 1.35 | .471397 | .455960 | .440612 | .425340 | .410134 | .394983 | .373149 |
| 1.36 | .466821 | .451355 | .435981 | .420687 | .405462 | .390295 | .374838 |
| 1.37 | .462245 | .446752 | .431354 | .416039 | .400796 | .385615 | .376505 |
| 1.38 | .457671 | .442152 | .426730 | .411395 | .396136 | .380942 | .378150 |
| 1.39 | .453098 | .437554 | .422111 | .406757 | .391483 | .376277 | .379774 |
| 1.40 | .448526 | .432958 | .417495 | .402124 | .386836 | .371620 | .381375 |
| 1.41 | .443956 | .428366 | .412884 | .397497 | .382197 | .366972 | .382955 |
| 1.42 | .439389 | .423777 | .408277 | .392876 | .377564 | .362331 | .384513 |
| 1.43 | .434823 | .419192 | .403675 | .388261 | .372939 | .357700 | .386048 |
| 1.44 | .430260 | .414610 | .399078 | .383652 | .368322 | .353077 | .387562 |
| 1.45 | .425700 | .410033 | .394486 | .379050 | .363712 | .348464 | .389053 |
| 1.46 | .421143 | .405459 | .389900 | .374454 | .359111 | .343860 | .390522 |
| 1.47 | .416589 | .400890 | .385320 | .369865 | .354517 | .339265 | .391968 |
| 1.48 | .412038 | .396326 | .380745 | .365284 | .349932 | .334680 | .393392 |
| 1.49 | .407491 | .391767 | .376176 | .360710 | .345356 | .330105 | .394794 |
| 1.50 | .402948 | .387212 | .371614 | .356143 | .340788 | .325541 | .396173 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .402948 | .387212 | .371614 | .356143 | .340788 | .325541 | .396173 |
| 1.51 | .398408 | .382663 | .367059 | .351584 | .336230 | .320986 | .397529 |
| 1.52 | .393873 | .378119 | .362510 | .347034 | .331681 | .316442 | .398863 |
| 1.53 | .389343 | .373582 | .357968 | .342491 | .327141 | .311909 | .400174 |
| 1.54 | .384817 | .369050 | .353433 | .337957 | .322611 | .307387 | .401462 |
| 1.55 | .380297 | .364524 | .348906 | .333432 | .318091 | .302875 | .402727 |
| 1.56 | .375781 | .360005 | .344386 | .328915 | .313582 | .298376 | .403969 |
| 1.57 | .371271 | .355492 | .339875 | .324408 | .309082 | .293887 | .405189 |
| 1.58 | .366767 | .350987 | .335371 | .319910 | .304593 | .289411 | .406385 |
| 1.59 | .362268 | .346488 | .330876 | .315421 | .300114 | .284946 | .407558 |
| 1.60 | .357776 | .341997 | .326389 | .310942 | .295647 | .280494 | .408708 |
| 1.61 | .353290 | .337513 | .321911 | .306473 | .291191 | .276054 | .409835 |
| 1.62 | .348810 | .333037 | .317441 | .302014 | .286746 | .271626 | .410939 |
| 1.63 | .344337 | .328568 | .312981 | .297566 | .282312 | .267211 | .412019 |
| 1.64 | .339871 | .324108 | .308531 | .293128 | .277890 | .262809 | .413076 |
| 1.65 | .335413 | .319657 | .304089 | .288700 | .273480 | .258420 | .414110 |
| 1.66 | .330961 | .315214 | .299658 | .284284 | .269083 | .254045 | .415120 |
| 1.67 | .326518 | .310779 | .295236 | .279879 | .264697 | .249683 | .416107 |
| 1.68 | .322082 | .306354 | .290825 | .275485 | .260324 | .245334 | .417071 |
| 1.69 | .317654 | .301938 | .286424 | .271102 | .255964 | .240999 | .418011 |
| 1.70 | .313234 | .297531 | .282033 | .266731 | .251616 | .236679 | .418927 |
| 1.71 | .308823 | .293134 | .277654 | .262373 | .247282 | .232372 | .419820 |
| 1.72 | .304421 | .288746 | .273285 | .258026 | .242960 | .228080 | .420690 |
| 1.73 | .300027 | .284369 | .268927 | .253692 | .238653 | .223803 | .421536 |
| 1.74 | .295643 | .280002 | .264581 | .249370 | .234359 | .219540 | .422358 |
| 1.75 | .291267 | .275645 | .260246 | .245060 | .230078 | .215292 | .423156 |
| 1.76 | .286902 | .271299 | .255923 | .240764 | .225812 | .211059 | .423931 |
| 1.77 | .282546 | .266964 | .251612 | .236481 | .221560 | .206841 | .424682 |
| 1.78 | .278200 | .262640 | .247314 | .232211 | .217322 | .202639 | .425410 |
| 1.79 | .273864 | .258327 | .243027 | .227954 | .213098 | .198453 | .426114 |
| 1.80 | .269538 | .254026 | .238753 | .223711 | .208890 | .194282 | .426794 |
| 1.81 | .265223 | .249736 | .234492 | .219482 | .204696 | .190127 | .427450 |
| 1.82 | .260918 | .245458 | .230244 | .215266 | .200517 | .185989 | .428082 |
| 1.83 | .256625 | .241192 | .226008 | .211065 | .196354 | .181866 | .428691 |
| 1.84 | .252343 | .236938 | .221787 | .206879 | .192206 | .177760 | .429276 |
| 1.85 | .248072 | .232697 | .217578 | .202707 | .188073 | .173671 | .429837 |
| 1.86 | .243812 | .228468 | .213383 | .198549 | .183957 | .169598 | .430374 |
| 1.87 | .239565 | .224252 | .209202 | .194406 | .179856 | .165543 | .430888 |
| 1.88 | .235329 | .220049 | .205035 | .190279 | .175771 | .161504 | .431377 |
| 1.89 | .231105 | .215859 | .200883 | .186167 | .171703 | .157483 | .431843 |
| 1.90 | .226894 | .211682 | .196744 | .182070 | .167651 | .153479 | .432285 |
| 1.91 | .222695 | .207519 | .192620 | .177989 | .163615 | .149493 | .432704 |
| 1.92 | .218509 | .203370 | .188511 | .173923 | .159596 | .145525 | .433098 |
| 1.93 | .214335 | .199235 | .184417 | .169873 | .155595 | .141574 | .433469 |
| 1.94 | .210175 | .195114 | .180338 | .165840 | .151610 | .137641 | .433816 |
| 1.95 | .206028 | .191007 | .176275 | .161823 | .147642 | .133727 | .434139 |
| 1.96 | .201895 | .186914 | .172226 | .157822 | .143692 | .129831 | .434438 |
| 1.97 | .197775 | .182836 | .168194 | .153838 | .139760 | .125953 | .434714 |
| 1.98 | .193669 | .178773 | .164177 | .149870 | .135845 | .122094 | .434965 |
| 1.99 | .189576 | .174725 | .160176 | .145920 | .131948 | .118254 | .435193 |
| 2.00 | .185498 | .170692 | .156191 | .141986 | .128069 | .114433 | .435398 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .185498 | .170692 | .156191 | .141986 | .128069 | .114433 | .435398 |
| 2.01 | .181435 | .166674 | .152222 | .138070 | .124208 | .110631 | .435578 |
| 2.02 | .177386 | .162672 | .148270 | .134171 | .120366 | .106848 | .435735 |
| 2.03 | .173351 | .158686 | .144335 | .130289 | .116542 | .103084 | .435869 |
| 2.04 | .169332 | .154715 | .140416 | .126426 | .112736 | .099340 | .435978 |
| 2.05 | .165328 | .150761 | .136514 | .122580 | .108949 | .095616 | .436065 |
| 2.06 | .161339 | .146822 | .132630 | .118752 | .105182 | .091911 | .436127 |
| 2.07 | .157365 | .142900 | .128762 | .114943 | .101433 | .088226 | .436166 |
| 2.08 | .153407 | .138995 | .124912 | .111151 | .097703 | .084561 | .436182 |
| 2.09 | .149464 | .135106 | .121080 | .107378 | .093993 | .080916 | .436173 |
| 2.10 | .145538 | .131234 | .117265 | .103624 | .090302 | .077292 | .436142 |
| 2.11 | .141627 | .127378 | .113469 | .099889 | .086631 | .073688 | .436087 |
| 2.12 | .137733 | .123541 | .109690 | .096172 | .082979 | .070105 | .436009 |
| 2.13 | .133856 | .119720 | .105929 | .092474 | .079347 | .066542 | .435907 |
| 2.14 | .129994 | .115917 | .102187 | .088796 | .075736 | .063000 | .435782 |
| 2.15 | .126150 | .112131 | .098463 | .085137 | .072144 | .059479 | .435634 |
| 2.16 | .122323 | .108364 | .094758 | .081497 | .068573 | .055978 | .435462 |
| 2.17 | .118512 | .104614 | .091072 | .077877 | .065022 | .052499 | .435268 |
| 2.18 | .114719 | .100882 | .087404 | .074276 | .061491 | .049042 | .435050 |
| 2.19 | .110943 | .097169 | .083756 | .070696 | .057981 | .045605 | .434809 |
| 2.20 | .107185 | .093473 | .080126 | .067135 | .054492 | .042191 | .434545 |
| 2.21 | .103444 | .089797 | .076517 | .063595 | .051024 | .038797 | .434258 |
| 2.22 | .099722 | .086139 | .072926 | .060075 | .047576 | .035426 | .433948 |
| 2.23 | .096017 | .082500 | .069355 | .056575 | .044150 | .032076 | .433616 |
| 2.24 | .092330 | .078879 | .065804 | .053095 | .040745 | .028748 | .433260 |
| 2.25 | .088662 | .075278 | .062273 | .049636 | .037362 | .025442 | .432882 |
| 2.26 | .085012 | .071696 | .058761 | .046198 | .034000 | .022159 | .432481 |
| 2.27 | .081381 | .068134 | .055270 | .042781 | .030659 | .018897 | .432057 |
| 2.28 | .077769 | .064591 | .051799 | .039385 | .027340 | .015658 | .431611 |
| 2.29 | .074175 | .061068 | .048349 | .036010 | .024043 | .012442 | .431142 |
| 2.30 | .070600 | .057564 | .044919 | .032656 | .020767 | .009247 | .430650 |
| 2.31 | .067045 | .054080 | .041509 | .029323 | .017514 | .006076 | .430137 |
| 2.32 | .063509 | .050617 | .038121 | .026012 | .014283 | .002927 | .429600 |
| 2.33 | .059992 | .047173 | .034753 | .022722 | .011074 | -.000199 | .429042 |
| 2.34 | .056495 | .043750 | .031406 | .019454 | .007887 | -.003302 | .428461 |
| 2.35 | .053017 | .040347 | .028080 | .016208 | .004723 | -.006382 | .427859 |
| 2.36 | .049559 | .036965 | .024776 | .012984 | .001581 | -.009439 | .427234 |
| 2.37 | .046122 | .033603 | .021493 | .009781 | -.001539 | -.012473 | .426587 |
| 2.38 | .042704 | .030262 | .018231 | .006601 | -.004635 | -.015483 | .425918 |
| 2.39 | .039307 | .026942 | .014991 | .003443 | -.007709 | -.018470 | .425228 |
| 2.40 | .035929 | .023643 | .011772 | .000307 | -.010760 | -.021434 | .424515 |
| 2.41 | .032573 | .020365 | .008575 | -.002806 | -.013788 | -.024374 | .423781 |
| 2.42 | .029237 | .017109 | .005401 | -.005898 | -.016793 | -.027291 | .423026 |
| 2.43 | .025921 | .013874 | .002248 | -.008966 | -.019775 | -.030184 | .422248 |
| 2.44 | .022627 | .010660 | -.000883 | -.012012 | -.022733 | -.033054 | .421450 |
| 2.45 | .019353 | .007468 | -.003992 | -.015035 | -.025669 | -.035899 | .420630 |
| 2.46 | .016101 | .004297 | -.007078 | -.018035 | -.028581 | -.038721 | .419789 |
| 2.47 | .012869 | .001148 | -.010142 | -.021012 | -.031469 | -.041519 | .418926 |
| 2.48 | .009659 | -.001978 | -.013184 | -.023967 | -.034334 | -.044292 | .418043 |
| 2.49 | .006471 | -.005083 | -.016203 | -.026898 | -.037176 | -.047042 | .417138 |
| 2.50 | .003303 | -.008166 | -.019199 | -.029806 | -.039993 | -.049768 | .416213 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | .003303 | -.008166 | -.019199 | -.029806 | -.039993 | -.049768 | .416213 |
| 2.51 | .000158 | -.011227 | -.022173 | -.032691 | -.042787 | -.052469 | .415267 |
| 2.52 | -.002966 | -.014265 | -.025124 | -.035552 | -.045557 | -.055146 | .414300 |
| 2.53 | -.006068 | -.017281 | -.028052 | -.038390 | -.048304 | -.057799 | .413312 |
| 2.54 | -.009148 | -.020274 | -.030956 | -.041205 | -.051026 | -.060427 | .412304 |
| 2.55 | -.012206 | -.023245 | -.033838 | -.043996 | -.053724 | -.063031 | .411276 |
| 2.56 | -.015242 | -.026193 | -.036697 | -.046763 | -.056399 | -.065610 | .410227 |
| 2.57 | -.018256 | -.029118 | -.039532 | -.049506 | -.059049 | -.068165 | .409158 |
| 2.58 | -.021247 | -.032021 | -.042344 | -.052226 | -.061675 | -.070696 | .408069 |
| 2.59 | -.024216 | -.034901 | -.045133 | -.054922 | -.064276 | -.073201 | .406959 |
| 2.60 | -.027163 | -.037757 | -.047898 | -.057594 | -.066854 | -.075682 | .405830 |
| 2.61 | -.030087 | -.040591 | -.050640 | -.060242 | -.069406 | -.078139 | .404681 |
| 2.62 | -.032988 | -.043401 | -.053357 | -.062866 | -.071935 | -.080570 | .403513 |
| 2.63 | -.035866 | -.046188 | -.056052 | -.065466 | -.074439 | -.082977 | .402324 |
| 2.64 | -.038722 | -.048952 | -.058722 | -.068042 | -.076919 | -.085359 | .401117 |
| 2.65 | -.041554 | -.051692 | -.061369 | -.070593 | -.079373 | -.087716 | .399889 |
| 2.66 | -.044364 | -.054409 | -.063992 | -.073120 | -.081804 | -.090048 | .398643 |
| 2.67 | -.047150 | -.057102 | -.066590 | -.075623 | -.084209 | -.092355 | .397377 |
| 2.68 | -.049913 | -.059772 | -.069165 | -.078102 | -.086590 | -.094637 | .396093 |
| 2.69 | -.052653 | -.062418 | -.071716 | -.080556 | -.088946 | -.096894 | .394789 |
| 2.70 | -.055370 | -.065040 | -.074242 | -.082985 | -.091278 | -.099126 | .393467 |
| 2.71 | -.058063 | -.067639 | -.076745 | -.085390 | -.093584 | -.101332 | .392126 |
| 2.72 | -.060733 | -.070213 | -.079223 | -.087771 | -.095866 | -.103514 | .390766 |
| 2.73 | -.063379 | -.072764 | -.081676 | -.090127 | -.098123 | -.105671 | .389388 |
| 2.74 | -.066001 | -.075290 | -.084106 | -.092458 | -.100354 | -.107802 | .387992 |
| 2.75 | -.068600 | -.077792 | -.086511 | -.094764 | -.102561 | -.109908 | .386578 |
| 2.76 | -.071175 | -.080271 | -.088891 | -.097046 | -.104743 | -.111989 | .385145 |
| 2.77 | -.073726 | -.082725 | -.091247 | -.099303 | -.106900 | -.114045 | .383694 |
| 2.78 | -.076253 | -.085155 | -.093579 | -.101535 | -.109032 | -.116075 | .382226 |
| 2.79 | -.078756 | -.087560 | -.095886 | -.103742 | -.111138 | -.118081 | .380740 |
| 2.80 | -.081235 | -.089941 | -.098168 | -.105924 | -.113220 | -.120060 | .379236 |
| 2.81 | -.083691 | -.092298 | -.100425 | -.108082 | -.115276 | -.122015 | .377715 |
| 2.82 | -.086122 | -.094631 | -.102658 | -.110214 | -.117308 | -.123944 | .376176 |
| 2.83 | -.088528 | -.096938 | -.104866 | -.112322 | -.119314 | -.125848 | .374621 |
| 2.84 | -.090911 | -.099222 | -.107050 | -.114404 | -.121295 | -.127727 | .373048 |
| 2.85 | -.093269 | -.101481 | -.109208 | -.116462 | -.123250 | -.129581 | .371458 |
| 2.86 | -.095603 | -.103715 | -.111342 | -.118494 | -.125181 | -.131409 | .369852 |
| 2.87 | -.097913 | -.105924 | -.113450 | -.120502 | -.127086 | -.133211 | .368229 |
| 2.88 | -.100198 | -.108109 | -.115534 | -.122484 | -.128966 | -.134989 | .366589 |
| 2.89 | -.102458 | -.110269 | -.117593 | -.124441 | -.130821 | -.136741 | .364934 |
| 2.90 | -.104694 | -.112404 | -.119627 | -.126373 | -.132651 | -.138468 | .363261 |
| 2.91 | -.106906 | -.114515 | -.121636 | -.128280 | -.134455 | -.140169 | .361573 |
| 2.92 | -.109093 | -.116601 | -.123620 | -.130162 | -.136234 | -.141845 | .359869 |
| 2.93 | -.111255 | -.118661 | -.125579 | -.132019 | -.137988 | -.143496 | .358149 |
| 2.94 | -.113393 | -.120697 | -.127513 | -.133850 | -.139717 | -.145121 | .356413 |
| 2.95 | -.115506 | -.122709 | -.129422 | -.135656 | -.141420 | -.146722 | .354662 |
| 2.96 | -.117594 | -.124695 | -.131306 | -.137437 | -.143099 | -.148297 | .352895 |
| 2.97 | -.119657 | -.126656 | -.133165 | -.139193 | -.144752 | -.149846 | .351113 |
| 2.98 | -.121696 | -.128592 | -.134998 | -.140924 | -.146379 | -.151371 | .349316 |
| 2.99 | -.123710 | -.130504 | -.136807 | -.142630 | -.147982 | -.152870 | .347504 |
| 3.00 | -.125699 | -.132390 | -.138590 | -.144310 | -.149559 | -.154344 | .345677 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .996409 | .996202 | .995989 | .995770 | .995546 | .995315 | .003333 |
| .02 | .992796 | .992382 | .991957 | .991522 | .991075 | .990615 | .006666 |
| .03 | .989160 | .988540 | .987906 | .987255 | .986587 | .985899 | .009999 |
| .04 | .985502 | .984678 | .983834 | .982970 | .982082 | .981169 | .013331 |
| .05 | .981821 | .980794 | .979743 | .978666 | .977561 | .976424 | .016663 |
| .06 | .978119 | .976890 | .975633 | .974345 | .973023 | .971664 | .019993 |
| .07 | .974394 | .972966 | .971504 | .970006 | .968470 | .966891 | .023322 |
| .08 | .970648 | .969020 | .967356 | .965650 | .963901 | .962103 | .026650 |
| .09 | .966881 | .965055 | .963189 | .961277 | .959316 | .957302 | .029976 |
| .10 | .963092 | .961070 | .959003 | .956887 | .954716 | .952486 | .033300 |
| .11 | .959282 | .957065 | .954799 | .952479 | .950101 | .947658 | .036622 |
| .12 | .955451 | .953041 | .950577 | .948056 | .945470 | .942816 | .039942 |
| .13 | .951600 | .948997 | .946337 | .943615 | .940826 | .937962 | .043260 |
| .14 | .947728 | .944934 | .942080 | .939159 | .936166 | .933095 | .046575 |
| .15 | .943835 | .940852 | .937805 | .934687 | .931493 | .928215 | .049888 |
| .16 | .939923 | .936752 | .933512 | .930199 | .926805 | .923323 | .053197 |
| .17 | .935991 | .932633 | .929203 | .925696 | .922104 | .918419 | .056503 |
| .18 | .932039 | .928495 | .924877 | .921177 | .917388 | .913503 | .059806 |
| .19 | .928068 | .924340 | .920534 | .916643 | .912660 | .908576 | .063105 |
| .20 | .924078 | .920167 | .916175 | .912095 | .907918 | .903638 | .066400 |
| .21 | .920068 | .915976 | .911799 | .907531 | .903164 | .898688 | .069692 |
| .22 | .916040 | .911767 | .907408 | .902954 | .898397 | .893727 | .072979 |
| .23 | .911993 | .907541 | .903001 | .898362 | .893617 | .888756 | .076262 |
| .24 | .907927 | .903299 | .898578 | .893756 | .888825 | .883774 | .079540 |
| .25 | .903844 | .899039 | .894140 | .889137 | .884021 | .878782 | .082814 |
| .26 | .899742 | .894763 | .889687 | .884504 | .879205 | .873780 | .086082 |
| .27 | .895623 | .890471 | .885219 | .879858 | .874378 | .868769 | .089346 |
| .28 | .891486 | .886162 | .880736 | .875199 | .869539 | .863747 | .092604 |
| .29 | .887331 | .881837 | .876239 | .870526 | .864690 | .858717 | .095856 |
| .30 | .883160 | .877497 | .871728 | .865842 | .859829 | .853677 | .099103 |
| .31 | .878972 | .873141 | .867202 | .861145 | .854958 | .848629 | .102344 |
| .32 | .874767 | .868770 | .862663 | .856436 | .850076 | .843572 | .105578 |
| .33 | .870545 | .864384 | .858111 | .851714 | .845184 | .838507 | .108807 |
| .34 | .866307 | .859983 | .853545 | .846982 | .840282 | .833433 | .112029 |
| .35 | .862053 | .855567 | .848966 | .842237 | .835370 | .828352 | .115244 |
| .36 | .857783 | .851137 | .844374 | .837482 | .830449 | .823263 | .118452 |
| .37 | .853498 | .846693 | .839769 | .832715 | .825518 | .818166 | .121653 |
| .38 | .849197 | .842235 | .835153 | .827938 | .820579 | .813062 | .124847 |
| .39 | .844881 | .837763 | .830523 | .823150 | .815631 | .807952 | .128033 |
| .40 | .840550 | .833278 | .825882 | .818352 | .810674 | .802834 | .131212 |
| .41 | .836204 | .828779 | .821230 | .813544 | .805708 | .797710 | .134383 |
| .42 | .831844 | .824268 | .816565 | .808725 | .800735 | .792580 | .137546 |
| .43 | .827470 | .819743 | .811890 | .803898 | .795754 | .787444 | .140701 |
| .44 | .823081 | .815206 | .807203 | .799061 | .790765 | .782302 | .143847 |
| .45 | .818679 | .810657 | .802506 | .794214 | .785768 | .777154 | .146984 |
| .46 | .814263 | .806095 | .797798 | .789359 | .780765 | .772001 | .150113 |
| .47 | .809834 | .801522 | .793080 | .784495 | .775754 | .766843 | .153233 |
| .48 | .805391 | .796937 | .788351 | .779623 | .770737 | .761679 | .156344 |
| .49 | .800936 | .792340 | .783613 | .774742 | .765713 | .756512 | .159445 |
| .50 | .796467 | .787732 | .778865 | .769853 | .760683 | .751340 | .162537 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .796467 | .787732 | .778865 | .769853 | .760683 | .751340 | .162537 |
| .51 | .791987 | .783113 | .774108 | .764957 | .755647 | .746163 | .165619 |
| .52 | .787494 | .778484 | .769341 | .760053 | .750605 | .740983 | .168691 |
| .53 | .782989 | .773844 | .764566 | .755142 | .745558 | .735799 | .171754 |
| .54 | .778472 | .769193 | .759782 | .750224 | .740505 | .730611 | .174806 |
| .55 | .773944 | .764533 | .754989 | .745299 | .735448 | .725421 | .177847 |
| .56 | .769404 | .759863 | .750188 | .740367 | .730385 | .720227 | .180878 |
| .57 | .764854 | .755183 | .745379 | .735429 | .725318 | .715030 | .183898 |
| .58 | .760292 | .750494 | .740563 | .730485 | .720246 | .709831 | .186907 |
| .59 | .755720 | .745796 | .735738 | .725535 | .715170 | .704629 | .189905 |
| .60 | .751137 | .741088 | .730907 | .720579 | .710091 | .699426 | .192892 |
| .61 | .746545 | .736373 | .726068 | .715618 | .705007 | .694220 | .195867 |
| .62 | .741942 | .731648 | .721223 | .710652 | .699920 | .689013 | .198831 |
| .63 | .737329 | .726916 | .716371 | .705681 | .694830 | .683805 | .201782 |
| .64 | .732708 | .722175 | .711512 | .700705 | .689737 | .678595 | .204722 |
| .65 | .728076 | .717427 | .706648 | .695724 | .684642 | .673385 | .207650 |
| .66 | .723436 | .712672 | .701777 | .690740 | .679543 | .668173 | .210565 |
| .67 | .718788 | .707909 | .696901 | .685751 | .674443 | .662962 | .213467 |
| .68 | .714130 | .703139 | .692020 | .680758 | .669340 | .657750 | .216357 |
| .69 | .709464 | .698362 | .687133 | .675762 | .664236 | .652538 | .219234 |
| .70 | .704791 | .693579 | .682241 | .670763 | .659130 | .647326 | .222098 |
| .71 | .700109 | .688790 | .677345 | .665761 | .654023 | .642114 | .224949 |
| .72 | .695420 | .683994 | .672444 | .660756 | .648914 | .636904 | .227787 |
| .73 | .690723 | .679193 | .667539 | .655748 | .643805 | .631694 | .230610 |
| .74 | .686020 | .674386 | .662630 | .650738 | .638695 | .626485 | .233421 |
| .75 | .681309 | .669574 | .657717 | .645725 | .633584 | .621278 | .236217 |
| .76 | .676592 | .664756 | .652800 | .640711 | .628474 | .616073 | .238999 |
| .77 | .671869 | .659934 | .647881 | .635695 | .623363 | .610869 | .241768 |
| .78 | .667139 | .655107 | .642958 | .630678 | .618253 | .605667 | .244521 |
| .79 | .662403 | .650275 | .638032 | .625660 | .613143 | .600468 | .247261 |
| .80 | .657662 | .645440 | .633104 | .620640 | .608034 | .595271 | .249986 |
| .81 | .652915 | .640600 | .628173 | .615620 | .602926 | .590076 | .252695 |
| .82 | .648163 | .635757 | .623241 | .610600 | .597819 | .584885 | .255390 |
| .83 | .643406 | .630910 | .618306 | .605579 | .592714 | .579697 | .258070 |
| .84 | .638644 | .626060 | .613370 | .600558 | .587610 | .574512 | .260735 |
| .85 | .633878 | .621208 | .608432 | .595537 | .582509 | .569331 | .263384 |
| .86 | .629107 | .616352 | .603493 | .590517 | .577409 | .564154 | .266017 |
| .87 | .624332 | .611494 | .598553 | .585497 | .572311 | .558981 | .268635 |
| .88 | .619554 | .606633 | .593613 | .580478 | .567217 | .553812 | .271237 |
| .89 | .614772 | .601771 | .588671 | .575461 | .562125 | .548648 | .273823 |
| .90 | .609986 | .596906 | .583730 | .570445 | .557036 | .543489 | .276393 |
| .91 | .605198 | .592040 | .578789 | .565430 | .551950 | .538334 | .278946 |
| .92 | .600407 | .587173 | .573848 | .560417 | .546868 | .533185 | .281483 |
| .93 | .595613 | .582305 | .568907 | .555406 | .541789 | .528041 | .284003 |
| .94 | .590816 | .577435 | .563967 | .550398 | .536715 | .522903 | .286507 |
| .95 | .586018 | .572565 | .559028 | .545392 | .531644 | .517770 | .288993 |
| .96 | .581217 | .567695 | .554090 | .540389 | .526578 | .512644 | .291463 |
| .97 | .576415 | .562824 | .549153 | .535388 | .521517 | .507524 | .293916 |
| .98 | .571612 | .557954 | .544218 | .530391 | .516460 | .502410 | .296351 |
| .99 | .566807 | .553084 | .539285 | .525398 | .511408 | .497303 | .298769 |
| 1.00 | .562001 | .548214 | .534354 | .520407 | .506362 | .492204 | .301169 |

Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .562001 | .548214 | .534354 | .520407 | .506362 | .492204 | .301169 |
| 1.01 | .557195 | .543345 | .529425 | .515421 | .501321 | .487111 | .303551 |
| 1.02 | .552388 | .538477 | .524498 | .510439 | .496286 | .482026 | .305916 |
| 1.03 | .547581 | .533610 | .519575 | .505461 | .491257 | .476948 | .308262 |
| 1.04 | .542773 | .528745 | .514654 | .500488 | .486234 | .471878 | .310591 |
| 1.05 | .537966 | .523882 | .509737 | .495520 | .481217 | .466816 | .312901 |
| 1.06 | .533160 | .519020 | .504823 | .490556 | .476207 | .461762 | .315193 |
| 1.07 | .528354 | .514160 | .499912 | .485598 | .471204 | .456717 | .317467 |
| 1.08 | .523548 | .509303 | .495006 | .480645 | .466207 | .451681 | .319722 |
| 1.09 | .518744 | .504448 | .490104 | .475698 | .461218 | .446653 | .321958 |
| 1.10 | .513942 | .499597 | .485206 | .470756 | .456237 | .441634 | .324175 |
| 1.11 | .509141 | .494748 | .480312 | .465821 | .451263 | .436625 | .326373 |
| 1.12 | .504341 | .489902 | .475423 | .460892 | .446297 | .431625 | .328552 |
| 1.13 | .499544 | .485061 | .470540 | .455970 | .441339 | .426635 | .330712 |
| 1.14 | .494749 | .480222 | .465661 | .451054 | .436389 | .421654 | .332853 |
| 1.15 | .489957 | .475388 | .460788 | .446145 | .431448 | .416684 | .334974 |
| 1.16 | .485167 | .470558 | .455921 | .441244 | .426515 | .411724 | .337076 |
| 1.17 | .480380 | .465732 | .451059 | .436349 | .421592 | .406775 | .339158 |
| 1.18 | .475597 | .460911 | .446204 | .431463 | .416677 | .401836 | .341220 |
| 1.19 | .470817 | .456095 | .441355 | .426584 | .411772 | .396908 | .343262 |
| 1.20 | .466040 | .451284 | .436512 | .421713 | .406877 | .391991 | .345285 |
| 1.21 | .461268 | .446478 | .431676 | .416851 | .401991 | .387086 | .347287 |
| 1.22 | .456499 | .441678 | .426848 | .411997 | .397115 | .382192 | .349269 |
| 1.23 | .451735 | .436883 | .422026 | .407152 | .392250 | .377310 | .351230 |
| 1.24 | .446975 | .432095 | .417212 | .402315 | .387395 | .372439 | .353172 |
| 1.25 | .442220 | .427312 | .412405 | .397488 | .382550 | .367581 | .355092 |
| 1.26 | .437471 | .422537 | .407606 | .392670 | .377716 | .362735 | .356992 |
| 1.27 | .432726 | .417767 | .402816 | .387861 | .372893 | .357902 | .358872 |
| 1.28 | .427987 | .413005 | .398033 | .383062 | .368081 | .353081 | .360730 |
| 1.29 | .423253 | .408249 | .393259 | .378273 | .363281 | .348273 | .362568 |
| 1.30 | .418525 | .403501 | .388494 | .373495 | .358492 | .343478 | .364384 |
| 1.31 | .413804 | .398760 | .383738 | .368726 | .353715 | .338696 | .366180 |
| 1.32 | .409089 | .394027 | .378990 | .363968 | .348950 | .333928 | .367954 |
| 1.33 | .404380 | .389302 | .374252 | .359221 | .344197 | .329174 | .369707 |
| 1.34 | .399678 | .384585 | .369524 | .354484 | .339457 | .324433 | .371439 |
| 1.35 | .394983 | .379877 | .364805 | .349759 | .334729 | .319706 | .373149 |
| 1.36 | .390295 | .375177 | .360097 | .345045 | .330014 | .314993 | .374838 |
| 1.37 | .385615 | .370485 | .355398 | .340343 | .325311 | .310295 | .376505 |
| 1.38 | .380942 | .365803 | .350710 | .335652 | .320622 | .305611 | .378150 |
| 1.39 | .376277 | .361130 | .346032 | .330974 | .315946 | .300942 | .379774 |
| 1.40 | .371620 | .356466 | .341365 | .326307 | .311284 | .296288 | .381375 |
| 1.41 | .366972 | .351812 | .336709 | .321653 | .306635 | .291649 | .382955 |
| 1.42 | .362331 | .347168 | .332064 | .317011 | .302001 | .287025 | .384513 |
| 1.43 | .357700 | .342533 | .327430 | .312382 | .297380 | .282417 | .386048 |
| 1.44 | .353077 | .337909 | .322808 | .307765 | .292773 | .277824 | .387562 |
| 1.45 | .348464 | .333296 | .318198 | .303162 | .288181 | .273247 | .389053 |
| 1.46 | .343860 | .328692 | .313599 | .298572 | .283604 | .268686 | .390522 |
| 1.47 | .339265 | .324100 | .309013 | .293996 | .279041 | .264141 | .391968 |
| 1.48 | .334680 | .319519 | .304439 | .289433 | .274493 | .259612 | .393392 |
| 1.49 | .330105 | .314949 | .299878 | .284884 | .269960 | .255100 | .394794 |
| 1.50 | .325541 | .310390 | .295329 | .280349 | .265443 | .250604 | .396173 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .325541 | .310390 | .295329 | .280349 | .265443 | .250604 | .396173 |
| 1.51 | .320986 | .305843 | .290793 | .275828 | .260941 | .246125 | .397529 |
| 1.52 | .316442 | .301308 | .286271 | .271322 | .256455 | .241663 | .398863 |
| 1.53 | .311909 | .296785 | .281761 | .266830 | .251984 | .237218 | .400174 |
| 1.54 | .307387 | .292274 | .277265 | .262353 | .247530 | .232791 | .401462 |
| 1.55 | .302875 | .287775 | .272783 | .257891 | .243092 | .228381 | .402727 |
| 1.56 | .298376 | .283289 | .268314 | .253443 | .238670 | .223988 | .403969 |
| 1.57 | .293887 | .278816 | .263860 | .249011 | .234265 | .219614 | .405189 |
| 1.58 | .289411 | .274356 | .259419 | .244595 | .229876 | .215257 | .406385 |
| 1.59 | .284946 | .269909 | .254994 | .240194 | .225504 | .210918 | .407558 |
| 1.60 | .280494 | .265475 | .250582 | .235809 | .221149 | .206597 | .408708 |
| 1.61 | .276054 | .261055 | .246186 | .231440 | .216811 | .202295 | .409835 |
| 1.62 | .271626 | .256648 | .241804 | .227087 | .212491 | .198012 | .410939 |
| 1.63 | .267211 | .252256 | .237437 | .222750 | .208188 | .193747 | .412019 |
| 1.64 | .262809 | .247877 | .233086 | .218430 | .203903 | .189500 | .413076 |
| 1.65 | .258420 | .243513 | .228750 | .214126 | .199635 | .185273 | .414110 |
| 1.66 | .254045 | .239163 | .224430 | .209839 | .195386 | .181065 | .415120 |
| 1.67 | .249683 | .234828 | .220125 | .205569 | .191154 | .176876 | .416107 |
| 1.68 | .245334 | .230507 | .215837 | .201316 | .186941 | .172707 | .417071 |
| 1.69 | .240999 | .226202 | .211564 | .197081 | .182746 | .168557 | .418011 |
| 1.70 | .236679 | .221912 | .207308 | .192863 | .178570 | .164427 | .418927 |
| 1.71 | .232372 | .217637 | .203069 | .188662 | .174413 | .160316 | .419820 |
| 1.72 | .228080 | .213377 | .198846 | .184480 | .170274 | .156226 | .420690 |
| 1.73 | .223803 | .209134 | .194640 | .180315 | .166155 | .152156 | .421536 |
| 1.74 | .219540 | .204906 | .190450 | .176168 | .162054 | .148105 | .422358 |
| 1.75 | .215292 | .200694 | .186278 | .172039 | .157973 | .144076 | .423156 |
| 1.76 | .211059 | .196498 | .182123 | .167929 | .153911 | .140067 | .423931 |
| 1.77 | .206841 | .192319 | .177986 | .163837 | .149869 | .136078 | .424682 |
| 1.78 | .202639 | .188156 | .173866 | .159764 | .145847 | .132110 | .425410 |
| 1.79 | .198453 | .184010 | .169764 | .155710 | .141844 | .128163 | .426114 |
| 1.80 | .194282 | .179881 | .165680 | .151675 | .137861 | .124237 | .426794 |
| 1.81 | .190127 | .175768 | .161614 | .147658 | .133899 | .120332 | .427450 |
| 1.82 | .185989 | .171673 | .157566 | .143661 | .129957 | .116449 | .428082 |
| 1.83 | .181866 | .167596 | .153536 | .139684 | .126035 | .112587 | .428691 |
| 1.84 | .177760 | .163535 | .149525 | .135726 | .122133 | .108746 | .429276 |
| 1.85 | .173671 | .159493 | .145533 | .131787 | .118253 | .104927 | .429837 |
| 1.86 | .169598 | .155468 | .141559 | .127869 | .114393 | .101130 | .430374 |
| 1.87 | .165543 | .151461 | .137605 | .123970 | .110554 | .097354 | .430888 |
| 1.88 | .161504 | .147472 | .133669 | .120091 | .106736 | .093601 | .431377 |
| 1.89 | .157483 | .143502 | .129753 | .116233 | .102939 | .089869 | .431843 |
| 1.90 | .153479 | .139549 | .125856 | .112395 | .099163 | .086160 | .432285 |
| 1.91 | .149493 | .135616 | .121979 | .108577 | .095409 | .082473 | .432704 |
| 1.92 | .145525 | .131701 | .118121 | .104780 | .091676 | .078808 | .433098 |
| 1.93 | .141574 | .127805 | .114283 | .101004 | .087965 | .075166 | .433469 |
| 1.94 | .137641 | .123928 | .110465 | .097248 | .084276 | .071547 | .433816 |
| 1.95 | .133727 | .120070 | .106667 | .093514 | .080609 | .067950 | .434139 |
| 1.96 | .129831 | .116231 | .102889 | .089800 | .076963 | .064376 | .434438 |
| 1.97 | .125953 | .112412 | .099132 | .086108 | .073340 | .060825 | .434714 |
| 1.98 | .122094 | .108612 | .095394 | .082437 | .069738 | .057297 | .434965 |
| 1.99 | .118254 | .104832 | .091678 | .078788 | .066159 | .053792 | .435193 |
| 2.00 | .114433 | .101072 | .087982 | .075160 | .062603 | .050311 | .435398 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .114433 | .101072 | .087982 | .075160 | .062603 | .050311 | .435398 |
| 2.01 | .110631 | .097332 | .084307 | .071553 | .059069 | .046852 | .435578 |
| 2.02 | .106848 | .093612 | .080653 | .067969 | .055557 | .043417 | .435735 |
| 2.03 | .103084 | .089912 | .077020 | .064406 | .052068 | .040006 | .435869 |
| 2.04 | .099340 | .086232 | .073409 | .060866 | .048602 | .036618 | .435978 |
| 2.05 | .095616 | .082573 | .069818 | .057347 | .045159 | .033254 | .436065 |
| 2.06 | .091911 | .078935 | .066249 | .053851 | .041739 | .029913 | .436127 |
| 2.07 | .088226 | .075317 | .062702 | .050377 | .038342 | .026597 | .436166 |
| 2.08 | .084561 | .071720 | .059176 | .046926 | .034968 | .023304 | .436182 |
| 2.09 | .080916 | .068144 | .055672 | .043497 | .031618 | .020035 | .436173 |
| 2.10 | .077292 | .064589 | .052190 | .040091 | .028291 | .016790 | .436142 |
| 2.11 | .073688 | .061056 | .048730 | .036707 | .024987 | .013570 | .436087 |
| 2.12 | .070105 | .057543 | .045291 | .033346 | .021707 | .010373 | .436009 |
| 2.13 | .066542 | .054052 | .041875 | .030008 | .018450 | .007201 | .435907 |
| 2.14 | .063000 | .050583 | .038482 | .026694 | .015218 | .004054 | .435782 |
| 2.15 | .059479 | .047135 | .035111 | .023402 | .012008 | .000931 | .435634 |
| 2.16 | .055978 | .043709 | .031762 | .020134 | .008823 | -.002168 | .435462 |
| 2.17 | .052499 | .040305 | .028436 | .016888 | .005662 | -.005242 | .435268 |
| 2.18 | .049042 | .036923 | .025132 | .013667 | .002525 | -.008292 | .435050 |
| 2.19 | .045605 | .033563 | .021852 | .010468 | -.000588 | -.011316 | .434809 |
| 2.20 | .042191 | .030226 | .018594 | .007293 | -.003677 | -.014316 | .434545 |
| 2.21 | .038797 | .026910 | .015359 | .004142 | -.006742 | -.017291 | .434258 |
| 2.22 | .035426 | .023617 | .012148 | .001015 | -.009782 | -.020242 | .433948 |
| 2.23 | .032076 | .020347 | .008959 | -.002089 | -.012798 | -.023167 | .433616 |
| 2.24 | .028748 | .017099 | .005794 | -.005169 | -.015789 | -.026067 | .433260 |
| 2.25 | .025442 | .013874 | .002652 | -.008225 | -.018756 | -.028942 | .432882 |
| 2.26 | .022159 | .010671 | -.000467 | -.011256 | -.021699 | -.031792 | .432481 |
| 2.27 | .018897 | .007492 | -.003562 | -.014264 | -.024616 | -.034617 | .432057 |
| 2.28 | .015658 | .004335 | -.006633 | -.017248 | -.027509 | -.037417 | .431611 |
| 2.29 | .012442 | .001201 | -.009681 | -.020207 | -.030378 | -.040192 | .431142 |
| 2.30 | .009247 | -.001909 | -.012705 | -.023142 | -.033221 | -.042941 | .430650 |
| 2.31 | .006076 | -.004996 | -.015705 | -.026053 | -.036040 | -.045664 | .430137 |
| 2.32 | .002927 | -.008060 | -.018681 | -.028939 | -.038833 | -.048363 | .429600 |
| 2.33 | -.000199 | -.011100 | -.021634 | -.031801 | -.041602 | -.051036 | .429042 |
| 2.34 | -.003302 | -.014117 | -.024562 | -.034638 | -.044345 | -.053683 | .428461 |
| 2.35 | -.006382 | -.017110 | -.027466 | -.037451 | -.047064 | -.056305 | .427859 |
| 2.36 | -.009439 | -.020080 | -.030346 | -.040238 | -.049757 | -.058901 | .427234 |
| 2.37 | -.012473 | -.023026 | -.033202 | -.043002 | -.052425 | -.061472 | .426587 |
| 2.38 | -.015483 | -.025948 | -.036033 | -.045740 | -.055068 | -.064017 | .425918 |
| 2.39 | -.018470 | -.028847 | -.038840 | -.048454 | -.057686 | -.066537 | .425228 |
| 2.40 | -.021434 | -.031721 | -.041623 | -.051142 | -.060278 | -.069030 | .424515 |
| 2.41 | -.024374 | -.034571 | -.044381 | -.053806 | -.062846 | -.071498 | .423781 |
| 2.42 | -.027291 | -.037398 | -.047115 | -.056445 | -.065387 | -.073941 | .423026 |
| 2.43 | -.030184 | -.040200 | -.049824 | -.059058 | -.067903 | -.076357 | .422248 |
| 2.44 | -.033054 | -.042978 | -.052508 | -.061647 | -.070394 | -.078748 | .421450 |
| 2.45 | -.035899 | -.045731 | -.055168 | -.064211 | -.072859 | -.081113 | .420630 |
| 2.46 | -.038721 | -.048461 | -.057803 | -.066749 | -.075299 | -.083452 | .419789 |
| 2.47 | -.041519 | -.051165 | -.060413 | -.069262 | -.077713 | -.085765 | .418926 |
| 2.48 | -.044292 | -.053846 | -.062998 | -.071750 | -.080102 | -.088053 | .418043 |
| 2.49 | -.047042 | -.056502 | -.065558 | -.074213 | -.082465 | -.090314 | .417138 |
| 2.50 | -.049768 | -.059133 | -.068094 | -.076650 | -.084803 | -.092550 | .416213 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.049768 | -.059133 | -.068094 | -.076650 | -.084803 | -.092550 | .416213 |
| 2.51 | -.052469 | -.061740 | -.070604 | -.079062 | -.087114 | -.094759 | .415267 |
| 2.52 | -.055146 | -.064322 | -.073089 | -.081449 | -.089400 | -.096943 | .414300 |
| 2.53 | -.057799 | -.066880 | -.075549 | -.083810 | -.091661 | -.099101 | .413312 |
| 2.54 | -.060427 | -.069412 | -.077984 | -.086146 | -.093896 | -.101233 | .412304 |
| 2.55 | -.063031 | -.071920 | -.080394 | -.088456 | -.096105 | -.103339 | .411276 |
| 2.56 | -.065610 | -.074403 | -.082779 | -.090741 | -.098288 | -.105419 | .410227 |
| 2.57 | -.068165 | -.076861 | -.085139 | -.093000 | -.100445 | -.107473 | .409158 |
| 2.58 | -.070696 | -.079294 | -.087473 | -.095234 | -.102577 | -.109501 | .408069 |
| 2.59 | -.073201 | -.081702 | -.089782 | -.097442 | -.104683 | -.111503 | .406959 |
| 2.60 | -.075682 | -.084085 | -.092066 | -.099625 | -.106763 | -.113479 | .405830 |
| 2.61 | -.078139 | -.086444 | -.094324 | -.101782 | -.108818 | -.115429 | .404681 |
| 2.62 | -.080570 | -.088777 | -.096557 | -.103914 | -.110846 | -.117354 | .403513 |
| 2.63 | -.082977 | -.091084 | -.098765 | -.106020 | -.112849 | -.119252 | .402324 |
| 2.64 | -.085359 | -.093367 | -.100947 | -.108100 | -.114826 | -.121125 | .401117 |
| 2.65 | -.087716 | -.095625 | -.103104 | -.110155 | -.116778 | -.122971 | .399889 |
| 2.66 | -.090048 | -.097857 | -.105235 | -.112184 | -.118703 | -.124792 | .398643 |
| 2.67 | -.092355 | -.100064 | -.107341 | -.114187 | -.120603 | -.126587 | .397377 |
| 2.68 | -.094637 | -.102246 | -.109421 | -.116165 | -.122477 | -.128355 | .396093 |
| 2.69 | -.096894 | -.104403 | -.111476 | -.118117 | -.124325 | -.130099 | .394789 |
| 2.70 | -.099126 | -.106534 | -.113506 | -.120044 | -.126147 | -.131816 | .393467 |
| 2.71 | -.101332 | -.108640 | -.115510 | -.121944 | -.127944 | -.133507 | .392126 |
| 2.72 | -.103514 | -.110720 | -.117488 | -.123820 | -.129715 | -.135173 | .390766 |
| 2.73 | -.105671 | -.112776 | -.119441 | -.125669 | -.131460 | -.136813 | .389388 |
| 2.74 | -.107802 | -.114806 | -.121369 | -.127493 | -.133179 | -.138427 | .387992 |
| 2.75 | -.109908 | -.116810 | -.123270 | -.129291 | -.134873 | -.140015 | .386578 |
| 2.76 | -.111989 | -.118789 | -.125147 | -.131064 | -.136541 | -.141578 | .385145 |
| 2.77 | -.114045 | -.120743 | -.126998 | -.132811 | -.138184 | -.143115 | .383694 |
| 2.78 | -.116075 | -.122671 | -.128823 | -.134532 | -.139800 | -.144626 | .382226 |
| 2.79 | -.118081 | -.124574 | -.130623 | -.136228 | -.141391 | -.146112 | .380740 |
| 2.80 | -.120060 | -.126452 | -.132397 | -.137898 | -.142957 | -.147572 | .379236 |
| 2.81 | -.122015 | -.128304 | -.134146 | -.139543 | -.144497 | -.149007 | .377715 |
| 2.82 | -.123944 | -.130130 | -.135869 | -.141162 | -.146012 | -.150416 | .376176 |
| 2.83 | -.125848 | -.131931 | -.137566 | -.142756 | -.147500 | -.151800 | .374621 |
| 2.84 | -.127727 | -.133707 | -.139239 | -.144324 | -.148964 | -.153158 | .373048 |
| 2.85 | -.129581 | -.135458 | -.140886 | -.145867 | -.150402 | -.154491 | .371458 |
| 2.86 | -.131409 | -.137183 | -.142507 | -.147384 | -.151815 | -.155799 | .369852 |
| 2.87 | -.133211 | -.138882 | -.144103 | -.148876 | -.153202 | -.157081 | .368229 |
| 2.88 | -.134989 | -.140556 | -.145673 | -.150342 | -.154564 | -.158338 | .366589 |
| 2.89 | -.136741 | -.142205 | -.147218 | -.151783 | -.155900 | -.159570 | .364934 |
| 2.90 | -.138468 | -.143829 | -.148738 | -.153199 | -.157212 | -.160777 | .363261 |
| 2.91 | -.140169 | -.145427 | -.150232 | -.154589 | -.158498 | -.161958 | .361573 |
| 2.92 | -.141845 | -.146999 | -.151701 | -.155954 | -.159759 | -.163115 | .359869 |
| 2.93 | -.143496 | -.148547 | -.153145 | -.157294 | -.160994 | -.164247 | .358149 |
| 2.94 | -.145121 | -.150069 | -.154564 | -.158608 | -.162205 | -.165353 | .356413 |
| 2.95 | -.146722 | -.151566 | -.155957 | -.159898 | -.163391 | -.166435 | .354662 |
| 2.96 | -.148297 | -.153037 | -.157325 | -.161162 | -.164551 | -.167492 | .352895 |
| 2.97 | -.149846 | -.154483 | -.158668 | -.162402 | -.165687 | -.168525 | .351113 |
| 2.98 | -.151371 | -.155905 | -.159985 | -.163616 | -.166798 | -.169532 | .349316 |
| 2.99 | -.152870 | -.157300 | -.161278 | -.164805 | -.167884 | -.170515 | .347504 |
| 3.00 | -.154344 | -.158671 | -.162545 | -.165969 | -.168945 | -.171473 | .345677 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| .00 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | .000000 |
| .01 | .995315 | .995077 | .994831 | .994577 | .994314 | .993634 | .003333 |
| .02 | .990615 | .990141 | .989651 | .989145 | .988621 | .987268 | .006666 |
| .03 | .985899 | .985191 | .984460 | .983705 | .982922 | .980902 | .009999 |
| .04 | .981169 | .980229 | .979258 | .978255 | .977216 | .974537 | .013331 |
| .05 | .976424 | .975253 | .974046 | .972797 | .971505 | .968173 | .016663 |
| .06 | .971664 | .970265 | .968822 | .967331 | .965788 | .961810 | .019993 |
| .07 | .966891 | .965265 | .963589 | .961857 | .960065 | .955449 | .023322 |
| .08 | .962103 | .960253 | .958345 | .956375 | .954337 | .949089 | .026650 |
| .09 | .957302 | .955229 | .953092 | .950886 | .948604 | .942730 | .029976 |
| .10 | .952486 | .950193 | .947829 | .945389 | .942865 | .936373 | .033300 |
| .11 | .947658 | .945145 | .942557 | .939885 | .937122 | .930019 | .036622 |
| .12 | .942816 | .940087 | .937275 | .934374 | .931375 | .923667 | .039942 |
| .13 | .937962 | .935017 | .931985 | .928857 | .925624 | .917317 | .043260 |
| .14 | .933095 | .929937 | .926686 | .923333 | .919868 | .910970 | .046575 |
| .15 | .928215 | .924846 | .921379 | .917803 | .914109 | .904626 | .049888 |
| .16 | .923323 | .919745 | .916063 | .912267 | .908346 | .898286 | .053197 |
| .17 | .918419 | .914634 | .910739 | .906725 | .902580 | .891948 | .056503 |
| .18 | .913503 | .909513 | .905408 | .901178 | .896811 | .885615 | .059806 |
| .19 | .908576 | .904382 | .900069 | .895625 | .891038 | .879285 | .063105 |
| .20 | .903638 | .899242 | .894723 | .890067 | .885264 | .872959 | .066400 |
| .21 | .898688 | .894093 | .889369 | .884505 | .879486 | .866637 | .069692 |
| .22 | .893727 | .888935 | .884009 | .878938 | .873707 | .860320 | .072979 |
| .23 | .888756 | .883768 | .878642 | .873366 | .867925 | .854007 | .076262 |
| .24 | .883774 | .878593 | .873269 | .867790 | .862142 | .847699 | .079540 |
| .25 | .878782 | .873409 | .867890 | .862211 | .856358 | .841397 | .082814 |
| .26 | .873780 | .868217 | .862504 | .856627 | .850571 | .835099 | .086082 |
| .27 | .868769 | .863018 | .857113 | .851040 | .844784 | .828807 | .089346 |
| .28 | .863747 | .857811 | .851717 | .845450 | .838996 | .822521 | .092604 |
| .29 | .858717 | .852596 | .846315 | .839857 | .833208 | .816241 | .095856 |
| .30 | .853677 | .847375 | .840908 | .834261 | .827419 | .809966 | .099103 |
| .31 | .848629 | .842146 | .835496 | .828663 | .821629 | .803698 | .102344 |
| .32 | .843572 | .836911 | .830080 | .823062 | .815840 | .797437 | .105578 |
| .33 | .838507 | .831670 | .824659 | .817459 | .810051 | .791182 | .108807 |
| .34 | .833433 | .826422 | .819234 | .811854 | .804263 | .784935 | .112029 |
| .35 | .828352 | .821169 | .813806 | .806247 | .798475 | .778694 | .115244 |
| .36 | .823263 | .815909 | .808374 | .800639 | .792688 | .772461 | .118452 |
| .37 | .818166 | .810644 | .802938 | .795030 | .786902 | .766235 | .121653 |
| .38 | .813062 | .805374 | .797499 | .789420 | .781118 | .760017 | .124847 |
| .39 | .807952 | .800099 | .792057 | .783809 | .775335 | .753807 | .128033 |
| .40 | .802834 | .794819 | .786613 | .778197 | .769554 | .747605 | .131212 |
| .41 | .797710 | .789535 | .781166 | .772586 | .763775 | .741411 | .134383 |
| .42 | .792580 | .784246 | .775716 | .766974 | .757999 | .735226 | .137546 |
| .43 | .787444 | .778953 | .770265 | .761362 | .752225 | .729050 | .140701 |
| .44 | .782302 | .773656 | .764812 | .755751 | .746453 | .722883 | .143847 |
| .45 | .777154 | .768356 | .759357 | .750140 | .740685 | .716724 | .146984 |
| .46 | .772001 | .763052 | .753901 | .744530 | .734919 | .710576 | .150113 |
| .47 | .766843 | .757745 | .748443 | .738921 | .729157 | .704436 | .153233 |
| .48 | .761679 | .752435 | .742985 | .733313 | .723399 | .698307 | .156344 |
| .49 | .756512 | .747122 | .737526 | .727707 | .717644 | .692187 | .159445 |
| .50 | .751340 | .741807 | .732067 | .722103 | .711893 | .686078 | .162537 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| .50 | .751340 | .741807 | .732067 | .722103 | .711893 | .686078 | .162537 |
| .51 | .746163 | .736489 | .726608 | .716500 | .706147 | .679979 | .165619 |
| .52 | .740983 | .731170 | .721148 | .710900 | .700405 | .673891 | .168691 |
| .53 | .735799 | .725848 | .715689 | .705302 | .694667 | .667813 | .171754 |
| .54 | .730611 | .720525 | .710230 | .699707 | .688935 | .661746 | .174806 |
| .55 | .725421 | .715201 | .704772 | .694114 | .683207 | .655690 | .177847 |
| .56 | .720227 | .709876 | .699315 | .688525 | .677485 | .649646 | .180878 |
| .57 | .715030 | .704550 | .693859 | .682939 | .671769 | .643613 | .183898 |
| .58 | .709831 | .699223 | .688404 | .677356 | .666058 | .637592 | .186907 |
| .59 | .704629 | .693896 | .682951 | .671777 | .660353 | .631583 | .189905 |
| .60 | .699426 | .688568 | .677500 | .666202 | .654655 | .625586 | .192892 |
| .61 | .694220 | .683241 | .672051 | .660632 | .648962 | .619601 | .195867 |
| .62 | .689013 | .677914 | .666604 | .655065 | .643277 | .613628 | .198831 |
| .63 | .683805 | .672587 | .661160 | .649503 | .637598 | .607669 | .201782 |
| .64 | .678595 | .667261 | .655718 | .643946 | .631926 | .601722 | .204722 |
| .65 | .673385 | .661936 | .650279 | .638395 | .626262 | .595788 | .207650 |
| .66 | .668173 | .656613 | .644844 | .632848 | .620604 | .589867 | .210565 |
| .67 | .662962 | .651290 | .639412 | .627307 | .614955 | .583960 | .213467 |
| .68 | .657750 | .645970 | .633983 | .621771 | .609313 | .578066 | .216357 |
| .69 | .652538 | .640651 | .628559 | .616242 | .603680 | .572186 | .219234 |
| .70 | .647326 | .635334 | .623138 | .610718 | .598055 | .566320 | .222098 |
| .71 | .642114 | .630020 | .617722 | .605201 | .592438 | .560469 | .224949 |
| .72 | .636904 | .624708 | .612310 | .599691 | .586830 | .554631 | .227787 |
| .73 | .631694 | .619399 | .606903 | .594187 | .581231 | .548808 | .230610 |
| .74 | .626485 | .614093 | .601501 | .588690 | .575641 | .543000 | .233421 |
| .75 | .621278 | .608791 | .596104 | .583201 | .570060 | .537207 | .236217 |
| .76 | .616073 | .603491 | .590713 | .577718 | .564489 | .531428 | .238999 |
| .77 | .610869 | .598196 | .585327 | .572244 | .558927 | .525665 | .241768 |
| .78 | .605667 | .592904 | .579947 | .566777 | .553376 | .519917 | .244521 |
| .79 | .600468 | .587616 | .574573 | .561318 | .547835 | .514185 | .247261 |
| .80 | .595271 | .582333 | .569205 | .555868 | .542304 | .508469 | .249986 |
| .81 | .590076 | .577054 | .563844 | .550426 | .536783 | .502768 | .252695 |
| .82 | .584885 | .571780 | .558489 | .544993 | .531273 | .497084 | .255390 |
| .83 | .579697 | .566512 | .553141 | .539568 | .525774 | .491415 | .258070 |
| .84 | .574512 | .561248 | .547801 | .534153 | .520287 | .485764 | .260735 |
| .85 | .569331 | .555990 | .542467 | .528747 | .514810 | .480128 | .263384 |
| .86 | .564154 | .550737 | .537142 | .523350 | .509345 | .474510 | .266017 |
| .87 | .558981 | .545491 | .531824 | .517964 | .503892 | .468908 | .268635 |
| .88 | .553812 | .540250 | .526514 | .512587 | .498451 | .463324 | .271237 |
| .89 | .548648 | .535016 | .521212 | .507220 | .493022 | .457757 | .273823 |
| .90 | .543489 | .529788 | .515919 | .501863 | .487605 | .452207 | .276393 |
| .91 | .538334 | .524567 | .510634 | .496517 | .482201 | .446675 | .278946 |
| .92 | .533185 | .519353 | .505358 | .491182 | .476809 | .441161 | .281483 |
| .93 | .528041 | .514147 | .500091 | .485858 | .471430 | .435665 | .284003 |
| .94 | .522903 | .508947 | .494833 | .480544 | .466065 | .430186 | .286507 |
| .95 | .517770 | .503755 | .489585 | .475243 | .460712 | .424726 | .288993 |
| .96 | .512644 | .498572 | .484346 | .469952 | .455373 | .419284 | .291463 |
| .97 | .507524 | .493396 | .479117 | .464673 | .450048 | .413861 | .293916 |
| .98 | .502410 | .488228 | .473899 | .459407 | .444736 | .408457 | .296351 |
| .99 | .497303 | .483069 | .468690 | .454152 | .439439 | .403071 | .298769 |
| 1.00 | .492204 | .477918 | .463492 | .448909 | .434155 | .397705 | .301169 |

## Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .492204 | .477918 | .463492 | .448909 | .434155 | .397705 | .301169 |
| 1.01 | .487111 | .472777 | .458305 | .443679 | .428886 | .392357 | .303551 |
| 1.02 | .482026 | .467644 | .453128 | .438462 | .423632 | .387029 | .305916 |
| 1.03 | .476948 | .462521 | .447962 | .433258 | .418392 | .381721 | .308262 |
| 1.04 | .471878 | .457407 | .442808 | .428066 | .413167 | .376432 | .310591 |
| 1.05 | .466816 | .452303 | .437665 | .422888 | .407957 | .371163 | .312901 |
| 1.06 | .461762 | .447209 | .432534 | .417723 | .402763 | .365914 | .315193 |
| 1.07 | .456717 | .442125 | .427415 | .412572 | .397584 | .360684 | .317467 |
| 1.08 | .451681 | .437052 | .422308 | .407435 | .392420 | .355475 | .319722 |
| 1.09 | .446653 | .431989 | .417213 | .402312 | .387273 | .350287 | .321958 |
| 1.10 | .441634 | .426936 | .412130 | .397203 | .382141 | .345119 | .324175 |
| 1.11 | .436625 | .421895 | .407060 | .392108 | .377026 | .339971 | .326373 |
| 1.12 | .431625 | .416864 | .402003 | .387028 | .371926 | .334844 | .328552 |
| 1.13 | .426635 | .411845 | .396959 | .381962 | .366844 | .329739 | .330712 |
| 1.14 | .421654 | .406838 | .391928 | .376911 | .361777 | .324654 | .332853 |
| 1.15 | .416684 | .401842 | .386910 | .371876 | .356728 | .319590 | .334974 |
| 1.16 | .411724 | .396858 | .381906 | .366856 | .351696 | .314548 | .337076 |
| 1.17 | .406775 | .391886 | .376916 | .361851 | .346681 | .309527 | .339158 |
| 1.18 | .401836 | .386927 | .371939 | .356862 | .341683 | .304528 | .341220 |
| 1.19 | .396908 | .381980 | .366977 | .351888 | .336702 | .299551 | .343262 |
| 1.20 | .391991 | .377046 | .362029 | .346931 | .331740 | .294595 | .345285 |
| 1.21 | .387086 | .372124 | .357095 | .341989 | .326795 | .289662 | .347287 |
| 1.22 | .382192 | .367216 | .352177 | .337064 | .321868 | .284750 | .349269 |
| 1.23 | .377310 | .362321 | .347273 | .332155 | .316959 | .279861 | .351230 |
| 1.24 | .372439 | .357439 | .342384 | .327263 | .312068 | .274994 | .353172 |
| 1.25 | .367581 | .352571 | .337510 | .322388 | .307196 | .270150 | .355092 |
| 1.26 | .362735 | .347717 | .332652 | .317530 | .302343 | .265328 | .356992 |
| 1.27 | .357902 | .342877 | .327809 | .312689 | .297508 | .260529 | .358872 |
| 1.28 | .353081 | .338051 | .322982 | .307865 | .292692 | .255752 | .360730 |
| 1.29 | .348273 | .333239 | .318171 | .303059 | .287895 | .250999 | .362568 |
| 1.30 | .343478 | .328442 | .313376 | .298270 | .283117 | .246269 | .364384 |
| 1.31 | .338696 | .323660 | .308597 | .293499 | .278359 | .241562 | .366180 |
| 1.32 | .333928 | .318892 | .303835 | .288746 | .273620 | .236878 | .367954 |
| 1.33 | .329174 | .314140 | .299089 | .284011 | .268901 | .232218 | .369707 |
| 1.34 | .324433 | .309403 | .294360 | .279295 | .264201 | .227581 | .371439 |
| 1.35 | .319706 | .304681 | .289648 | .274597 | .259522 | .222968 | .373149 |
| 1.36 | .314993 | .299975 | .284952 | .269917 | .254862 | .218379 | .374838 |
| 1.37 | .310295 | .295285 | .280275 | .265256 | .250223 | .213813 | .376505 |
| 1.38 | .305611 | .290611 | .275614 | .260614 | .245604 | .209272 | .378150 |
| 1.39 | .300942 | .285953 | .270971 | .255991 | .241006 | .204754 | .379774 |
| 1.40 | .296288 | .281311 | .266346 | .251387 | .236428 | .200261 | .381375 |
| 1.41 | .291649 | .276686 | .261739 | .246803 | .231871 | .195792 | .382955 |
| 1.42 | .287025 | .272077 | .257150 | .242238 | .227335 | .191348 | .384513 |
| 1.43 | .282417 | .267485 | .252579 | .237692 | .222820 | .186928 | .386048 |
| 1.44 | .277824 | .262910 | .248026 | .233166 | .218326 | .182532 | .387562 |
| 1.45 | .273247 | .258352 | .243492 | .228661 | .213853 | .178161 | .389053 |
| 1.46 | .268686 | .253812 | .238977 | .224175 | .209402 | .173815 | .390522 |
| 1.47 | .264141 | .249289 | .234480 | .219709 | .204972 | .169494 | .391968 |
| 1.48 | .259612 | .244784 | .230002 | .215264 | .200564 | .165198 | .393392 |
| 1.49 | .255100 | .240296 | .225544 | .210839 | .196178 | .160926 | .394794 |
| 1.50 | .250604 | .235826 | .221105 | .206435 | .191814 | .156680 | .396173 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .250604 | .235826 | .221105 | .206435 | .191814 | .156680 | .396173 |
| 1.51 | .246125 | .231375 | .216685 | .202051 | .187471 | .152459 | .397529 |
| 1.52 | .241663 | .226941 | .212284 | .197689 | .183151 | .148264 | .398863 |
| 1.53 | .237218 | .222526 | .207904 | .193347 | .178853 | .144094 | .400174 |
| 1.54 | .232791 | .218130 | .203543 | .189026 | .174578 | .139949 | .401462 |
| 1.55 | .228381 | .213752 | .199202 | .184727 | .170325 | .135830 | .402727 |
| 1.56 | .223988 | .209393 | .194881 | .180449 | .166094 | .131736 | .403969 |
| 1.57 | .219614 | .205054 | .190581 | .176192 | .161887 | .127669 | .405189 |
| 1.58 | .215257 | .200733 | .186301 | .171958 | .157702 | .123627 | .406385 |
| 1.59 | .210918 | .196431 | .182041 | .167744 | .153540 | .119610 | .407558 |
| 1.60 | .206597 | .192149 | .177802 | .163553 | .149402 | .115620 | .408708 |
| 1.61 | .202295 | .187887 | .173584 | .159384 | .145286 | .111656 | .409835 |
| 1.62 | .198012 | .183644 | .169387 | .155237 | .141194 | .107718 | .410939 |
| 1.63 | .193747 | .179422 | .165211 | .151112 | .137125 | .103806 | .412019 |
| 1.64 | .189500 | .175219 | .161056 | .147009 | .133079 | .099920 | .413076 |
| 1.65 | .185273 | .171036 | .156922 | .142929 | .129058 | .096061 | .414110 |
| 1.66 | .181065 | .166874 | .152809 | .138871 | .125060 | .092228 | .415120 |
| 1.67 | .176876 | .162732 | .148719 | .134836 | .121085 | .088421 | .416107 |
| 1.68 | .172707 | .158610 | .144650 | .130824 | .117135 | .084641 | .417071 |
| 1.69 | .168557 | .154509 | .140602 | .126835 | .113208 | .080888 | .418011 |
| 1.70 | .164427 | .150429 | .136577 | .122869 | .109306 | .077161 | .418927 |
| 1.71 | .160316 | .146370 | .132573 | .118926 | .105428 | .073461 | .419820 |
| 1.72 | .156226 | .142332 | .128592 | .115006 | .101574 | .069787 | .420690 |
| 1.73 | .152156 | .138316 | .124633 | .111109 | .097744 | .066140 | .421536 |
| 1.74 | .148105 | .134320 | .120697 | .107236 | .093939 | .062520 | .422358 |
| 1.75 | .144076 | .130346 | .116782 | .103386 | .090159 | .058927 | .423156 |
| 1.76 | .140067 | .126393 | .112891 | .099560 | .086403 | .055361 | .423931 |
| 1.77 | .136078 | .122462 | .109022 | .095757 | .082671 | .051822 | .424682 |
| 1.78 | .132110 | .118553 | .105176 | .091979 | .078965 | .048310 | .425410 |
| 1.79 | .128163 | .114666 | .101353 | .088224 | .075283 | .044825 | .426114 |
| 1.80 | .124237 | .110801 | .097552 | .084493 | .071626 | .041367 | .426794 |
| 1.81 | .120332 | .106958 | .093775 | .080787 | .067994 | .037937 | .427450 |
| 1.82 | .116449 | .103137 | .090022 | .077104 | .064388 | .034533 | .428082 |
| 1.83 | .112587 | .099339 | .086291 | .073446 | .060806 | .031157 | .428691 |
| 1.84 | .108746 | .095563 | .082584 | .069812 | .057250 | .027808 | .429276 |
| 1.85 | .104927 | .091809 | .078900 | .066202 | .053719 | .024486 | .429837 |
| 1.86 | .101130 | .088078 | .075240 | .062617 | .050213 | .021192 | .430374 |
| 1.87 | .097354 | .084370 | .071604 | .059057 | .046733 | .017925 | .430888 |
| 1.88 | .093601 | .080685 | .067991 | .055521 | .043279 | .014686 | .431377 |
| 1.89 | .089869 | .077023 | .064403 | .052010 | .039850 | .011474 | .431843 |
| 1.90 | .086160 | .073384 | .060838 | .048524 | .036446 | .008289 | .432285 |
| 1.91 | .082473 | .069768 | .057297 | .045062 | .033068 | .005132 | .432704 |
| 1.92 | .078808 | .066176 | .053781 | .041626 | .029716 | .002003 | .433098 |
| 1.93 | .075166 | .062607 | .050288 | .038214 | .026390 | -.001099 | .433469 |
| 1.94 | .071547 | .059061 | .046820 | .034828 | .023090 | -.004173 | .433816 |
| 1.95 | .067950 | .055539 | .043377 | .031467 | .019815 | -.007220 | .434139 |
| 1.96 | .064376 | .052040 | .039957 | .028131 | .016567 | -.010239 | .434438 |
| 1.97 | .060825 | .048565 | .036563 | .024821 | .013345 | -.013230 | .434714 |
| 1.98 | .057297 | .045115 | .033193 | .021535 | .010148 | -.016193 | .434965 |
| 1.99 | .053792 | .041687 | .029847 | .018276 | .006978 | -.019129 | .435193 |
| 2.00 | .050311 | .038284 | .026527 | .015041 | .003834 | -.022038 | .435398 |

## Table of $Q(y, \varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | .050311 | .038284 | .026527 | .015041 | .003834 | -.022038 | .435398 |
| 2.01 | .046852 | .034905 | .023231 | .011832 | .000717 | -.024918 | .435578 |
| 2.02 | .043417 | .031551 | .019960 | .008649 | -.002375 | -.027771 | .435735 |
| 2.03 | .040006 | .028220 | .016714 | .005492 | -.005440 | -.030596 | .435869 |
| 2.04 | .036618 | .024914 | .013493 | .002360 | -.008479 | -.033393 | .435978 |
| 2.05 | .033254 | .021632 | .010297 | -.000746 | -.011491 | -.036163 | .436065 |
| 2.06 | .029913 | .018375 | .007127 | -.003826 | -.014477 | -.038905 | .436127 |
| 2.07 | .026597 | .015142 | .003981 | -.006881 | -.017437 | -.041619 | .436166 |
| 2.08 | .023304 | .011934 | .000861 | -.009909 | -.020370 | -.044305 | .436182 |
| 2.09 | .020035 | .008750 | -.002234 | -.012912 | -.023276 | -.046963 | .436173 |
| 2.10 | .016790 | .005591 | -.005303 | -.015888 | -.026156 | -.049594 | .436142 |
| 2.11 | .013570 | .002457 | -.008347 | -.018839 | -.029009 | -.052197 | .436087 |
| 2.12 | .010373 | -.000652 | -.011366 | -.021763 | -.031836 | -.054772 | .436009 |
| 2.13 | .007201 | -.003736 | -.014359 | -.024661 | -.034636 | -.057320 | .435907 |
| 2.14 | .004054 | -.006795 | -.017326 | -.027533 | -.037409 | -.059839 | .435782 |
| 2.15 | .000931 | -.009829 | -.020268 | -.030379 | -.040156 | -.062331 | .435634 |
| 2.16 | -.002168 | -.012838 | -.023184 | -.033199 | -.042876 | -.064796 | .435462 |
| 2.17 | -.005242 | -.015822 | -.026074 | -.035992 | -.045569 | -.067232 | .435268 |
| 2.18 | -.008292 | -.018781 | -.028939 | -.038759 | -.048235 | -.069641 | .435050 |
| 2.19 | -.011316 | -.021714 | -.031777 | -.041500 | -.050875 | -.072022 | .434809 |
| 2.20 | -.014316 | -.024622 | -.034590 | -.044215 | -.053488 | -.074375 | .434545 |
| 2.21 | -.017291 | -.027505 | -.037377 | -.046903 | -.056074 | -.076701 | .434258 |
| 2.22 | -.020242 | -.030362 | -.040138 | -.049564 | -.058633 | -.078999 | .433948 |
| 2.23 | -.023167 | -.033193 | -.042873 | -.052200 | -.061165 | -.081270 | .433616 |
| 2.24 | -.026067 | -.035999 | -.045582 | -.054808 | -.063671 | -.083512 | .433260 |
| 2.25 | -.028942 | -.038780 | -.048265 | -.057391 | -.066149 | -.085728 | .432882 |
| 2.26 | -.031792 | -.041535 | -.050922 | -.059946 | -.068601 | -.087915 | .432481 |
| 2.27 | -.034617 | -.044264 | -.053552 | -.062476 | -.071026 | -.090076 | .432057 |
| 2.28 | -.037417 | -.046968 | -.056157 | -.064979 | -.073424 | -.092208 | .431611 |
| 2.29 | -.040192 | -.049646 | -.058736 | -.067455 | -.075795 | -.094314 | .431142 |
| 2.30 | -.042941 | -.052298 | -.061288 | -.069904 | -.078139 | -.096391 | .430650 |
| 2.31 | -.045664 | -.054924 | -.063814 | -.072328 | -.080457 | -.098442 | .430137 |
| 2.32 | -.048363 | -.057524 | -.066314 | -.074724 | -.082747 | -.100465 | .429600 |
| 2.33 | -.051036 | -.060099 | -.068787 | -.077094 | -.085011 | -.102460 | .429042 |
| 2.34 | -.053683 | -.062648 | -.071235 | -.079438 | -.087248 | -.104429 | .428461 |
| 2.35 | -.056305 | -.065170 | -.073656 | -.081754 | -.089458 | -.106370 | .427859 |
| 2.36 | -.058901 | -.067667 | -.076051 | -.084045 | -.091641 | -.108283 | .427234 |
| 2.37 | -.061472 | -.070138 | -.078419 | -.086308 | -.093797 | -.110170 | .426587 |
| 2.38 | -.064017 | -.072583 | -.080761 | -.088545 | -.095927 | -.112029 | .425918 |
| 2.39 | -.066537 | -.075002 | -.083077 | -.090756 | -.098029 | -.113862 | .425228 |
| 2.40 | -.069030 | -.077395 | -.085367 | -.092940 | -.100105 | -.115667 | .424515 |
| 2.41 | -.071498 | -.079762 | -.087630 | -.095097 | -.102154 | -.117445 | .423781 |
| 2.42 | -.073941 | -.082102 | -.089867 | -.097228 | -.104177 | -.119196 | .423026 |
| 2.43 | -.076357 | -.084417 | -.092077 | -.099332 | -.106172 | -.120921 | .422248 |
| 2.44 | -.078748 | -.086705 | -.094262 | -.101410 | -.108141 | -.122618 | .421450 |
| 2.45 | -.081113 | -.088968 | -.096419 | -.103461 | -.110084 | -.124289 | .420630 |
| 2.46 | -.083452 | -.091204 | -.098551 | -.105485 | -.111999 | -.125933 | .419789 |
| 2.47 | -.085765 | -.093414 | -.100656 | -.107483 | -.113888 | -.127550 | .418926 |
| 2.48 | -.088053 | -.095598 | -.102735 | -.109455 | -.115750 | -.129140 | .418043 |
| 2.49 | -.090314 | -.097756 | -.104787 | -.111400 | -.117586 | -.130704 | .417138 |
| 2.50 | -.092550 | -.099888 | -.106813 | -.113319 | -.119395 | -.132241 | .416213 |

Table of $Q(y,\varphi)$ and $S(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | S(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.092550 | -.099888 | -.106813 | -.113319 | -.119395 | -.132241 | .416213 |
| 2.51 | -.094759 | -.101994 | -.108813 | -.115211 | -.121178 | -.133752 | .415267 |
| 2.52 | -.096943 | -.104074 | -.110787 | -.117076 | -.122934 | -.135236 | .414300 |
| 2.53 | -.099101 | -.106127 | -.112734 | -.118916 | -.124664 | -.136694 | .413312 |
| 2.54 | -.101233 | -.108154 | -.114655 | -.120729 | -.126367 | -.138126 | .412304 |
| 2.55 | -.103339 | -.110155 | -.116550 | -.122515 | -.128044 | -.139531 | .411276 |
| 2.56 | -.105419 | -.112130 | -.118418 | -.124276 | -.129694 | -.140910 | .410227 |
| 2.57 | -.107473 | -.114079 | -.120261 | -.126010 | -.131319 | -.142263 | .409158 |
| 2.58 | -.109501 | -.116002 | -.122077 | -.127717 | -.132917 | -.143590 | .408069 |
| 2.59 | -.111503 | -.117899 | -.123866 | -.129399 | -.134488 | -.144892 | .406959 |
| 2.60 | -.113479 | -.119770 | -.125630 | -.131054 | -.136034 | -.146167 | .405830 |
| 2.61 | -.115429 | -.121614 | -.127368 | -.132683 | -.137553 | -.147416 | .404681 |
| 2.62 | -.117354 | -.123433 | -.129079 | -.134286 | -.139047 | -.148640 | .403513 |
| 2.63 | -.119252 | -.125225 | -.130765 | -.135863 | -.140514 | -.149837 | .402324 |
| 2.64 | -.121125 | -.126992 | -.132424 | -.137414 | -.141955 | -.151010 | .401117 |
| 2.65 | -.122971 | -.128733 | -.134057 | -.138939 | -.143371 | -.152156 | .399889 |
| 2.66 | -.124792 | -.130447 | -.135665 | -.140438 | -.144760 | -.153278 | .398643 |
| 2.67 | -.126587 | -.132136 | -.137246 | -.141911 | -.146124 | -.154374 | ,397377 |
| 2.68 | -.128355 | -.133799 | -.138802 | -.143359 | -.147462 | -.155444 | .396093 |
| 2.69 | -.130099 | -.135435 | -.140331 | -.144780 | -.148774 | -.156490 | .394789 |
| 2.70 | -.131816 | -.137046 | -.141835 | -.146176 | -.150061 | -.157510 | .393467 |
| 2.71 | -.133507 | -.138632 | -.143313 | -.147546 | -.151322 | -.158505 | .392126 |
| 2.72 | -.135173 | -.140191 | -.144765 | -.148890 | -.152557 | -.159475 | .390766 |
| 2.73 | -.136813 | -.141725 | -.146192 | -.150208 | -.153767 | -.160421 | .389388 |
| 2.74 | -.138427 | -.143232 | -.147592 | -.151501 | -.154952 | -.161341 | .387992 |
| 2.75 | -.140015 | -.144715 | -.148968 | -.152769 | -.156111 | -.162237 | .386578 |
| 2.76 | -.141578 | -.146171 | -.150317 | -.154011 | -.157245 | -.163108 | .385145 |
| 2.77 | -.143115 | -.147602 | -.151641 | -.155228 | -.158354 | -.163955 | .383694 |
| 2.78 | -.144626 | -.149007 | -.152940 | -.156419 | -.159438 | -.164777 | .382226 |
| 2.79 | -.146112 | -.150387 | -.154213 | -.157585 | -.160497 | -.165575 | .380740 |
| 2.80 | -.147572 | -.151741 | -.155461 | -.158726 | -.161530 | -.166349 | .379236 |
| 2.81 | -.149007 | -.153070 | -.156684 | -.159842 | -.162539 | -.167099 | .377715 |
| 2.82 | -.150416 | -.154374 | -.157881 | -.160933 | -.163523 | -.167824 | .376176 |
| 2.83 | -.151800 | -.155652 | -.159053 | -.161998 | -.164482 | -.168526 | .374621 |
| 2.84 | -.153158 | -.156904 | -.160200 | -.163039 | -.165416 | -.169203 | .373048 |
| 2.85 | -.154491 | -.158132 | -.161322 | -.164055 | -.166326 | -.169857 | .371458 |
| 2.86 | -.155799 | -.159334 | -.162418 | -.165046 | -.167211 | -.170488 | .369852 |
| 2.87 | -.157081 | -.160511 | -.163490 | -.166012 | -.168072 | -.171095 | .368229 |
| 2.88 | -.158338 | -.161664 | -.164537 | -.166954 | -.168909 | -.171678 | .366589 |
| 2.89 | -.159570 | -.162791 | -.165559 | -.167871 | -.169721 | -.172238 | .364934 |
| 2.90 | -.160777 | -.163893 | -.166556 | -.168764 | -.170509 | -.172775 | .363261 |
| 2.91 | -.161958 | -.164970 | -.167529 | -.169632 | -.171273 | -.173288 | .361573 |
| 2.92 | -.163115 | -.166022 | -.168477 | -.170476 | -.172013 | -.173779 | .359869 |
| 2.93 | -.164247 | -.167050 | -.169400 | -.171295 | -.172729 | -.174247 | .358149 |
| 2.94 | -.165353 | -.168052 | -.170299 | -.172091 | -.173421 | -.174692 | .356413 |
| 2.95 | -.166435 | -.169031 | -.171174 | -.172862 | -.174089 | -.175114 | .354662 |
| 2.96 | -.167492 | -.169984 | -.172024 | -.173609 | -.174734 | -.175514 | .352895 |
| 2.97 | -.168525 | -.170913 | -.172850 | -.174332 | -.175355 | -.175891 | .351113 |
| 2.98 | -.169532 | -.171818 | -.173652 | -.175032 | -.175953 | -.176246 | .349316 |
| 2.99 | -.170515 | -.172698 | -.174430 | -.175707 | -.176527 | -.176578 | .347504 |
| 3.00 | -.171473 | -.173553 | -.175183 | -.176359 | -.177078 | -.176889 | .345677 |

## Table of $R^*(y, \varphi)$ and $T^*(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | .000000 | -.025010 | -.050084 | -.075283 | -.100674 | -.126324 | 1.000000 |
| .01 | -.005000 | -.030008 | -.055074 | -.080262 | -.105638 | -.131268 | 1.000050 |
| .02 | -.010000 | -.035003 | -.060062 | -.085237 | -.110596 | -.136206 | 1.000200 |
| .03 | -.014999 | -.039997 | -.065046 | -.090208 | -.115549 | -.141137 | 1.000450 |
| .04 | -.019997 | -.044989 | -.070028 | -.095175 | -.120497 | -.146061 | 1.000800 |
| .05 | -.024995 | -.049979 | -.075005 | -.100137 | -.125438 | -.150977 | 1.001249 |
| .06 | -.029991 | -.054966 | -.079979 | -.105094 | -.130373 | -.155886 | 1.001798 |
| .07 | -.034986 | -.059951 | -.084950 | -.110045 | -.135302 | -.160788 | 1.002447 |
| .08 | -.039979 | -.064932 | -.089916 | -.114991 | -.140224 | -.165681 | 1.003195 |
| .09 | -.044970 | -.069911 | -.094877 | -.119931 | -.145139 | -.170567 | 1.004042 |
| .10 | -.049958 | -.074885 | -.099834 | -.124866 | -.150047 | -.175444 | 1.004988 |
| .11 | -.054945 | -.079857 | -.104785 | -.129794 | -.154947 | -.180312 | 1.006032 |
| .12 | -.059928 | -.084824 | -.109732 | -.134716 | -.159840 | -.185171 | 1.007174 |
| .13 | -.064909 | -.089786 | -.114673 | -.139631 | -.164725 | -.190021 | 1.008414 |
| .14 | -.069886 | -.094745 | -.119608 | -.144539 | -.169601 | -.194862 | 1.009752 |
| .15 | -.074859 | -.099698 | -.124537 | -.149440 | -.174469 | -.199693 | 1.011187 |
| .16 | -.079829 | -.104647 | -.129460 | -.154333 | -.179329 | -.204515 | 1.012718 |
| .17 | -.084795 | -.109590 | -.134377 | -.159219 | -.184180 | -.209326 | 1.014346 |
| .18 | -.089757 | -.114528 | -.139287 | -.164097 | -.189021 | -.214127 | 1.016069 |
| .19 | -.094715 | -.119460 | -.144190 | -.168966 | -.193853 | -.218917 | 1.017887 |
| .20 | -.099667 | -.124387 | -.149086 | -.173828 | -.198676 | -.223696 | 1.019800 |
| .21 | -.104615 | -.129307 | -.153974 | -.178680 | -.203488 | -.228465 | 1.021807 |
| .22 | -.109557 | -.134220 | -.158855 | -.183524 | -.208291 | -.233222 | 1.023908 |
| .23 | -.114494 | -.139127 | -.163728 | -.188359 | -.213083 | -.237967 | 1.026101 |
| .24 | -.119425 | -.144027 | -.168592 | -.193184 | -.217865 | -.242701 | 1.028387 |
| .25 | -.124350 | -.148920 | -.173449 | -.197999 | -.222636 | -.247423 | 1.030763 |
| .26 | -.129269 | -.153805 | -.178296 | -.202805 | -.227396 | -.252133 | 1.033231 |
| .27 | -.134182 | -.158683 | -.183135 | -.207601 | -.232144 | -.256830 | 1.035788 |
| .28 | -.139088 | -.163553 | -.187965 | -.212387 | -.236881 | -.261515 | 1.038435 |
| .29 | -.143987 | -.168414 | -.192785 | -.217161 | -.241607 | -.266187 | 1.041170 |
| .30 | -.148878 | -.173268 | -.197596 | -.221926 | -.246320 | -.270845 | 1.043993 |
| .31 | -.153763 | -.178112 | -.202397 | -.226679 | -.251022 | -.275491 | 1.046902 |
| .32 | -.158639 | -.182948 | -.207187 | -.231421 | -.255711 | -.280122 | 1.049897 |
| .33 | -.163508 | -.187774 | -.211968 | -.236151 | -.260387 | -.284740 | 1.052977 |
| .34 | -.168369 | -.192592 | -.216738 | -.240870 | -.265050 | -.289344 | 1.056140 |
| .35 | -.173221 | -.197399 | -.221497 | -.245577 | -.269701 | -.293934 | 1.059387 |
| .36 | -.178064 | -.202197 | -.226245 | -.250271 | -.274338 | -.298509 | 1.062716 |
| .37 | -.182899 | -.206985 | -.230982 | -.254953 | -.278961 | -.303070 | 1.066125 |
| .38 | -.187725 | -.211762 | -.235708 | -.259623 | -.283571 | -.307616 | 1.069614 |
| .39 | -.192541 | -.216529 | -.240422 | -.264280 | -.288167 | -.312146 | 1.073183 |
| .40 | -.197348 | -.221286 | -.245124 | -.268924 | -.292748 | -.316662 | 1.076828 |
| .41 | -.202144 | -.226031 | -.249813 | -.273554 | -.297315 | -.321162 | 1.080551 |
| .42 | -.206931 | -.230765 | -.254491 | -.278171 | -.301868 | -.325646 | 1.084348 |
| .43 | -.211708 | -.235487 | -.259155 | -.282774 | -.306405 | -.330114 | 1.088220 |
| .44 | -.216473 | -.240198 | -.263807 | -.287363 | -.310928 | -.334565 | 1.092165 |
| .45 | -.221229 | -.244897 | -.268446 | -.291938 | -.315435 | -.339001 | 1.096182 |
| .46 | -.225973 | -.249584 | -.273072 | -.296498 | -.319927 | -.343420 | 1.100269 |
| .47 | -.230706 | -.254258 | -.277684 | -.301044 | -.324402 | -.347822 | 1.104425 |
| .48 | -.235427 | -.258920 | -.282282 | -.305575 | -.328862 | -.352207 | 1.108649 |
| .49 | -.240137 | -.263569 | -.286866 | -.310091 | -.333306 | -.356575 | 1.112940 |
| .50 | -.244835 | -.268204 | -.291436 | -.314592 | -.337734 | -.360925 | 1.117295 |

$$R(y, \varphi) = R^*(y, \varphi) + \frac{1+f}{w} \cdot U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | 1.755165 | 1.564470 | 1.417733 | 1.297800 | 1.196197 | 1.107995 | 4.469181 |
| .51 | 1.711263 | 1.526691 | 1.384037 | 1.267111 | 1.167851 | 1.081544 | 4.312629 |
| .52 | 1.668883 | 1.490110 | 1.351347 | 1.237296 | 1.140282 | 1.055796 | 4.164929 |
| .53 | 1.627938 | 1.454665 | 1.319612 | 1.208313 | 1.113454 | 1.030719 | 4.025417 |
| .54 | 1.588349 | 1.420297 | 1.288787 | 1.180123 | 1.087334 | 1.006284 | 3.893492 |
| .55 | 1.550045 | 1.386953 | 1.258826 | 1.152690 | 1.061889 | .982461 | 3.768603 |
| .56 | 1.512956 | 1.354582 | 1.229690 | 1.125977 | 1.037089 | .959224 | 3.650253 |
| .57 | 1.477019 | 1.323137 | 1.201340 | 1.099954 | 1.012907 | .936549 | 3.537985 |
| .58 | 1.442177 | 1.292573 | 1.173741 | 1.074591 | .989315 | .914412 | 3.431381 |
| .59 | 1.408374 | 1.262851 | 1.146859 | 1.049857 | .966290 | .892790 | 3.330059 |
| .60 | 1.375559 | 1.233931 | 1.120663 | 1.025728 | .943807 | .871664 | 3.233670 |
| .61 | 1.343685 | 1.205776 | 1.095123 | 1.002178 | .921846 | .851013 | 3.141890 |
| .62 | 1.312707 | 1.178354 | 1.070211 | .979183 | .900384 | .830820 | 3.054423 |
| .63 | 1.282583 | 1.151632 | 1.045901 | .956720 | .879403 | .811066 | 2.970997 |
| .64 | 1.253275 | 1.125580 | 1.022169 | .934769 | .858884 | .791736 | 2.891360 |
| .65 | 1.224744 | 1.100170 | .998991 | .913310 | .838810 | .772813 | 2.815278 |
| .66 | 1.196958 | 1.075375 | .976345 | .892324 | .819164 | .754283 | 2.742538 |
| .67 | 1.169883 | 1.051170 | .954210 | .871793 | .799931 | .736132 | 2.672939 |
| .68 | 1.143489 | 1.027531 | .932567 | .851700 | .781095 | .718347 | 2.606298 |
| .69 | 1.117748 | 1.004436 | .911398 | .832029 | .762642 | .700914 | 2.542442 |
| .70 | 1.092632 | .981865 | .890684 | .812766 | .744560 | .683823 | 2.481213 |
| .71 | 1.068115 | .959796 | .870408 | .793895 | .726836 | .667061 | 2.422464 |
| .72 | 1.044175 | .938211 | .850556 | .775404 | .709457 | .650619 | 2.366055 |
| .73 | 1.020787 | .917092 | .831113 | .757278 | .692412 | .634485 | 2.311858 |
| .74 | .997930 | .896421 | .812062 | .739507 | .675690 | .618649 | 2.259755 |
| .75 | .975585 | .876184 | .793393 | .722078 | .659281 | .603104 | 2.209632 |
| .76 | .953732 | .856364 | .775091 | .704979 | .643175 | .587839 | 2.161386 |
| .77 | .932352 | .836946 | .757144 | .688201 | .627363 | .572846 | 2.114918 |
| .78 | .911428 | .817918 | .739540 | .671733 | .611835 | .558117 | 2.070137 |
| .79 | .890943 | .799266 | .722269 | .655566 | .596583 | .543644 | 2.026958 |
| .80 | .870883 | .780977 | .705320 | .639690 | .581598 | .529421 | 1.985299 |
| .81 | .851233 | .763039 | .688683 | .624097 | .566874 | .515439 | 1.945086 |
| .82 | .831977 | .745441 | .672347 | .608777 | .552402 | .501692 | 1.906248 |
| .83 | .813103 | .728172 | .656305 | .593724 | .538176 | .488174 | 1.868716 |
| .84 | .794599 | .711222 | .640547 | .578930 | .524188 | .474879 | 1.832431 |
| .85 | .776451 | .694582 | .625065 | .564386 | .510432 | .461800 | 1.797331 |
| .86 | .758648 | .678240 | .609850 | .550087 | .496901 | .448932 | 1.763361 |
| .87 | .741180 | .662189 | .594896 | .536025 | .483591 | .436270 | 1.730470 |
| .88 | .724035 | .646420 | .580194 | .522194 | .470494 | .423807 | 1.698607 |
| .89 | .707205 | .630925 | .565738 | .508588 | .457606 | .411540 | 1.667726 |
| .90 | .690678 | .615695 | .551521 | .495201 | .444920 | .399464 | 1.637783 |
| .91 | .674446 | .600724 | .537537 | .482027 | .432433 | .387573 | 1.608736 |
| .92 | .658500 | .586004 | .523779 | .469060 | .420140 | .375864 | 1.580545 |
| .93 | .642832 | .571528 | .510241 | .456296 | .408034 | .364332 | 1.553174 |
| .94 | .627434 | .557290 | .496918 | .443730 | .396113 | .352973 | 1.526587 |
| .95 | .612298 | .543283 | .483805 | .431357 | .384371 | .341783 | 1.500751 |
| .96 | .597417 | .529501 | .470895 | .419171 | .372805 | .330758 | 1.475634 |
| .97 | .582783 | .515938 | .458185 | .407169 | .361410 | .319895 | 1.451205 |
| .98 | .568390 | .502589 | .445668 | .395347 | .350183 | .309191 | 1.427436 |
| .99 | .554232 | .489448 | .433342 | .383700 | .339120 | .298641 | 1.404301 |
| 1.00 | .540302 | .476511 | .421200 | .372224 | .328217 | .288243 | 1.381773 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .540302 | .476511 | .421200 | .372224 | .328217 | .288243 | 1.381773 |
| 1.01 | .526595 | .463771 | .409239 | .360915 | .317472 | .277993 | 1.359828 |
| 1.02 | .513104 | .451225 | .397454 | .349770 | .306880 | .267888 | 1.338443 |
| 1.03 | .499824 | .438867 | .385842 | .338786 | .296438 | .257926 | 1.317595 |
| 1.04 | .486750 | .426694 | .374399 | .327958 | .286144 | .248104 | 1.297264 |
| 1.05 | .473877 | .414702 | .363121 | .317284 | .275994 | .238418 | 1.277429 |
| 1.06 | .461200 | .402885 | .352005 | .306760 | .265985 | .228867 | 1.258071 |
| 1.07 | .448714 | .391240 | .341046 | .296384 | .256116 | .219448 | 1.239173 |
| 1.08 | .436415 | .379763 | .330242 | .286152 | .246382 | .210158 | 1.220716 |
| 1.09 | .424299 | .368451 | .319590 | .276061 | .236782 | .200995 | 1.202684 |
| 1.10 | .412360 | .357300 | .309086 | .266109 | .227313 | .191956 | 1.185061 |
| 1.11 | .400596 | .346307 | .298728 | .256294 | .217973 | .183040 | 1.167833 |
| 1.12 | .389002 | .335468 | .288513 | .246611 | .208759 | .174245 | 1.150984 |
| 1.13 | .377575 | .324780 | .278437 | .237060 | .199669 | .165567 | 1.134502 |
| 1.14 | .366311 | .314241 | .268498 | .227638 | .190700 | .157006 | 1.118372 |
| 1.15 | .355206 | .303846 | .258694 | .218342 | .181852 | .148560 | 1.102583 |
| 1.16 | .344258 | .293595 | .249023 | .209170 | .173121 | .140225 | 1.087122 |
| 1.17 | .333463 | .283482 | .239480 | .200120 | .164506 | .132002 | 1.071977 |
| 1.18 | .322818 | .273507 | .230066 | .191190 | .156005 | .123887 | 1.057139 |
| 1.19 | .312319 | .263666 | .220776 | .182377 | .147616 | .115879 | 1.042595 |
| 1.20 | .301965 | .253957 | .211609 | .173681 | .139337 | .107977 | 1.028337 |
| 1.21 | .291752 | .244377 | .202563 | .165098 | .131166 | .100179 | 1.014353 |
| 1.22 | .281677 | .234925 | .193635 | .156628 | .123102 | .092483 | 1.000636 |
| 1.23 | .271738 | .225597 | .184825 | .148268 | .115144 | .084888 | .987176 |
| 1.24 | .261932 | .216392 | .176129 | .140016 | .107288 | .077393 | .973965 |
| 1.25 | .252258 | .207308 | .167546 | .131871 | .099535 | .069995 | .960994 |
| 1.26 | .242712 | .198343 | .159074 | .123832 | .091883 | .062694 | .948256 |
| 1.27 | .233292 | .189494 | .150712 | .115896 | .084329 | .055488 | .935742 |
| 1.28 | .223996 | .180760 | .142457 | .108062 | .076873 | .048376 | .923447 |
| 1.29 | .214822 | .172139 | .134308 | .100329 | .069513 | .041357 | .911362 |
| 1.30 | .205768 | .163628 | .126264 | .092696 | .062249 | .034430 | .899482 |
| 1.31 | .196832 | .155228 | .118322 | .085160 | .055078 | .027592 | .887799 |
| 1.32 | .188012 | .146934 | .110482 | .077720 | .047999 | .020844 | .876308 |
| 1.33 | .179305 | .138747 | .102742 | .070376 | .041012 | .014184 | .865003 |
| 1.34 | .170711 | .130664 | .095101 | .063126 | .034115 | .007610 | .853877 |
| 1.35 | .162227 | .122684 | .087556 | .055968 | .027306 | .001122 | .842926 |
| 1.36 | .153852 | .114806 | .080108 | .048901 | .020586 | -.005281 | .832145 |
| 1.37 | .145584 | .107027 | .072754 | .041925 | .013952 | -.011600 | .821527 |
| 1.38 | .137421 | .099347 | .065493 | .035038 | .007404 | -.017836 | .811068 |
| 1.39 | .129362 | .091764 | .058324 | .028238 | .000940 | -.023991 | .800765 |
| 1.40 | .121405 | .084276 | .051246 | .021526 | -.005440 | -.030064 | .790611 |
| 1.41 | .113549 | .076884 | .044258 | .014899 | -.011738 | -.036058 | .780602 |
| 1.42 | .105793 | .069584 | .037358 | .008357 | -.017954 | -.041973 | .770735 |
| 1.43 | .098134 | .062377 | .030545 | .001899 | -.024089 | -.047810 | .761006 |
| 1.44 | .090572 | .055260 | .023819 | -.004476 | -.030144 | -.053569 | .751410 |
| 1.45 | .083105 | .048233 | .017179 | -.010770 | -.036120 | -.059251 | .741944 |
| 1.46 | .075733 | .041295 | .010622 | -.016983 | -.042018 | -.064858 | .732603 |
| 1.47 | .068453 | .034444 | .004149 | -.023115 | -.047839 | -.070390 | .723386 |
| 1.48 | .061265 | .027679 | -.002242 | -.029169 | -.053584 | -.075848 | .714287 |
| 1.49 | .054167 | .021000 | -.008551 | -.035144 | -.059253 | -.081233 | .705305 |
| 1.50 | .047158 | .014405 | -.014780 | -.041042 | -.064847 | -.086545 | .696435 |

Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | .047158 | .014405 | -.014780 | -.041042 | -.064847 | -.086545 | .696435 |
| 1.51 | .040238 | .007893 | -.020929 | -.046863 | -.070367 | -.091784 | .687676 |
| 1.52 | .033404 | .001464 | -.026999 | -.052609 | -.075814 | -.096953 | .679023 |
| 1.53 | .026657 | -.004884 | -.032992 | -.058279 | -.081188 | -.102051 | .670474 |
| 1.54 | .019994 | -.011151 | -.038907 | -.063875 | -.086490 | -.107079 | .662026 |
| 1.55 | .013416 | -.017338 | -.044746 | -.069398 | -.091721 | -.112038 | .653677 |
| 1.56 | .006921 | -.023447 | -.050510 | -.074848 | -.096881 | -.116928 | .645425 |
| 1.57 | .000507 | -.029478 | -.056199 | -.080226 | -.101971 | -.121750 | .637266 |
| 1.58 | -.005825 | -.035431 | -.061814 | -.085532 | -.106993 | -.126505 | .629198 |
| 1.59 | -.012077 | -.041308 | -.067356 | -.090768 | -.111945 | -.131193 | .621219 |
| 1.60 | -.018250 | -.047110 | -.072825 | -.095934 | -.116830 | -.135815 | .613327 |
| 1.61 | -.024344 | -.052837 | -.078223 | -.101030 | -.121647 | -.140371 | .605520 |
| 1.62 | -.030360 | -.058490 | -.083549 | -.106058 | -.126398 | -.144862 | .597796 |
| 1.63 | -.036300 | -.064070 | -.088805 | -.111017 | -.131082 | -.149289 | .590152 |
| 1.64 | -.042164 | -.069577 | -.093991 | -.115909 | -.135701 | -.153652 | .582587 |
| 1.65 | -.047952 | -.075012 | -.099108 | -.120734 | -.140255 | -.157951 | .575099 |
| 1.66 | -.053666 | -.080376 | -.104156 | -.125493 | -.144744 | -.162188 | .567686 |
| 1.67 | -.059306 | -.085670 | -.109137 | -.130185 | -.149169 | -.166362 | .560346 |
| 1.68 | -.064873 | -.090894 | -.114050 | -.134813 | -.153531 | -.170474 | .553077 |
| 1.69 | -.070368 | -.096048 | -.118896 | -.139376 | -.157830 | -.174524 | .545879 |
| 1.70 | -.075791 | -.101134 | -.123677 | -.143875 | -.162067 | -.178514 | .538749 |
| 1.71 | -.081143 | -.106152 | -.128391 | -.148310 | -.166241 | -.182444 | .531686 |
| 1.72 | -.086425 | -.111102 | -.133041 | -.152682 | -.170354 | -.186313 | .524689 |
| 1.73 | -.091637 | -.115986 | -.137626 | -.156991 | -.174407 | -.190123 | .517755 |
| 1.74 | -.096780 | -.120803 | -.142147 | -.161239 | -.178398 | -.193874 | .510884 |
| 1.75 | -.101855 | -.125555 | -.146604 | -.165424 | -.182330 | -.197566 | .504075 |
| 1.76 | -.106862 | -.130242 | -.150999 | -.169549 | -.186202 | -.201200 | .497325 |
| 1.77 | -.111802 | -.134864 | -.155331 | -.173613 | -.190015 | -.204777 | .490634 |
| 1.78 | -.116675 | -.139422 | -.159602 | -.177617 | -.193770 | -.208296 | .484001 |
| 1.79 | -.121482 | -.143916 | -.163810 | -.181561 | -.197466 | -.211758 | .477424 |
| 1.80 | -.126223 | -.148348 | -.167958 | -.185446 | -.201104 | -.215164 | .470902 |
| 1.81 | -.130900 | -.152716 | -.172045 | -.189272 | -.204685 | -.218513 | .464435 |
| 1.82 | -.135512 | -.157023 | -.176073 | -.193039 | -.208209 | -.221807 | .458020 |
| 1.83 | -.140061 | -.161269 | -.180040 | -.196749 | -.211677 | -.225046 | .451658 |
| 1.84 | -.144546 | -.165453 | -.183949 | -.200401 | -.215088 | -.228229 | .445346 |
| 1.85 | -.148968 | -.169577 | -.187798 | -.203996 | -.218444 | -.231359 | .439085 |
| 1.86 | -.153327 | -.173640 | -.191590 | -.207534 | -.221744 | -.234434 | .432873 |
| 1.87 | -.157625 | -.177644 | -.195323 | -.211015 | -.224989 | -.237455 | .426709 |
| 1.88 | -.161862 | -.181588 | -.198999 | -.214441 | -.228180 | -.240423 | .420593 |
| 1.89 | -.166037 | -.185474 | -.202618 | -.217811 | -.231316 | -.243337 | .414523 |
| 1.90 | -.170152 | -.189301 | -.206180 | -.221126 | -.234398 | -.246199 | .408499 |
| 1.91 | -.174207 | -.193071 | -.209686 | -.224386 | -.237427 | -.249009 | .402520 |
| 1.92 | -.178203 | -.196783 | -.213136 | -.227592 | -.240403 | -.251767 | .396585 |
| 1.93 | -.182139 | -.200437 | -.216530 | -.230744 | -.243326 | -.254473 | .390693 |
| 1.94 | -.186017 | -.204035 | -.219870 | -.233842 | -.246196 | -.257128 | .384844 |
| 1.95 | -.189836 | -.207576 | -.223155 | -.236886 | -.249015 | -.259732 | .379038 |
| 1.96 | -.193598 | -.211062 | -.226385 | -.239878 | -.251782 | -.262285 | .373272 |
| 1.97 | -.197302 | -.214492 | -.229561 | -.242817 | -.254497 | -.264788 | .367548 |
| 1.98 | -.200949 | -.217867 | -.232684 | -.245704 | -.257161 | -.267241 | .361863 |
| 1.99 | -.204539 | -.221186 | -.235753 | -.248538 | -.259774 | -.269644 | .356218 |
| 2.00 | -.208073 | -.224452 | -.238769 | -.251321 | -.262337 | -.271998 | .350612 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.208073 | -.224452 | -.238769 | -.251321 | -.262337 | -.271998 | .350612 |
| 2.01 | -.211552 | -.227663 | -.241733 | -.254053 | -.264850 | -.274303 | .345044 |
| 2.02 | -.214974 | -.230820 | -.244644 | -.256734 | -.267313 | -.276559 | .339514 |
| 2.03 | -.218342 | -.233925 | -.247504 | -.259364 | -.269727 | -.278767 | .334022 |
| 2.04 | -.221655 | -.236976 | -.250311 | -.261944 | -.272091 | -.280927 | .328566 |
| 2.05 | -.224914 | -.239974 | -.253068 | -.264474 | -.274407 | -.283039 | .323146 |
| 2.06 | -.228118 | -.242920 | -.255774 | -.266954 | -.276674 | -.285103 | .317762 |
| 2.07 | -.231269 | -.245814 | -.258429 | -.269385 | -.278892 | -.287120 | .312413 |
| 2.08 | -.234366 | -.248656 | -.261033 | -.271766 | -.281063 | -.289091 | .307099 |
| 2.09 | -.237411 | -.251447 | -.263588 | -.274099 | -.283186 | -.291014 | .301820 |
| 2.10 | -.240403 | -.254186 | -.266093 | -.276384 | -.285262 | -.292892 | .296574 |
| 2.11 | -.243343 | -.256876 | -.268549 | -.278620 | -.287291 | -.294724 | .291363 |
| 2.12 | -.246230 | -.259514 | -.270955 | -.280808 | -.289273 | -.296509 | .286184 |
| 2.13 | -.249066 | -.262103 | -.273313 | -.282949 | -.291209 | -.298250 | .281038 |
| 2.14 | -.251851 | -.264641 | -.275622 | -.285043 | -.293098 | -.299945 | .275925 |
| 2.15 | -.254585 | -.267131 | -.277883 | -.287089 | -.294942 | -.301595 | .270844 |
| 2.16 | -.257268 | -.269571 | -.280097 | -.289089 | -.296740 | -.303201 | .265794 |
| 2.17 | -.259901 | -.271962 | -.282262 | -.291043 | -.298492 | -.304763 | .260776 |
| 2.18 | -.262484 | -.274305 | -.284381 | -.292950 | -.300200 | -.306280 | .255789 |
| 2.19 | -.265017 | -.276599 | -.286452 | -.294812 | -.301863 | -.307754 | .250833 |
| 2.20 | -.267501 | -.278845 | -.288477 | -.296628 | -.303481 | -.309184 | .245907 |
| 2.21 | -.269935 | -.281044 | -.290455 | -.298398 | -.305055 | -.310571 | .241012 |
| 2.22 | -.272321 | -.283195 | -.292387 | -.300124 | -.306585 | -.311915 | .236146 |
| 2.23 | -.274658 | -.285299 | -.294273 | -.301805 | -.308072 | -.313217 | .231310 |
| 2.24 | -.276947 | -.287357 | -.296114 | -.303441 | -.309515 | -.314476 | .226504 |
| 2.25 | -.279188 | -.289367 | -.297909 | -.305034 | -.310915 | -.315693 | .221727 |
| 2.26 | -.281382 | -.291332 | -.299659 | -.306582 | -.312272 | -.316868 | .216978 |
| 2.27 | -.283528 | -.293250 | -.301365 | -.308087 | -.313586 | -.318001 | .212259 |
| 2.28 | -.285627 | -.295123 | -.303026 | -.309548 | -.314858 | -.319094 | .207567 |
| 2.29 | -.287679 | -.296950 | -.304643 | -.310966 | -.316089 | -.320145 | .202904 |
| 2.30 | -.289685 | -.298733 | -.306215 | -.312342 | -.317277 | -.321155 | .198270 |
| 2.31 | -.291645 | -.300470 | -.307744 | -.313675 | -.318424 | -.322125 | .193663 |
| 2.32 | -.293559 | -.302163 | -.309230 | -.314965 | -.319529 | -.323054 | .189083 |
| 2.33 | -.295427 | -.303811 | -.310673 | -.316213 | -.320594 | -.323944 | .184531 |
| 2.34 | -.297249 | -.305415 | -.312072 | -.317420 | -.321617 | -.324794 | .180007 |
| 2.35 | -.299027 | -.306976 | -.313429 | -.318585 | -.322601 | -.325604 | .175509 |
| 2.36 | -.300760 | -.308492 | -.314744 | -.319709 | -.323544 | -.326375 | .171039 |
| 2.37 | -.302448 | -.309966 | -.316016 | -.320791 | -.324447 | -.327107 | .166595 |
| 2.38 | -.304092 | -.311396 | -.317247 | -.321833 | -.325310 | -.327800 | .162178 |
| 2.39 | -.305691 | -.312784 | -.318435 | -.322835 | -.326134 | -.328455 | .157787 |
| 2.40 | -.307247 | -.314129 | -.319583 | -.323796 | -.326918 | -.329072 | .153423 |
| 2.41 | -.308760 | -.315432 | -.320689 | -.324717 | -.327664 | -.329650 | .149085 |
| 2.42 | -.310229 | -.316693 | -.321755 | -.325598 | -.328370 | -.330191 | .144774 |
| 2.43 | -.311655 | -.317913 | -.322780 | -.326440 | -.329039 | -.330695 | .140488 |
| 2.44 | -.313039 | -.319090 | -.323765 | -.327243 | -.329669 | -.331161 | .136228 |
| 2.45 | -.314380 | -.320227 | -.324709 | -.328006 | -.330261 | -.331591 | .131994 |
| 2.46 | -.315679 | -.321322 | -.325614 | -.328731 | -.330816 | -.331983 | .127785 |
| 2.47 | -.316936 | -.322377 | -.326479 | -.329418 | -.331333 | -.332339 | .123602 |
| 2.48 | -.318151 | -.323391 | -.327305 | -.330066 | -.331812 | -.332659 | .119445 |
| 2.49 | -.319325 | -.324365 | -.328092 | -.330676 | -.332255 | -.332943 | .115313 |
| 2.50 | -.320457 | -.325299 | -.328840 | -.331248 | -.332661 | -.333192 | .111206 |

Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.320457 | -.325299 | -.328840 | -.331248 | -.332661 | -.333192 | .111206 |
| 2.51 | -.321549 | -.326194 | -.329549 | -.331783 | -.333031 | -.333404 | .107124 |
| 2.52 | -.322600 | -.327049 | -.330220 | -.332280 | -.333364 | -.333582 | .103068 |
| 2.53 | -.323611 | -.327864 | -.330853 | -.332741 | -.333662 | -.333725 | .099036 |
| 2.54 | -.324581 | -.328641 | -.331448 | -.333165 | -.333924 | -.333833 | .095030 |
| 2.55 | -.325511 | -.329379 | -.332005 | -.333552 | -.334150 | -.333906 | .091048 |
| 2.56 | -.326402 | -.330078 | -.332525 | -.333903 | -.334341 | -.333946 | .087091 |
| 2.57 | -.327253 | -.330739 | -.333008 | -.334217 | -.334497 | -.333951 | .083159 |
| 2.58 | -.328065 | -.331362 | -.333454 | -.334497 | -.334618 | -.333923 | .079252 |
| 2.59 | -.328838 | -.331948 | -.333863 | -.334740 | -.334705 | -.333861 | .075369 |
| 2.60 | -.329573 | -.332496 | -.334236 | -.334948 | -.334757 | -.333766 | .071511 |
| 2.61 | -.330269 | -.333006 | -.334573 | -.335121 | -.334776 | -.333638 | .067678 |
| 2.62 | -.330926 | -.333480 | -.334874 | -.335260 | -.334761 | -.333477 | .063868 |
| 2.63 | -.331546 | -.333917 | -.335139 | -.335364 | -.334712 | -.333284 | .060084 |
| 2.64 | -.332128 | -.334317 | -.335369 | -.335433 | -.334630 | -.333058 | .056324 |
| 2.65 | -.332673 | -.334681 | -.335564 | -.335468 | -.334515 | -.332801 | .052588 |
| 2.66 | -.333180 | -.335009 | -.335723 | -.335470 | -.334367 | -.332512 | .048876 |
| 2.67 | -.333650 | -.335301 | -.335849 | -.335438 | -.334186 | -.332191 | .045189 |
| 2.68 | -.334084 | -.335557 | -.335939 | -.335372 | -.333974 | -.331839 | .041526 |
| 2.69 | -.334481 | -.335779 | -.335996 | -.335274 | -.333729 | -.331456 | .037888 |
| 2.70 | -.334842 | -.335965 | -.336018 | -.335143 | -.333452 | -.331042 | .034273 |
| 2.71 | -.335166 | -.336116 | -.336007 | -.334978 | -.333144 | -.330598 | .030683 |
| 2.72 | -.335455 | -.336233 | -.335962 | -.334782 | -.332805 | -.330124 | .027117 |
| 2.73 | -.335709 | -.336315 | -.335884 | -.334554 | -.332434 | -.329619 | .023575 |
| 2.74 | -.335927 | -.336363 | -.335773 | -.334293 | -.332033 | -.329085 | .020058 |
| 2.75 | -.336110 | -.336378 | -.335630 | -.334001 | -.331601 | -.328521 | .016564 |
| 2.76 | -.336258 | -.336358 | -.335453 | -.333677 | -.331139 | -.327928 | .013094 |
| 2.77 | -.336372 | -.336305 | -.335245 | -.333323 | -.330647 | -.327306 | .009649 |
| 2.78 | -.336451 | -.336220 | -.335004 | -.332937 | -.330125 | -.326655 | .006228 |
| 2.79 | -.336497 | -.336101 | -.334732 | -.332521 | -.329573 | -.325976 | .002830 |
| 2.80 | -.336508 | -.335949 | -.334428 | -.332074 | -.328992 | -.325268 | -.000543 |
| 2.81 | -.336486 | -.335765 | -.334093 | -.331597 | -.328381 | -.324532 | -.003892 |
| 2.82 | -.336430 | -.335549 | -.333727 | -.331090 | -.327742 | -.323769 | -.007217 |
| 2.83 | -.336342 | -.335301 | -.333330 | -.330554 | -.327075 | -.322978 | -.010518 |
| 2.84 | -.336220 | -.335021 | -.332902 | -.329988 | -.326378 | -.322159 | -.013795 |
| 2.85 | -.336066 | -.334710 | -.332444 | -.329392 | -.325654 | -.321314 | -.017048 |
| 2.86 | -.335879 | -.334368 | -.331956 | -.328768 | -.324902 | -.320441 | -.020277 |
| 2.87 | -.335660 | -.333994 | -.331439 | -.328115 | -.324122 | -.319542 | -.023482 |
| 2.88 | -.335409 | -.333590 | -.330891 | -.327433 | -.323315 | -.318617 | -.026663 |
| 2.89 | -.335127 | -.333155 | -.330314 | -.326724 | -.322481 | -.317666 | -.029820 |
| 2.90 | -.334813 | -.332690 | -.329708 | -.325986 | -.321619 | -.316689 | -.032953 |
| 2.91 | -.334468 | -.332195 | -.329073 | -.325220 | -.320731 | -.315686 | -.036062 |
| 2.92 | -.334092 | -.331670 | -.328410 | -.324427 | -.319817 | -.314658 | -.039147 |
| 2.93 | -.333685 | -.331116 | -.327718 | -.323607 | -.318876 | -.313605 | -.042207 |
| 2.94 | -.333248 | -.330532 | -.326998 | -.322759 | -.317910 | -.312527 | -.045244 |
| 2.95 | -.332780 | -.329919 | -.326250 | -.321885 | -.316918 | -.311424 | -.048257 |
| 2.96 | -.332283 | -.329278 | -.325474 | -.320984 | -.315900 | -.310297 | -.051245 |
| 2.97 | -.331756 | -.328608 | -.324671 | -.320057 | -.314857 | -.309146 | -.054210 |
| 2.98 | -.331199 | -.327909 | -.323841 | -.319104 | -.313789 | -.307971 | -.057150 |
| 2.99 | -.330613 | -.327182 | -.322984 | -.318125 | -.312697 | -.306772 | -.060067 |
| 3.00 | -.329997 | -.326428 | -.322100 | -.317121 | -.311580 | -.305550 | -.062959 |

## Table of $R^*(y,\varphi)$ and $T^*(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | -.126324 | -.152306 | -.178694 | -.205573 | -.233031 | -.261168 | 1.000000 |
| .01 | -.131268 | -.157225 | -.183585 | -.210430 | -.237849 | -.265943 | 1.000050 |
| .02 | -.136206 | -.162137 | -.188467 | -.215277 | -.242656 | -.270705 | 1.000200 |
| .03 | -.141137 | -.167042 | -.193340 | -.220113 | -.247451 | -.275453 | 1.000450 |
| .04 | -.146061 | -.171937 | -.198203 | -.224939 | -.252235 | -.280189 | 1.000800 |
| .05 | -.150977 | -.176825 | -.203057 | -.229754 | -.257006 | -.284911 | 1.001249 |
| .06 | -.155886 | -.181704 | -.207900 | -.234558 | -.261765 | -.289619 | 1.001798 |
| .07 | -.160788 | -.186573 | -.212734 | -.239350 | -.266511 | -.294314 | 1.002447 |
| .08 | -.165681 | -.191434 | -.217557 | -.244131 | -.271244 | -.298995 | 1.003195 |
| .09 | -.170567 | -.196285 | -.222369 | -.248899 | -.275964 | -.303661 | 1.004042 |
| .10 | -.175444 | -.201127 | -.227171 | -.253656 | -.280671 | -.308313 | 1.004988 |
| .11 | -.180312 | -.205958 | -.231961 | -.258400 | -.285364 | -.312950 | 1.006032 |
| .12 | -.185171 | -.210780 | -.236740 | -.263132 | -.290044 | -.317572 | 1.007174 |
| .13 | -.190021 | -.215591 | -.241507 | -.267851 | -.294710 | -.322179 | 1.008414 |
| .14 | -.194862 | -.220391 | -.246263 | -.272557 | -.299361 | -.326770 | 1.009752 |
| .15 | -.199693 | -.225181 | -.251007 | -.277250 | -.303998 | -.331346 | 1.011187 |
| .16 | -.204515 | -.229960 | -.255738 | -.281929 | -.308620 | -.335906 | 1.012718 |
| .17 | -.209326 | -.234727 | -.260457 | -.286595 | -.313228 | -.340451 | 1.014346 |
| .18 | -.214127 | -.239483 | -.265163 | -.291247 | -.317820 | -.344978 | 1.016069 |
| .19 | -.218917 | -.244227 | -.269856 | -.295884 | -.322397 | -.349490 | 1.017887 |
| .20 | -.223696 | -.248959 | -.274536 | -.300508 | -.326959 | -.353984 | 1.019800 |
| .21 | -.228465 | -.253678 | -.279203 | -.305116 | -.331505 | -.358462 | 1.021807 |
| .22 | -.233222 | -.258386 | -.283856 | -.309710 | -.336035 | -.362923 | 1.023908 |
| .23 | -.237967 | -.263080 | -.288495 | -.314289 | -.340548 | -.367366 | 1.026101 |
| .24 | -.242701 | -.267762 | -.293120 | -.318853 | -.345046 | -.371792 | 1.028387 |
| .25 | -.247423 | -.272431 | -.297730 | -.323401 | -.349526 | -.376201 | 1.030763 |
| .26 | -.252133 | -.277086 | -.302327 | -.327933 | -.353990 | -.380591 | 1.033231 |
| .27 | -.256830 | -.281727 | -.306908 | -.332450 | -.358437 | -.384963 | 1.035788 |
| .28 | -.261515 | -.286355 | -.311475 | -.336951 | -.362867 | -.389317 | 1.038435 |
| .29 | -.266187 | -.290969 | -.316026 | -.341435 | -.367280 | -.393652 | 1.041170 |
| .30 | -.270845 | -.295569 | -.320562 | -.345903 | -.371674 | -.397969 | 1.043993 |
| .31 | -.275491 | -.300154 | -.325082 | -.350354 | -.376051 | -.402267 | 1.046902 |
| .32 | -.280122 | -.304724 | -.329587 | -.354788 | -.380410 | -.406545 | 1.049897 |
| .33 | -.284740 | -.309279 | -.334075 | -.359205 | -.384751 | -.410805 | 1.052977 |
| .34 | -.289344 | -.313820 | -.338547 | -.363604 | -.389073 | -.415044 | 1.056140 |
| .35 | -.293934 | -.318345 | -.343003 | -.367986 | -.393376 | -.419264 | 1.059387 |
| .36 | -.298509 | -.322854 | -.347442 | -.372350 | -.397661 | -.423465 | 1.062716 |
| .37 | -.303070 | -.327348 | -.351864 | -.376697 | -.401927 | -.427645 | 1.066125 |
| .38 | -.307616 | -.331825 | -.356270 | -.381025 | -.406173 | -.431805 | 1.069614 |
| .39 | -.312146 | -.336286 | -.360657 | -.385335 | -.410400 | -.435944 | 1.073183 |
| .40 | -.316662 | -.340731 | -.365028 | -.389626 | -.414608 | -.440063 | 1.076828 |
| .41 | -.321162 | -.345160 | -.369380 | -.393898 | -.418795 | -.444161 | 1.080551 |
| .42 | -.325646 | -.349571 | -.373715 | -.398152 | -.422963 | -.448237 | 1.084348 |
| .43 | -.330114 | -.353966 | -.378031 | -.402386 | -.427110 | -.452293 | 1.088220 |
| .44 | -.334565 | -.358343 | -.382330 | -.406601 | -.431237 | -.456327 | 1.092165 |
| .45 | -.339001 | -.362703 | -.386609 | -.410796 | -.435344 | -.460340 | 1.096182 |
| .46 | -.343420 | -.367045 | -.390870 | -.414972 | -.439429 | -.464331 | 1.100269 |
| .47 | -.347822 | -.371369 | -.395112 | -.419128 | -.443494 | -.468300 | 1.104425 |
| .48 | -.352207 | -.375675 | -.399335 | -.423263 | -.447538 | -.472247 | 1.108649 |
| .49 | -.356575 | -.379963 | -.403539 | -.427378 | -.451560 | -.476172 | 1.112940 |
| .50 | -.360925 | -.384232 | -.407723 | -.431473 | -.455561 | -.480074 | 1.117295 |

$$R(y,\varphi) = R^*(y,\varphi) + \frac{1+f}{y}.U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y,\varphi)$ and $T(y)$

| $y$ \ $\varphi$ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | 1.107995 | 1.030040 | .960180 | .896875 | .838983 | .785635 | 4.469181 |
| .51 | 1.081544 | 1.005165 | .936643 | .874495 | .817616 | .765166 | 4.312629 |
| .52 | 1.055796 | .980934 | .913703 | .852671 | .796771 | .745190 | 4.164929 |
| .53 | 1.030719 | .957319 | .891332 | .831378 | .776425 | .725685 | 4.025417 |
| .54 | 1.006284 | .934291 | .869506 | .810594 | .756558 | .706633 | 3.893492 |
| .55 | .982461 | .911827 | .848202 | .790298 | .737150 | .688015 | 3.768603 |
| .56 | .959224 | .889901 | .827398 | .770470 | .718182 | .669814 | 3.650253 |
| .57 | .936549 | .868492 | .807074 | .751091 | .699637 | .652013 | 3.537985 |
| .58 | .914412 | .847578 | .787211 | .732143 | .681498 | .634598 | 3.431381 |
| .59 | .892790 | .827140 | .767790 | .713610 | .663751 | .617554 | 3.330059 |
| .60 | .871664 | .807159 | .748794 | .695477 | .646380 | .600867 | 3.233670 |
| .61 | .851013 | .787617 | .730208 | .677727 | .629373 | .584525 | 3.141890 |
| .62 | .830820 | .768497 | .712016 | .660347 | .612715 | .568515 | 3.054423 |
| .63 | .811066 | .749785 | .694203 | .643325 | .596395 | .552826 | 2.970997 |
| .64 | .791736 | .731464 | .676756 | .626646 | .580400 | .537447 | 2.891360 |
| .65 | .772813 | .713521 | .659663 | .610300 | .564720 | .522367 | 2.815278 |
| .66 | .754283 | .695943 | .642910 | .594275 | .549345 | .507578 | 2.742538 |
| .67 | .736132 | .678716 | .626487 | .578561 | .534264 | .493068 | 2.672939 |
| .68 | .718347 | .661829 | .610381 | .563146 | .519467 | .478831 | 2.606298 |
| .69 | .700914 | .645270 | .594584 | .548022 | .504946 | .464856 | 2.542442 |
| .70 | .683823 | .629028 | .579084 | .533180 | .490693 | .451136 | 2.481213 |
| .71 | .667061 | .613094 | .563873 | .518610 | .476699 | .437664 | 2.422464 |
| .72 | .650619 | .597457 | .548941 | .504304 | .462955 | .424432 | 2.366055 |
| .73 | .634485 | .582107 | .534280 | .490254 | .449456 | .411433 | 2.311858 |
| .74 | .618649 | .567037 | .519881 | .476453 | .436194 | .398661 | 2.259755 |
| .75 | .603104 | .552237 | .505737 | .462894 | .423161 | .386109 | 2.209632 |
| .76 | .587839 | .537700 | .491840 | .449569 | .410353 | .373771 | 2.161386 |
| .77 | .572846 | .523417 | .478184 | .436471 | .397761 | .361641 | 2.114918 |
| .78 | .558117 | .509382 | .464760 | .423596 | .385381 | .349715 | 2.070137 |
| .79 | .543644 | .495587 | .451564 | .410936 | .373207 | .337986 | 2.026958 |
| .80 | .529421 | .482026 | .438589 | .398486 | .361234 | .326449 | 1.985299 |
| .81 | .515439 | .468691 | .425828 | .386240 | .349456 | .315100 | 1.945086 |
| .82 | .501692 | .455578 | .413276 | .374194 | .337868 | .303934 | 1.906248 |
| .83 | .488174 | .442680 | .400928 | .362341 | .326467 | .292946 | 1.868716 |
| .84 | .474879 | .429990 | .388778 | .350677 | .315246 | .282133 | 1.832431 |
| .85 | .461800 | .417505 | .376822 | .339198 | .304202 | .271490 | 1.797331 |
| .86 | .448932 | .405219 | .365054 | .327899 | .293330 | .261013 | 1.763361 |
| .87 | .436270 | .393126 | .353471 | .316775 | .282628 | .250698 | 1.730470 |
| .88 | .423807 | .381223 | .342067 | .305823 | .272090 | .240542 | 1.698607 |
| .89 | .411540 | .369504 | .330838 | .295039 | .261712 | .230542 | 1.667726 |
| .90 | .399464 | .357965 | .319780 | .284418 | .251493 | .220693 | 1.637783 |
| .91 | .387573 | .346601 | .308890 | .273958 | .241427 | .210993 | 1.608736 |
| .92 | .375864 | .335410 | .298163 | .263654 | .231512 | .201439 | 1.580545 |
| .93 | .364332 | .324386 | .287597 | .253504 | .221745 | .192027 | 1.553174 |
| .94 | .352973 | .313526 | .277186 | .243504 | .212122 | .182755 | 1.526587 |
| .95 | .341783 | .302826 | .266929 | .233650 | .202640 | .173619 | 1.500751 |
| .96 | .330758 | .292284 | .256822 | .223940 | .193298 | .164618 | 1.475634 |
| .97 | .319895 | .281895 | .246862 | .214372 | .184091 | .155748 | 1.451205 |
| .98 | .309191 | .271657 | .237045 | .204941 | .175017 | .147008 | 1.427436 |
| .99 | .298641 | .261565 | .227369 | .195646 | .166074 | .138394 | 1.404301 |
| 1.00 | .288243 | .251618 | .217831 | .186484 | .157260 | .129904 | 1.381773 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .288243 | .251618 | .217831 | .186484 | .157260 | .129904 | 1.381773 |
| 1.01 | .277993 | .241812 | .208429 | .177452 | .148571 | .121537 | 1.359828 |
| 1.02 | .267888 | .232145 | .199159 | .168547 | .140006 | .113289 | 1.338443 |
| 1.03 | .257926 | .222614 | .190020 | .159769 | .131562 | .105159 | 1.317595 |
| 1.04 | .248104 | .213216 | .181008 | .151113 | .123238 | .097145 | 1.297264 |
| 1.05 | .238418 | .203948 | .172122 | .142579 | .115031 | .089245 | 1.277429 |
| 1.06 | .228867 | .194809 | .163359 | .134163 | .106939 | .081457 | 1.258071 |
| 1.07 | .219448 | .185796 | .154717 | .125865 | .098960 | .073779 | 1.239173 |
| 1.08 | .210158 | .176907 | .146195 | .117681 | .091093 | .066209 | 1.220716 |
| 1.09 | .200995 | .168139 | .137789 | .109610 | .083335 | .058745 | 1.202684 |
| 1.10 | .191956 | .159490 | .129498 | .101650 | .075685 | .051387 | 1.185061 |
| 1.11 | .183040 | .150959 | .121320 | .093800 | .068141 | .044132 | 1.167833 |
| 1.12 | .174245 | .142544 | .113253 | .086057 | .060701 | .036978 | 1.150984 |
| 1.13 | .165567 | .134241 | .105296 | .078420 | .053364 | .029925 | 1.134502 |
| 1.14 | .157006 | .126051 | .097446 | .070887 | .046129 | .022970 | 1.118372 |
| 1.15 | .148560 | .117970 | .089702 | .063457 | .038993 | .016113 | 1.102583 |
| 1.16 | .140225 | .109997 | .082063 | .056128 | .031956 | .009351 | 1.087122 |
| 1.17 | .132002 | .102131 | .074526 | .048899 | .025016 | .002685 | 1.071977 |
| 1.18 | .123887 | .094369 | .067091 | .041768 | .018171 | -.003889 | 1.057139 |
| 1.19 | .115879 | .086710 | .059755 | .034733 | .011420 | -.010371 | 1.042595 |
| 1.20 | .107977 | .079153 | .052517 | .027795 | .004762 | -.016762 | 1.028337 |
| 1.21 | .100179 | .071696 | .045377 | .020950 | -.001804 | -.023064 | 1.014353 |
| 1.22 | .092483 | .064338 | .038332 | .014198 | -.008280 | -.029277 | 1.000636 |
| 1.23 | .084888 | .057077 | .031381 | .007537 | -.014666 | -.035403 | .987176 |
| 1.24 | .077393 | .049912 | .024523 | .000967 | -.020964 | -.041443 | .973965 |
| 1.25 | .069995 | .042842 | .017756 | -.005514 | -.027176 | -.047398 | .960994 |
| 1.26 | .062694 | .035864 | .011080 | -.011907 | -.033301 | -.053269 | .948256 |
| 1.27 | .055488 | .028979 | .004494 | -.018214 | -.039342 | -.059057 | .935742 |
| 1.28 | .048376 | .022185 | -.002005 | -.024434 | -.045299 | -.064763 | .923447 |
| 1.29 | .041357 | .015480 | -.008416 | -.030570 | -.051173 | -.070388 | .911362 |
| 1.30 | .034430 | .008864 | -.014742 | -.036621 | -.056966 | -.075933 | .899482 |
| 1.31 | .027592 | .002335 | -.020982 | -.042591 | -.062678 | -.081399 | .887799 |
| 1.32 | .020844 | -.004108 | -.027139 | -.048478 | -.068309 | -.086786 | .876308 |
| 1.33 | .014184 | -.010465 | -.033213 | -.054285 | -.073862 | -.092097 | .865003 |
| 1.34 | .007610 | -.016738 | -.039205 | -.060012 | -.079337 | -.097331 | .853877 |
| 1.35 | .001122 | -.022928 | -.045117 | -.065659 | -.084734 | -.102489 | .842926 |
| 1.36 | -.005281 | -.029036 | -.050948 | -.071229 | -.090056 | -.107572 | .832145 |
| 1.37 | -.011600 | -.035063 | -.056700 | -.076722 | -.095301 | -.112581 | .821527 |
| 1.38 | -.017836 | -.041009 | -.062374 | -.082138 | -.100472 | -.117517 | .811068 |
| 1.39 | -.023991 | -.046876 | -.067970 | -.087479 | -.105569 | -.122381 | .800765 |
| 1.40 | -.030064 | -.052664 | -.073490 | -.092744 | -.110593 | -.127172 | .790611 |
| 1.41 | -.036058 | -.058375 | -.078934 | -.097936 | -.115544 | -.131893 | .780602 |
| 1.42 | -.041973 | -.064009 | -.084304 | -.103055 | -.120423 | -.136543 | .770735 |
| 1.43 | -.047810 | -.069566 | -.089599 | -.108101 | -.125232 | -.141123 | .761006 |
| 1.44 | -.053569 | -.075049 | -.094821 | -.113076 | -.129970 | -.145635 | .751410 |
| 1.45 | -.059251 | -.080457 | -.099970 | -.117979 | -.134639 | -.150078 | .741944 |
| 1.46 | -.064858 | -.085792 | -.105047 | -.122812 | -.139238 | -.154454 | .732603 |
| 1.47 | -.070390 | -.091053 | -.110053 | -.127575 | -.143770 | -.158762 | .723386 |
| 1.48 | -.075848 | -.096242 | -.114989 | -.132270 | -.148233 | -.163004 | .714287 |
| 1.49 | -.081233 | -.101360 | -.119855 | -.136896 | -.152630 | -.167181 | .705305 |
| 1.50 | -.086545 | -.106407 | -.124651 | -.141454 | -.156960 | -.171292 | .696435 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | -.086545 | -.106407 | -.124651 | -.141454 | -.156960 | -.171292 | .696435 |
| 1.51 | -.091784 | -.111384 | -.129379 | -.145945 | -.161225 | -.175338 | .687676 |
| 1.52 | -.096953 | -.116291 | -.134040 | -.150370 | -.165424 | -.179320 | .679023 |
| 1.53 | -.102051 | -.121130 | -.138633 | -.154729 | -.169559 | -.183239 | .670474 |
| 1.54 | -.107079 | -.125900 | -.143159 | -.159022 | -.173629 | -.187095 | .662026 |
| 1.55 | -.112038 | -.130603 | -.147619 | -.163251 | -.177636 | -.190889 | .653677 |
| 1.56 | -.116928 | -.135239 | -.152014 | -.167416 | -.181580 | -.194620 | .645425 |
| 1.57 | -.121750 | -.139808 | -.156344 | -.171517 | -.185462 | -.198291 | .637266 |
| 1.58 | -.126505 | -.144312 | -.160609 | -.175555 | -.189282 | -.201900 | .629198 |
| 1.59 | -.131193 | -.148751 | -.164811 | -.179530 | -.193040 | -.205449 | .621219 |
| 1.60 | -.135815 | -.153125 | -.168949 | -.183444 | -.196738 | -.208939 | .613327 |
| 1.61 | -.140371 | -.157434 | -.173025 | -.187296 | -.200375 | -.212369 | .605520 |
| 1.62 | -.144862 | -.161681 | -.177038 | -.191087 | -.203952 | -.215740 | .597796 |
| 1.63 | -.149289 | -.165864 | -.180990 | -.194817 | -.207470 | -.219053 | .590152 |
| 1.64 | -.153652 | -.169985 | -.184881 | -.198488 | -.210929 | -.222308 | .582587 |
| 1.65 | -.157951 | -.174043 | -.188710 | -.202099 | -.214329 | -.225505 | .575099 |
| 1.66 | -.162188 | -.178041 | -.192480 | -.205650 | -.217672 | -.228645 | .567686 |
| 1.67 | -.166362 | -.181977 | -.196190 | -.209144 | -.220957 | -.231729 | .560346 |
| 1.68 | -.170474 | -.185853 | -.199841 | -.212579 | -.224184 | -.234757 | .553077 |
| 1.69 | -.174524 | -.189669 | -.203432 | -.215956 | -.227355 | -.237729 | .545879 |
| 1.70 | -.178514 | -.193425 | -.206966 | -.219276 | -.230470 | -.240645 | .538749 |
| 1.71 | -.182444 | -.197122 | -.210441 | -.222539 | -.233529 | -.243507 | .531686 |
| 1.72 | -.186313 | -.200760 | -.213859 | -.225746 | -.236533 | -.246315 | .524689 |
| 1.73 | -.190123 | -.204340 | -.217220 | -.228897 | -.239482 | -.249068 | .517755 |
| 1.74 | -.193874 | -.207863 | -.220525 | -.231992 | -.242376 | -.251768 | .510884 |
| 1.75 | -.197566 | -.211328 | -.223773 | -.235032 | -.245215 | -.254414 | .504075 |
| 1.76 | -.201200 | -.214736 | -.226965 | -.238018 | -.248001 | -.257007 | .497325 |
| 1.77 | -.204777 | -.218087 | -.230102 | -.240949 | -.250734 | -.259549 | .490634 |
| 1.78 | -.208296 | -.221383 | -.233184 | -.243826 | -.253414 | -.262038 | .484001 |
| 1.79 | -.211758 | -.224623 | -.236211 | -.246649 | -.256041 | -.264475 | .477424 |
| 1.80 | -.215164 | -.227807 | -.239184 | -.249419 | -.258616 | -.266861 | .470902 |
| 1.81 | -.218513 | -.230937 | -.242104 | -.252137 | -.261139 | -.269196 | .464435 |
| 1.82 | -.221807 | -.234012 | -.244969 | -.254802 | -.263610 | -.271480 | .458020 |
| 1.83 | -.225046 | -.237032 | -.247782 | -.257415 | -.266030 | -.273714 | .451658 |
| 1.84 | -.228229 | -.240000 | -.250542 | -.259976 | -.268400 | -.275898 | .445346 |
| 1.85 | -.231359 | -.242913 | -.253250 | -.262485 | -.270719 | -.278033 | .439085 |
| 1.86 | -.234434 | -.245774 | -.255905 | -.264944 | -.272988 | -.280119 | .432873 |
| 1.87 | -.237455 | -.248582 | -.258509 | -.267352 | -.275207 | -.282155 | .426709 |
| 1.88 | -.240423 | -.251338 | -.261062 | -.269710 | -.277377 | -.284143 | .420593 |
| 1.89 | -.243337 | -.254041 | -.263564 | -.272018 | -.279497 | -.286083 | .414523 |
| 1.90 | -.246199 | -.256694 | -.266015 | -.274276 | -.281569 | -.287975 | .408499 |
| 1.91 | -.249009 | -.259295 | -.268416 | -.276485 | -.283593 | -.289820 | .402520 |
| 1.92 | -.251767 | -.261844 | -.270767 | -.278644 | -.285568 | -.291617 | .396585 |
| 1.93 | -.254473 | -.264344 | -.273069 | -.280756 | -.287496 | -.293368 | .390693 |
| 1.94 | -.257128 | -.266793 | -.275321 | -.282819 | -.289377 | -.295072 | .384844 |
| 1.95 | -.259732 | -.269192 | -.277524 | -.284833 | -.291210 | -.296730 | .379038 |
| 1.96 | -.262285 | -.271542 | -.279679 | -.286801 | -.292997 | -.298342 | .373272 |
| 1.97 | -.264788 | -.273842 | -.281785 | -.288721 | -.294737 | -.299908 | .367548 |
| 1.98 | -.267241 | -.276094 | -.283843 | -.290594 | -.296431 | -.301429 | .361863 |
| 1.99 | -.269644 | -.278296 | -.285854 | -.292420 | -.298079 | -.302906 | .356218 |
| 2.00 | -.271998 | -.280451 | -.287818 | -.294199 | -.299682 | -.304337 | .350612 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.271998 | -.280451 | -.287818 | -.294199 | -.299682 | -.304337 | .350612 |
| 2.01 | -.274303 | -.282557 | -.289734 | -.295933 | -.301239 | -.305725 | .345044 |
| 2.02 | -.276559 | -.284616 | -.291604 | -.297621 | -.302752 | -.307068 | .339514 |
| 2.03 | -.278767 | -.286628 | -.293427 | -.299263 | -.304220 | -.308367 | .334022 |
| 2.04 | -.280927 | -.288592 | -.295204 | -.300860 | -.305643 | -.309624 | .328566 |
| 2.05 | -.283039 | -.290510 | -.296935 | -.302413 | -.307023 | -.310837 | .323146 |
| 2.06 | -.285103 | -.292381 | -.298621 | -.303920 | -.308359 | -.312007 | .317762 |
| 2.07 | -.287120 | -.294206 | -.300262 | -.305384 | -.309652 | -.313134 | .312413 |
| 2.08 | -.289091 | -.295985 | -.301857 | -.306803 | -.310901 | -.314220 | .307099 |
| 2.09 | -.291014 | -.297718 | -.303408 | -.308179 | -.312108 | -.315263 | .301820 |
| 2.10 | -.292892 | -.299406 | -.304915 | -.309511 | -.313272 | -.316265 | .296574 |
| 2.11 | -.294724 | -.301049 | -.306377 | -.310800 | -.314394 | -.317226 | .291363 |
| 2.12 | -.296509 | -.302648 | -.307796 | -.312046 | -.315474 | -.318145 | .286184 |
| 2.13 | -.298250 | -.304201 | -.309171 | -.313249 | -.316512 | -.319024 | .281038 |
| 2.14 | -.299945 | -.305711 | -.310503 | -.314411 | -.317509 | -.319862 | .275925 |
| 2.15 | -.301595 | -.307177 | -.311792 | -.315530 | -.318465 | -.320660 | .270844 |
| 2.16 | -.303201 | -.308599 | -.313039 | -.316608 | -.319379 | -.321418 | .265794 |
| 2.17 | -.304763 | -.309978 | -.314243 | -.317644 | -.320254 | -.322136 | .260776 |
| 2.18 | -.306280 | -.311314 | -.315405 | -.318639 | -.321088 | -.322815 | .255789 |
| 2.19 | -.307754 | -.312607 | -.316525 | -.319593 | -.321882 | -.323455 | .250833 |
| 2.20 | -.309184 | -.313858 | -.317604 | -.320506 | -.322636 | -.324056 | .245907 |
| 2.21 | -.310571 | -.315066 | -.318641 | -.321379 | -.323351 | -.324619 | .241012 |
| 2.22 | -.311915 | -.316233 | -.319637 | -.322212 | -.324027 | -.325143 | .236146 |
| 2.23 | -.313217 | -.317358 | -.320593 | -.323005 | -.324664 | -.325630 | .231310 |
| 2.24 | -.314476 | -.318441 | -.321508 | -.323759 | -.325262 | -.326078 | .226504 |
| 2.25 | -.315693 | -.319483 | -.322383 | -.324473 | -.325822 | -.326489 | .221727 |
| 2.26 | -.316868 | -.320485 | -.323218 | -.325148 | -.326344 | -.326864 | .216978 |
| 2.27 | -.318001 | -.321445 | -.324013 | -.325785 | -.326828 | -.327201 | .212259 |
| 2.28 | -.319094 | -.322366 | -.324769 | -.326383 | -.327275 | -.327501 | .207567 |
| 2.29 | -.320145 | -.323246 | -.325486 | -.326943 | -.327684 | -.327765 | .202904 |
| 2.30 | -.321155 | -.324087 | -.326164 | -.327465 | -.328056 | -.327994 | .198270 |
| 2.31 | -.322125 | -.324888 | -.326803 | -.327950 | -.328392 | -.328186 | .193663 |
| 2.32 | -.323054 | -.325649 | -.327404 | -.328396 | -.328691 | -.328343 | .189083 |
| 2.33 | -.323944 | -.326372 | -.327967 | -.328806 | -.328953 | -.328464 | .184531 |
| 2.34 | -.324794 | -.327056 | -.328492 | -.329179 | -.329180 | -.328551 | .180007 |
| 2.35 | -.325604 | -.327701 | -.328980 | -.329516 | -.329372 | -.328602 | .175509 |
| 2.36 | -.326375 | -.328308 | -.329430 | -.329816 | -.329527 | -.328620 | .171039 |
| 2.37 | -.327107 | -.328877 | -.329843 | -.330079 | -.329648 | -.328603 | .166595 |
| 2.38 | -.327800 | -.329408 | -.330220 | -.330307 | -.329734 | -.328552 | .162178 |
| 2.39 | -.328455 | -.329902 | -.330559 | -.330500 | -.329785 | -.328467 | .157787 |
| 2.40 | -.329072 | -.330359 | -.330863 | -.330657 | -.329802 | -.328350 | .153423 |
| 2.41 | -.329650 | -.330778 | -.331131 | -.330779 | -.329784 | -.328198 | .149085 |
| 2.42 | -.330191 | -.331161 | -.331362 | -.330866 | -.329733 | -.328015 | .144774 |
| 2.43 | -.330695 | -.331507 | -.331559 | -.330919 | -.329649 | -.327798 | .140488 |
| 2.44 | -.331161 | -.331817 | -.331720 | -.330938 | -.329531 | -.327549 | .136228 |
| 2.45 | -.331591 | -.332092 | -.331846 | -.330922 | -.329379 | -.327268 | .131994 |
| 2.46 | -.331983 | -.332330 | -.331937 | -.330873 | -.329196 | -.326955 | .127785 |
| 2.47 | -.332339 | -.332533 | -.331994 | -.330790 | -.328979 | -.326611 | .123602 |
| 2.48 | -.332659 | -.332701 | -.332017 | -.330674 | -.328730 | -.326235 | .119445 |
| 2.49 | -.332943 | -.332834 | -.332005 | -.330525 | -.328450 | -.325828 | .115313 |
| 2.50 | -.333192 | -.332932 | -.331960 | -.330343 | -.328137 | -.325390 | .111206 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.333192 | -.332932 | -.331960 | -.330343 | -.328137 | -.325390 | .111206 |
| 2.51 | -.333404 | -.332996 | -.331882 | -.330129 | -.327793 | -.324922 | .107124 |
| 2.52 | -.333582 | -.333025 | -.331770 | -.329882 | -.327418 | -.324424 | .103068 |
| 2.53 | -.333725 | -.333021 | -.331625 | -.329604 | -.327011 | -.323895 | .099036 |
| 2.54 | -.333833 | -.332982 | -.331448 | -.329294 | -.326574 | -.323337 | .095030 |
| 2.55 | -.333906 | -.332911 | -.331238 | -.328952 | -.326107 | -.322750 | .091048 |
| 2.56 | -.333946 | -.332806 | -.330996 | -.328579 | -.325609 | -.322133 | .087091 |
| 2.57 | -.333951 | -.332668 | -.330722 | -.328175 | -.325082 | -.321487 | .083159 |
| 2.58 | -.333923 | -.332498 | -.330416 | -.327741 | -.324524 | -.320812 | .079252 |
| 2.59 | -.333861 | -.332295 | -.330079 | -.327276 | -.323937 | -.320109 | .075369 |
| 2.60 | -.333766 | -.332060 | -.329711 | -.326780 | -.323321 | -.319378 | .071511 |
| 2.61 | -.333638 | -.331792 | -.329311 | -.326255 | -.322676 | -.318619 | .067678 |
| 2.62 | -.333477 | -.331494 | -.328881 | -.325700 | -.322002 | -.317832 | .063868 |
| 2.63 | -.333284 | -.331163 | -.328421 | -.325116 | -.321300 | -.317017 | .060084 |
| 2.64 | -.333058 | -.330802 | -.327930 | -.324503 | -.320570 | -.316176 | .056324 |
| 2.65 | -.332801 | -.330409 | -.327410 | -.323860 | -.319812 | -.315308 | .052588 |
| 2.66 | -.332512 | -.329986 | -.326859 | -.323189 | -.319026 | -.314412 | .048876 |
| 2.67 | -.332191 | -.329533 | -.326280 | -.322490 | -.318213 | -.313491 | .045189 |
| 2.68 | -.331839 | -.329049 | -.325671 | -.321762 | -.317372 | -.312543 | .041526 |
| 2.69 | -.331456 | -.328535 | -.325033 | -.321006 | -.316505 | -.311570 | .037888 |
| 2.70 | -.331042 | -.327991 | -.324366 | -.320223 | -.315611 | -.310571 | .034273 |
| 2.71 | -.330598 | -.327418 | -.323671 | -.319412 | -.314690 | -.309546 | .030683 |
| 2.72 | -.330124 | -.326816 | -.322948 | -.318574 | -.313744 | -.308497 | .027117 |
| 2.73 | -.329619 | -.326185 | -.322197 | -.317710 | -.312771 | -.307422 | .023575 |
| 2.74 | -.329085 | -.325525 | -.321418 | -.316818 | -.311773 | -.306323 | .020058 |
| 2.75 | -.328521 | -.324837 | -.320612 | -.315900 | -.310750 | -.305199 | .016564 |
| 2.76 | -.327928 | -.324120 | -.319778 | -.314956 | -.309701 | -.304052 | .013094 |
| 2.77 | -.327306 | -.323375 | -.318918 | -.313986 | -.308627 | -.302881 | .009649 |
| 2.78 | -.326655 | -.322603 | -.318030 | -.312991 | -.307529 | -.301686 | .006228 |
| 2.79 | -.325976 | -.321803 | -.317117 | -.311970 | -.306407 | -.300467 | .002830 |
| 2.80 | -.325268 | -.320976 | -.316177 | -.310923 | -.305260 | -.299226 | -.000543 |
| 2.81 | -.324532 | -.320122 | -.315211 | -.309852 | -.304090 | -.297962 | -.003892 |
| 2.82 | -.323769 | -.319241 | -.314220 | -.308757 | -.302896 | -.296675 | -.007217 |
| 2.83 | -.322978 | -.318334 | -.313203 | -.307636 | -.301678 | -.295366 | -.010518 |
| 2.84 | -.322159 | -.317400 | -.312161 | -.306492 | -.300438 | -.294034 | -.013795 |
| 2.85 | -.321314 | -.316440 | -.311094 | -.305324 | -.299174 | -.292681 | -.017048 |
| 2.86 | -.320441 | -.315455 | -.310002 | -.304132 | -.297888 | -.291307 | -.020277 |
| 2.87 | -.319542 | -.314444 | -.308886 | -.302917 | -.296580 | -.289911 | -.023482 |
| 2.88 | -.318617 | -.313408 | -.307746 | -.301679 | -.295249 | -.288494 | -.026663 |
| 2.89 | -.317666 | -.312347 | -.306581 | -.300417 | -.293897 | -.287056 | -.029820 |
| 2.90 | -.316689 | -.311261 | -.305393 | -.299133 | -.292523 | -.285598 | -.032953 |
| 2.91 | -.315686 | -.310151 | -.304182 | -.297827 | -.291128 | -.284120 | -.036062 |
| 2.92 | -.314658 | -.309016 | -.302947 | -.296499 | -.289712 | -.282621 | -.039147 |
| 2.93 | -.313605 | -.307857 | -.301689 | -.295148 | -.288274 | -.281103 | -.042207 |
| 2.94 | -.312527 | -.306675 | -.300409 | -.293776 | -.286817 | -.279565 | -.045244 |
| 2.95 | -.311424 | -.305469 | -.299106 | -.292383 | -.285339 | -.278008 | -.048257 |
| 2.96 | -.310297 | -.304239 | -.297781 | -.290968 | -.283840 | -.276432 | -.051245 |
| 2.97 | -.309146 | -.302987 | -.296434 | -.289533 | -.282322 | -.274837 | -.054210 |
| 2.98 | -.307971 | -.301712 | -.295065 | -.288077 | -.280785 | -.273223 | -.057150 |
| 2.99 | -.306772 | -.300414 | -.293675 | -.286600 | -.279228 | -.271591 | -.060067 |
| 3.00 | -.305550 | -.299094 | -.292264 | -.285104 | -.277652 | -.269942 | -.062959 |

## Table of $R^*(y, \varphi)$ and $T^*(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | -.261168 | -.290097 | -.319942 | -.350847 | -.382980 | -.416533 | 1.000000 |
| .01 | -.265943 | -.294822 | -.324611 | -.355454 | -.387518 | -.420995 | 1.000050 |
| .02 | -.270705 | -.299532 | -.329265 | -.360045 | -.392038 | -.425438 | 1.000200 |
| .03 | -.275453 | -.304229 | -.333903 | -.364619 | -.396541 | -.429862 | 1.000450 |
| .04 | -.280189 | -.308911 | -.338526 | -.369176 | -.401025 | -.434266 | 1.000800 |
| .05 | -.284911 | -.313579 | -.343133 | -.373716 | -.405492 | -.438652 | 1.001249 |
| .06 | -.289619 | -.318231 | -.347724 | -.378239 | -.409940 | -.443017 | 1.001798 |
| .07 | -.294314 | -.322869 | -.352299 | -.382744 | -.414369 | -.447363 | 1.002447 |
| .08 | -.298995 | -.327491 | -.356857 | -.387232 | -.418779 | -.451688 | 1.003195 |
| .09 | -.303661 | -.332098 | -.361398 | -.391702 | -.423170 | -.455994 | 1.004042 |
| .10 | -.308313 | -.336689 | -.365923 | -.396153 | -.427542 | -.460278 | 1.004988 |
| .11 | -.312950 | -.341264 | -.370430 | -.400587 | -.431895 | -.464543 | 1.006032 |
| .12 | -.317572 | -.345824 | -.374920 | -.405002 | -.436228 | -.468786 | 1.007174 |
| .13 | -.322179 | -.350366 | -.379393 | -.409398 | -.440541 | -.473009 | 1.008414 |
| .14 | -.326770 | -.354892 | -.383848 | -.413775 | -.444834 | -.477210 | 1.009752 |
| .15 | -.331346 | -.359402 | -.388285 | -.418133 | -.449106 | -.481390 | 1.011187 |
| .16 | -.335906 | -.363894 | -.392704 | -.422472 | -.453359 | -.485549 | 1.012718 |
| .17 | -.340451 | -.368369 | -.397104 | -.426792 | -.457590 | -.489685 | 1.014346 |
| .18 | -.344978 | -.372827 | -.401486 | -.431091 | -.461801 | -.493800 | 1.016069 |
| .19 | -.349490 | -.377267 | -.405849 | -.435371 | -.465991 | -.497893 | 1.017887 |
| .20 | -.353984 | -.381690 | -.410193 | -.439631 | -.470160 | -.501963 | 1.019800 |
| .21 | -.358462 | -.386094 | -.414518 | -.443871 | -.474307 | -.506011 | 1.021807 |
| .22 | -.362923 | -.390480 | -.418824 | -.448090 | -.478433 | -.510037 | 1.023908 |
| .23 | -.367366 | -.294848 | -.423110 | -.452288 | -.482537 | -.514040 | 1.026101 |
| .24 | -.371792 | -.399197 | -.427377 | -.456466 | -.486620 | -.518019 | 1.028387 |
| .25 | -.376201 | -.403527 | -.431623 | -.460623 | -.490680 | -.521976 | 1.030763 |
| .26 | -.380591 | -.407838 | -.435850 | -.464758 | -.494718 | -.525909 | 1.033231 |
| .27 | -.384963 | -.412130 | -.440056 | -.468872 | -.498733 | -.529819 | 1.035788 |
| .28 | -.389317 | -.416403 | -.444241 | -.472965 | -.502726 | -.533705 | 1.038435 |
| .29 | -.393652 | -.420656 | -.448406 | -.477036 | -.506697 | -.537568 | 1.041170 |
| .30 | -.397969 | -.424889 | -.452550 | -.481085 | -.510644 | -.541407 | 1.043993 |
| .31 | -.402267 | -.429102 | -.456674 | -.485111 | -.514568 | -.545221 | 1.046902 |
| .32 | -.406545 | -.433295 | -.460775 | -.489116 | -.518469 | -.549011 | 1.049897 |
| .33 | -.410805 | -.437468 | -.464856 | -.493098 | -.522346 | -.552777 | 1.052977 |
| .34 | -.415044 | -.441620 | -.468915 | -.497058 | -.526200 | -.556518 | 1.056140 |
| .35 | -.419264 | -.445752 | -.472952 | -.500995 | -.530030 | -.560235 | 1.059387 |
| .36 | -.423465 | -.449862 | -.476967 | -.504908 | -.533837 | -.563926 | 1.062716 |
| .37 | -.427645 | -.453951 | -.480960 | -.508799 | -.537619 | -.567593 | 1.066125 |
| .38 | -.431805 | -.458019 | -.484930 | -.512666 | -.541376 | -.571234 | 1.069614 |
| .39 | -.435944 | -.462066 | -.488879 | -.516510 | -.545110 | -.574851 | 1.073183 |
| .40 | -.440063 | -.466091 | -.492804 | -.520331 | -.548819 | -.578441 | 1.076828 |
| .41 | -.444161 | -.470094 | -.496707 | -.524127 | -.552503 | -.582006 | 1.080551 |
| .42 | -.448237 | -.474075 | -.500587 | -.527900 | -.556162 | -.585545 | 1.084348 |
| .43 | -.452293 | -.478034 | -.504443 | -.531649 | -.559797 | -.589059 | 1.088220 |
| .44 | -.456327 | -.481970 | -.508276 | -.535373 | -.563406 | -.592546 | 1.092165 |
| .45 | -.460340 | -.485884 | -.512086 | -.539073 | -.566990 | -.596007 | 1.096182 |
| .46 | -.464331 | -.489775 | -.515872 | -.542748 | -.570548 | -.599442 | 1.100269 |
| .47 | -.468300 | -.493644 | -.519635 | -.546399 | -.574081 | -.602850 | 1.104425 |
| .48 | -.472247 | -.497489 | -.523373 | -.550024 | -.577588 | -.606232 | 1.108649 |
| .49 | -.476172 | -.501311 | -.527087 | -.553625 | -.581069 | -.609587 | 1.112940 |
| .50 | -.480074 | -.505110 | -.530777 | -.557201 | -.584524 | -.612915 | 1.117295 |

$$R(y,\varphi) = R^*(y,\varphi) + \frac{1+f}{y}\, U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y, \varphi)$ and $T(y)$

| $y \backslash \varphi$ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | .785635 | .736149 | .689983 | .646700 | .605938 | .567398 | 4.469181 |
| .51 | .765166 | .716484 | .671045 | .628423 | .588269 | .550289 | 4.312629 |
| .52 | .745190 | .697287 | .652552 | .610573 | .571008 | .533573 | 4.164929 |
| .53 | .725685 | .678537 | .634486 | .593131 | .554139 | .517235 | 4.025417 |
| .54 | .706633 | .660217 | .616831 | .576082 | .537648 | .501261 | 3.893492 |
| .55 | .688015 | .642310 | .599569 | .559410 | .521520 | .485636 | 3.768603 |
| .56 | .669814 | .624800 | .582685 | .543101 | .505740 | .470348 | 3.650253 |
| .57 | .652013 | .607670 | .566166 | .527141 | .490297 | .455385 | 3.537985 |
| .58 | .634598 | .590908 | .549998 | .511518 | .475178 | .440734 | 3.431381 |
| .59 | .617554 | .574499 | .534168 | .496220 | .460371 | .426385 | 3.330059 |
| .60 | .600867 | .558431 | .518664 | .481235 | .445866 | .412328 | 3.233670 |
| .61 | .584525 | .542691 | .503475 | .466552 | .431653 | .398552 | 3.141890 |
| .62 | .568515 | .527269 | .488590 | .452162 | .417722 | .385049 | 3.054423 |
| .63 | .552826 | .512153 | .473998 | .438054 | .404063 | .371810 | 2.970997 |
| .64 | .537447 | .497333 | .459691 | .424219 | .390668 | .358827 | 2.891360 |
| .65 | .522367 | .482799 | .445658 | .410649 | .377529 | .346090 | 2.815278 |
| .66 | .507578 | .468543 | .431891 | .397336 | .364637 | .333594 | 2.742538 |
| .67 | .493068 | .454555 | .418383 | .384271 | .351986 | .321331 | 2.672939 |
| .68 | .478831 | .440827 | .405124 | .371447 | .339567 | .309294 | 2.606298 |
| .69 | .464856 | .427351 | .392107 | .358856 | .327375 | .297476 | 2.542442 |
| .70 | .451136 | .414120 | .379326 | .346493 | .315403 | .285871 | 2.481213 |
| .71 | .437664 | .401126 | .366773 | .334351 | .303645 | .274474 | 2.422464 |
| .72 | .424432 | .388362 | .354442 | .322423 | .292094 | .263279 | 2.366055 |
| .73 | .411433 | .375822 | .342327 | .310703 | .280745 | .252280 | 2.311858 |
| .74 | .398661 | .363500 | .330422 | .299186 | .269593 | .241473 | 2.259755 |
| .75 | .386109 | .351390 | .318720 | .287867 | .258632 | .230851 | 2.209632 |
| .76 | .373771 | .339485 | .307218 | .276740 | .247859 | .220411 | 2.161386 |
| .77 | .361641 | .327781 | .295909 | .265800 | .237267 | .210149 | 2.114918 |
| .78 | .349715 | .316272 | .284788 | .255043 | .226852 | .200059 | 2.070137 |
| .79 | .337986 | .304954 | .273852 | .244465 | .216611 | .190138 | 2.026958 |
| .80 | .326449 | .293820 | .263095 | .234060 | .206539 | .180381 | 1.985299 |
| .81 | .315100 | .282868 | .252512 | .223825 | .196632 | .170786 | 1.945086 |
| .82 | .303934 | .272093 | .242101 | .213755 | .186886 | .161347 | 1.906248 |
| .83 | .292946 | .261489 | .231856 | .203848 | .177297 | .152062 | 1.868716 |
| .84 | .282133 | .251054 | .221774 | .194099 | .167863 | .142928 | 1.832431 |
| .85 | .271490 | .240783 | .211851 | .184504 | .158579 | .133940 | 1.797331 |
| .86 | .261013 | .230673 | .202084 | .175061 | .149443 | .125097 | 1.763361 |
| .87 | .250698 | .220719 | .192470 | .165765 | .140451 | .116394 | 1.730470 |
| .88 | .240542 | .210919 | .183004 | .156615 | .131600 | .107830 | 1.698607 |
| .89 | .230542 | .201270 | .173684 | .147607 | .122888 | .099401 | 1.667726 |
| .90 | .220693 | .191768 | .164507 | .138737 | .114312 | .091104 | 1.637783 |
| .91 | .210993 | .182409 | .155470 | .130004 | .105868 | .082938 | 1.608736 |
| .92 | .201439 | .173192 | .146570 | .121405 | .097555 | .074899 | 1.580545 |
| .93 | .192027 | .164112 | .137804 | .112936 | .089369 | .066985 | 1.553174 |
| .94 | .182755 | .155168 | .129170 | .104596 | .081309 | .059194 | 1.526587 |
| .95 | .173619 | .146357 | .120665 | .096381 | .073372 | .051523 | 1.500751 |
| .96 | .164618 | .137677 | .112286 | .088291 | .065557 | .043971 | 1.475634 |
| .97 | .155748 | .129123 | .104032 | .080321 | .057859 | .036535 | 1.451205 |
| .98 | .147008 | .120696 | .095901 | .072471 | .050279 | .029214 | 1.427436 |
| .99 | .138394 | .112391 | .087889 | .064738 | .042813 | .022005 | 1.404301 |
| 1.00 | .129904 | .104207 | .079995 | .057120 | .035460 | .014906 | 1.381773 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .129904 | .104207 | .079995 | .057120 | .035460 | .014906 | 1.381773 |
| 1.01 | .121537 | .096142 | .072217 | .049616 | .028217 | .007916 | 1.359828 |
| 1.02 | .113289 | .088194 | .064552 | .042222 | .021083 | .001033 | 1.338443 |
| 1.03 | .105159 | .080360 | .057000 | .034938 | .014057 | -.005745 | 1.317595 |
| 1.04 | .097145 | .072639 | .049557 | .027762 | .007136 | -.012419 | 1.297264 |
| 1.05 | .089245 | .065029 | .042223 | .020691 | .000319 | -.018992 | 1.277429 |
| 1.06 | .081457 | .057528 | .034995 | .013725 | -.006396 | -.025464 | 1.258071 |
| 1.07 | .073779 | .050134 | .027872 | .006861 | -.013011 | -.031838 | 1.239173 |
| 1.08 | .066209 | .042846 | .020852 | .000098 | -.019526 | -.038114 | 1.220716 |
| 1.09 | .058745 | .035662 | .013934 | -.006565 | -.025944 | -.044294 | 1.202684 |
| 1.10 | .051387 | .028580 | .007116 | -.013131 | -.032266 | -.050380 | 1.185061 |
| 1.11 | .044132 | .021599 | .000396 | -.019599 | -.038492 | -.056373 | 1.167833 |
| 1.12 | .036978 | .014717 | -.006226 | -.025973 | -.044626 | -.062273 | 1.150984 |
| 1.13 | .029925 | .007933 | -.012753 | -.032252 | -.050667 | -.068083 | 1.134502 |
| 1.14 | .022970 | .001245 | -.019185 | -.038439 | -.056617 | -.073804 | 1.118372 |
| 1.15 | .016113 | -.005347 | -.025525 | -.044535 | -.062478 | -.079437 | 1.102583 |
| 1.16 | .009351 | -.011846 | -.031772 | -.050541 | -.068250 | -.084982 | 1.087122 |
| 1.17 | .002685 | -.018253 | -.037929 | -.056458 | -.073934 | -.090442 | 1.071977 |
| 1.18 | -.003889 | -.024568 | -.043997 | -.062287 | -.079533 | -.095816 | 1.057139 |
| 1.19 | -.010371 | -.030793 | -.049976 | -.068030 | -.085047 | -.101107 | 1.042595 |
| 1.20 | -.016762 | -.036930 | -.055869 | -.073687 | -.090476 | -.106316 | 1.028337 |
| 1.21 | -.023064 | -.042979 | -.061676 | -.079260 | -.095823 | -.111443 | 1.014353 |
| 1.22 | -.029277 | -.048941 | -.067397 | -.084750 | -.101088 | -.116489 | 1.000636 |
| 1.23 | -.035403 | -.054819 | -.073035 | -.090157 | -.106271 | -.121455 | .987176 |
| 1.24 | -.041443 | -.060611 | -.078591 | -.095483 | -.111375 | -.126343 | .973965 |
| 1.25 | -.047398 | -.066321 | -.084064 | -.100729 | -.116400 | -.131153 | .960994 |
| 1.26 | -.053269 | -.071948 | -.089457 | -.105895 | -.121347 | -.135886 | .948256 |
| 1.27 | -.059057 | -.077494 | -.094770 | -.110983 | -.126216 | -.140543 | .935742 |
| 1.28 | -.064763 | -.082960 | -.100004 | -.115993 | -.131010 | -.145124 | .923447 |
| 1.29 | -.070388 | -.088346 | -.105161 | -.120927 | -.135727 | -.149632 | .911362 |
| 1.30 | -.075933 | -.093654 | -.110240 | -.125785 | -.140371 | -.154066 | .899482 |
| 1.31 | -.081399 | -.098884 | -.115243 | -.130568 | -.144940 | -.158427 | .887799 |
| 1.32 | -.086786 | -.104037 | -.120170 | -.135277 | -.149436 | -.162716 | .876308 |
| 1.33 | -.092097 | -.109115 | -.125023 | -.139912 | -.153860 | -.166934 | .865003 |
| 1.34 | -.097331 | -.114117 | -.129802 | -.144475 | -.158213 | -.171081 | .853877 |
| 1.35 | -.102489 | -.119045 | -.134508 | -.148966 | -.162495 | -.175159 | .842926 |
| 1.36 | -.107572 | -.123900 | -.139142 | -.153386 | -.166707 | -.179168 | .832145 |
| 1.37 | -.112581 | -.128682 | -.143704 | -.157736 | -.170849 | -.183109 | .821527 |
| 1.38 | -.117517 | -.133392 | -.148196 | -.162016 | -.174923 | -.186982 | .811068 |
| 1.39 | -.122381 | -.138031 | -.152618 | -.166227 | -.178929 | -.190788 | .800765 |
| 1.40 | -.127172 | -.142599 | -.156970 | -.170369 | -.182868 | -.194527 | .790611 |
| 1.41 | -.131893 | -.147097 | -.161254 | -.174444 | -.186740 | -.198202 | .780602 |
| 1.42 | -.136543 | -.151526 | -.165469 | -.178453 | -.190547 | -.201811 | .770735 |
| 1.43 | -.141123 | -.155887 | -.169618 | -.182395 | -.194288 | -.205355 | .761006 |
| 1.44 | -.145635 | -.160180 | -.173699 | -.186271 | -.197964 | -.208836 | .751410 |
| 1.45 | -.150078 | -.164406 | -.177715 | -.190082 | -.201576 | -.212254 | .741944 |
| 1.46 | -.154454 | -.168566 | -.181665 | -.193829 | -.205125 | -.215610 | .732603 |
| 1.47 | -.158762 | -.172659 | -.185550 | -.197512 | -.208611 | -.218903 | .723386 |
| 1.48 | -.163004 | -.176687 | -.189371 | -.201132 | -.212034 | -.222135 | .714287 |
| 1.49 | -.167181 | -.180651 | -.193129 | -.204689 | -.215396 | -.225306 | .705305 |
| 1.50 | -.171292 | -.184550 | -.196823 | -.208184 | -.218697 | -.228416 | .696435 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | -.171292 | -.184550 | -.196823 | -.208184 | -.218697 | -.228416 | .696435 |
| 1.51 | -.175338 | -.188386 | -.200455 | -.211617 | -.221937 | -.231467 | .687676 |
| 1.52 | -.179320 | -.192159 | -.204024 | -.214989 | -.225116 | -.234459 | .679023 |
| 1.53 | -.183239 | -.195869 | -.207533 | -.218301 | -.228237 | -.237392 | .670474 |
| 1.54 | -.187095 | -.199518 | -.210980 | -.221553 | -.231298 | -.240266 | .662026 |
| 1.55 | -.190889 | -.203105 | -.214367 | -.224745 | -.234300 | -.243083 | .653677 |
| 1.56 | -.194620 | -.206631 | -.217694 | -.227879 | -.237245 | -.245843 | .645425 |
| 1.57 | -.198291 | -.210097 | -.220962 | -.230954 | -.240131 | -.248546 | .637266 |
| 1.58 | -.201900 | -.213503 | -.224171 | -.233971 | -.242961 | -.251192 | .629198 |
| 1.59 | -.205449 | -.216850 | -.227321 | -.236930 | -.245734 | -.253783 | .621219 |
| 1.60 | -.208939 | -.220138 | -.230414 | -.239833 | -.248451 | -.256319 | .613327 |
| 1.61 | -.212369 | -.223368 | -.233449 | -.242678 | -.251112 | -.258800 | .605520 |
| 1.62 | -.215740 | -.226540 | -.236427 | -.245468 | -.253718 | -.261226 | .597796 |
| 1.63 | -.219053 | -.229654 | -.239349 | -.248202 | -.256270 | -.263598 | .590152 |
| 1.64 | -.222308 | -.232711 | -.242215 | -.250881 | -.258766 | -.265917 | .582587 |
| 1.65 | -.225505 | -.235712 | -.245025 | -.253506 | -.261209 | -.268183 | .575099 |
| 1.66 | -.228645 | -.238657 | -.247779 | -.256075 | -.263599 | -.270396 | .567686 |
| 1.67 | -.231729 | -.241546 | -.250479 | -.258591 | -.265935 | -.272557 | .560346 |
| 1.68 | -.234757 | -.244380 | -.253125 | -.261054 | -.268219 | -.274666 | .553077 |
| 1.69 | -.237729 | -.247159 | -.255717 | -.263463 | -.270451 | -.276724 | .545879 |
| 1.70 | -.240645 | -.249884 | -.258255 | -.265820 | -.272631 | -.278731 | .538749 |
| 1.71 | -.243507 | -.252554 | -.260741 | -.268125 | -.274759 | -.280687 | .531686 |
| 1.72 | -.246315 | -.255172 | -.263173 | -.270378 | -.276836 | -.282593 | .524689 |
| 1.73 | -.249068 | -.257736 | -.265553 | -.272579 | -.278863 | -.284449 | .517755 |
| 1.74 | -.251768 | -.260247 | -.267882 | -.274730 | -.280840 | -.286256 | .510884 |
| 1.75 | -.254414 | -.262706 | -.270159 | -.276829 | -.282767 | -.288014 | .504075 |
| 1.76 | -.257007 | -.265113 | -.272385 | -.278879 | -.284644 | -.289723 | .497325 |
| 1.77 | -.259549 | -.267469 | -.274560 | -.280878 | -.286473 | -.291384 | .490634 |
| 1.78 | -.262038 | -.269773 | -.276684 | -.282828 | -.288252 | -.292998 | .484001 |
| 1.79 | -.264475 | -.272026 | -.278759 | -.284729 | -.289984 | -.294563 | .477424 |
| 1.80 | -.266861 | -.274229 | -.280784 | -.286581 | -.291667 | -.296082 | .470902 |
| 1.81 | -.269196 | -.276382 | -.282760 | -.288385 | -.293303 | -.297554 | .464435 |
| 1.82 | -.271480 | -.278485 | -.284687 | -.290141 | -.294892 | -.298979 | .458020 |
| 1.83 | -.273714 | -.280539 | -.286566 | -.291849 | -.296433 | -.300359 | .451658 |
| 1.84 | -.275898 | -.282543 | -.288396 | -.293510 | -.297929 | -.301693 | .445346 |
| 1.85 | -.278033 | -.284500 | -.290179 | -.295123 | -.299378 | -.302981 | .439085 |
| 1.86 | -.280119 | -.286407 | -.291914 | -.296690 | -.300781 | -.304225 | .432873 |
| 1.87 | -.282155 | -.288267 | -.293602 | -.298211 | -.302139 | -.305424 | .426709 |
| 1.88 | -.284143 | -.290079 | -.295243 | -.299686 | -.303452 | -.306579 | .420593 |
| 1.89 | -.286083 | -.291844 | -.296838 | -.301115 | -.304720 | -.307690 | .414523 |
| 1.90 | -.287975 | -.293562 | -.298386 | -.302499 | -.305944 | -.308757 | .408499 |
| 1.91 | -.289820 | -.295233 | -.299889 | -.303838 | -.307123 | -.309781 | .402520 |
| 1.92 | -.291617 | -.296858 | -.301346 | -.305133 | -.308259 | -.310762 | .396585 |
| 1.93 | -.293368 | -.298436 | -.302759 | -.306383 | -.309351 | -.311701 | .390693 |
| 1.94 | -.295072 | -.299970 | -.304126 | -.307589 | -.310401 | -.312597 | .384844 |
| 1.95 | -.296730 | -.301458 | -.305449 | -.308752 | -.311407 | -.313451 | .379038 |
| 1.96 | -.298342 | -.302900 | -.306728 | -.309871 | -.312371 | -.314264 | .373272 |
| 1.97 | -.299908 | -.304299 | -.307963 | -.310947 | -.313293 | -.315036 | .367548 |
| 1.98 | -.301429 | -.305652 | -.309154 | -.311981 | -.314173 | -.315766 | .361863 |
| 1.99 | -.302906 | -.306962 | -.310302 | -.312972 | -.315012 | -.316456 | .356218 |
| 2.00 | -.304337 | -.308228 | -.311407 | -.313921 | -.315809 | -.317106 | .350612 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.304337 | -.308228 | -.311407 | -.313921 | -.315809 | -.317106 | .350612 |
| 2.01 | -.305725 | -.309451 | -.312470 | -.314829 | -.316566 | -.317715 | .345044 |
| 2.02 | -.307068 | -.310630 | -.313491 | -.315695 | -.317282 | -.318285 | .339514 |
| 2.03 | -.308367 | -.311766 | -.314469 | -.316520 | -.317958 | -.318816 | .334022 |
| 2.04 | -.309624 | -.312860 | -.315406 | -.317304 | -.318593 | -.319307 | .328566 |
| 2.05 | -.310837 | -.313912 | -.316301 | -.318048 | -.319190 | -.319760 | .323146 |
| 2.06 | -.312007 | -.314922 | -.317155 | -.318751 | -.319747 | -.320175 | .317762 |
| 2.07 | -.313134 | -.315890 | -.317969 | -.319415 | -.320264 | -.320551 | .312413 |
| 2.08 | -.314220 | -.316817 | -.318742 | -.320039 | -.320744 | -.320889 | .307099 |
| 2.09 | -.315263 | -.317703 | -.319475 | -.320623 | -.321184 | -.321190 | .301820 |
| 2.10 | -.316265 | -.318548 | -.320168 | -.321169 | -.321587 | -.321454 | .296574 |
| 2.11 | -.317226 | -.319352 | -.320821 | -.321676 | -.321952 | -.321681 | .291363 |
| 2.12 | -.318145 | -.320116 | -.321436 | -.322144 | -.322279 | -.321871 | .286184 |
| 2.13 | -.319024 | -.320841 | -.322011 | -.322575 | -.322569 | -.322025 | .281038 |
| 2.14 | -.319862 | -.321526 | -.322547 | -.322968 | -.322822 | -.322143 | .275925 |
| 2.15 | -.320660 | -.322171 | -.323045 | -.323323 | -.323039 | -.322225 | .270844 |
| 2.16 | -.321418 | -.322777 | -.323505 | -.323640 | -.323219 | -.322271 | .265794 |
| 2.17 | -.322136 | -.323345 | -.323927 | -.323921 | -.323363 | -.322283 | .260776 |
| 2.18 | -.322815 | -.323874 | -.324311 | -.324166 | -.323472 | -.322260 | .255789 |
| 2.19 | -.323455 | -.324365 | -.324658 | -.324373 | -.323545 | -.322202 | .250833 |
| 2.20 | -.324056 | -.324819 | -.324968 | -.324545 | -.323582 | -.322110 | .245907 |
| 2.21 | -.324619 | -.325234 | -.325242 | -.324681 | -.323585 | -.321984 | .241012 |
| 2.22 | -.325143 | -.325612 | -.325479 | -.324781 | -.323554 | -.321824 | .236146 |
| 2.23 | -.325630 | -.325953 | -.325680 | -.324847 | -.323488 | -.321631 | .231310 |
| 2.24 | -.326078 | -.326258 | -.325845 | -.324877 | -.323388 | -.321405 | .226504 |
| 2.25 | -.326489 | -.326525 | -.325974 | -.324872 | -.323254 | -.321146 | .221727 |
| 2.26 | -.326864 | -.326757 | -.326068 | -.324833 | -.323086 | -.320855 | .216978 |
| 2.27 | -.327201 | -.326953 | -.326127 | -.324760 | -.322886 | -.320531 | .212259 |
| 2.28 | -.327501 | -.327112 | -.326151 | -.324654 | -.322653 | -.320176 | .207567 |
| 2.29 | -.327765 | -.327237 | -.326141 | -.324513 | -.322387 | -.319788 | .202904 |
| 2.30 | -.327994 | -.327326 | -.326096 | -.324340 | -.322088 | -.319370 | .198270 |
| 2.31 | -.328186 | -.327381 | -.326018 | -.324133 | -.321758 | -.318920 | .193663 |
| 2.32 | -.328343 | -.327400 | -.325905 | -.323894 | -.321396 | -.318439 | .189083 |
| 2.33 | -.328464 | -.327386 | -.325760 | -.323622 | -.321002 | -.317928 | .184531 |
| 2.34 | -.328551 | -.327337 | -.325581 | -.323318 | -.320577 | -.317387 | .180007 |
| 2.35 | -.328602 | -.327255 | -.325370 | -.322982 | -.320121 | -.316815 | .175509 |
| 2.36 | -.328620 | -.327139 | -.325126 | -.322614 | -.319635 | -.316214 | .171039 |
| 2.37 | -.328603 | -.326990 | -.324849 | -.322215 | -.319118 | -.315584 | .166595 |
| 2.38 | -.328552 | -.326808 | -.324541 | -.321785 | -.318571 | -.314924 | .162178 |
| 2.39 | -.328467 | -.326593 | -.324201 | -.321324 | -.317994 | -.314236 | .157787 |
| 2.40 | -.328350 | -.326346 | -.323829 | -.320833 | -.317388 | -.313519 | .153423 |
| 2.41 | -.328198 | -.326066 | -.323426 | -.320311 | -.316752 | -.312773 | .149085 |
| 2.42 | -.328015 | -.325755 | -.322992 | -.319760 | -.316087 | -.312000 | .144774 |
| 2.43 | -.327798 | -.325411 | -.322527 | -.319178 | -.315394 | -.311199 | .140488 |
| 2.44 | -.327549 | -.325037 | -.322032 | -.318568 | -.314672 | -.310370 | .136228 |
| 2.45 | -.327268 | -.324631 | -.321507 | -.317928 | -.313922 | -.309514 | .131994 |
| 2.46 | -.326955 | -.324195 | -.320952 | -.317259 | -.313144 | -.308632 | .127785 |
| 2.47 | -.326611 | -.323728 | -.320367 | -.316561 | -.312338 | -.307722 | .123602 |
| 2.48 | -.326235 | -.323230 | -.319753 | -.315835 | -.311505 | -.306786 | .119445 |
| 2.49 | -.325828 | -.322703 | -.319110 | -.315081 | -.310645 | -.305825 | .115313 |
| 2.50 | -.325390 | -.322145 | -.318438 | -.314299 | -.309758 | -.304837 | .111206 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.325390 | -.322145 | -.318438 | -.314299 | -.309758 | -.304837 | .111206 |
| 2.51 | -.324922 | -.321558 | -.317737 | -.313490 | -.308844 | -.303824 | .107124 |
| 2.52 | -.324424 | -.320942 | -.317008 | -.312653 | -.307904 | -.302785 | .103068 |
| 2.53 | -.323895 | -.320297 | -.316251 | -.311789 | -.306938 | -.301721 | .099036 |
| 2.54 | -.323337 | -.319623 | -.315467 | -.310899 | -.305947 | -.300633 | .095030 |
| 2.55 | -.322750 | -.318920 | -.314654 | -.309982 | -.304929 | -.299520 | .091048 |
| 2.56 | -.322133 | -.318190 | -.313815 | -.309038 | -.303887 | -.298383 | .087091 |
| 2.57 | -.321487 | -.317431 | -.312948 | -.308069 | -.302819 | -.297222 | .083159 |
| 2.58 | -.320812 | -.316645 | -.312055 | -.307074 | -.301727 | -.296037 | .079252 |
| 2.59 | -.320109 | -.315831 | -.311136 | -.306054 | -.300611 | -.294829 | .075369 |
| 2.60 | -.319378 | -.314989 | -.310190 | -.305008 | -.299470 | -.293598 | .071511 |
| 2.61 | -.318619 | -.314121 | -.309218 | -.303937 | -.298305 | -.292344 | .067678 |
| 2.62 | -.317832 | -.313227 | -.308221 | -.302842 | -.297117 | -.291067 | .063868 |
| 2.63 | -.317017 | -.312306 | -.307198 | -.301723 | -.295905 | -.289768 | .060084 |
| 2.64 | -.316176 | -.311358 | -.306150 | -.300579 | -.294670 | -.288447 | .056324 |
| 2.65 | -.315308 | -.310385 | -.305077 | -.299411 | -.293413 | -.287104 | .052588 |
| 2.66 | -.314412 | -.309386 | -.303979 | -.298220 | -.292133 | -.285739 | .048876 |
| 2.67 | -.313491 | -.308362 | -.302857 | -.297005 | -.290830 | -.284353 | .045189 |
| 2.68 | -.312543 | -.307313 | -.301711 | -.295768 | -.289506 | -.282947 | .041526 |
| 2.69 | -.311570 | -.306238 | -.300542 | -.294507 | -.288159 | -.281519 | .037888 |
| 2.70 | -.310571 | -.305139 | -.299348 | -.293224 | -.286791 | -.280071 | .034273 |
| 2.71 | -.309546 | -.304016 | -.298131 | -.291919 | -.285402 | -.278603 | .030683 |
| 2.72 | -.308497 | -.302869 | -.296892 | -.290591 | -.283992 | -.277115 | .027117 |
| 2.73 | -.307422 | -.301698 | -.295629 | -.289242 | -.282561 | -.275607 | .023575 |
| 2.74 | -.306323 | -.300503 | -.294344 | -.287872 | -.281110 | -.274079 | .020058 |
| 2.75 | -.305199 | -.299285 | -.293036 | -.286480 | -.279638 | -.272533 | .016564 |
| 2.76 | -.304052 | -.298044 | -.291707 | -.285067 | -.278147 | -.270967 | .013094 |
| 2.77 | -.302881 | -.296780 | -.290355 | -.283633 | -.276636 | -.269383 | .009649 |
| 2.78 | -.301686 | -.295493 | -.288983 | -.282179 | -.275105 | -.267781 | .006228 |
| 2.79 | -.300467 | -.294185 | -.287589 | -.280705 | -.273555 | -.266160 | .002830 |
| 2.80 | -.299226 | -.292854 | -.286174 | -.279210 | -.271986 | -.264522 | -.000543 |
| 2.81 | -.297962 | -.291501 | -.284738 | -.277696 | -.270399 | -.262866 | -.003892 |
| 2.82 | -.296675 | -.290127 | -.283281 | -.276163 | -.268793 | -.261192 | -.007217 |
| 2.83 | -.295366 | -.288732 | -.281805 | -.274610 | -.267169 | -.259502 | -.010518 |
| 2.84 | -.294034 | -.287315 | -.280308 | -.273039 | -.265527 | -.257794 | -.013795 |
| 2.85 | -.292681 | -.285878 | -.278792 | -.271448 | -.263868 | -.256070 | -.017048 |
| 2.86 | -.291307 | -.284420 | -.277256 | -.269840 | -.262191 | -.254330 | -.020277 |
| 2.87 | -.289911 | -.282942 | -.275702 | -.268213 | -.260497 | -.252574 | -.023482 |
| 2.88 | -.288494 | -.281444 | -.274128 | -.266568 | -.258786 | -.250801 | -.026663 |
| 2.89 | -.287056 | -.279927 | -.272535 | -.264906 | -.257059 | -.249014 | -.029820 |
| 2.90 | -.285598 | -.278390 | -.270924 | -.263226 | -.255315 | -.247211 | -.032953 |
| 2.91 | -.284120 | -.276833 | -.269295 | -.261529 | -.253555 | -.245393 | -.036062 |
| 2.92 | -.282621 | -.275258 | -.267648 | -.259815 | -.251780 | -.243560 | -.039147 |
| 2.93 | -.281103 | -.273664 | -.265983 | -.258085 | -.249988 | -.241713 | -.042207 |
| 2.94 | -.279565 | -.272051 | -.264301 | -.256338 | -.248182 | -.239851 | -.045244 |
| 2.95 | -.278008 | -.270420 | -.262601 | -.254575 | -.246360 | -.237975 | -.048257 |
| 2.96 | -.276432 | -.268771 | -.260885 | -.252796 | -.244524 | -.236086 | -.051245 |
| 2.97 | -.274837 | -.267105 | -.259152 | -.251002 | -.242673 | -.234183 | -.054210 |
| 2.98 | -.273223 | -.265421 | -.257403 | -.249192 | -.240807 | -.232267 | -.057150 |
| 2.99 | -.271591 | -.263719 | -.255637 | -.247367 | -.238928 | -.230337 | -.060067 |
| 3.00 | -.269942 | -.262001 | -.253856 | -.245527 | -.237035 | -.228395 | -.062959 |

## Table of $R^*(y,\varphi)$ and $T^*(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | -.416533 | -.451738 | -.488872 | -.528269 | -.570347 | -.615626 | 1.000000 |
| .01 | -.420995 | -.456116 | -.493156 | -.532450 | -.574414 | -.619567 | 1.000050 |
| .02 | -.425438 | -.460473 | -.497419 | -.536609 | -.578457 | -.623483 | 1.000200 |
| .03 | -.429862 | -.464810 | -.501660 | -.540745 | -.582476 | -.627374 | 1.000450 |
| .04 | -.434266 | -.469127 | -.505880 | -.544858 | -.586472 | -.631239 | 1.000800 |
| .05 | -.438652 | -.473423 | -.510077 | -.548948 | -.590443 | -.635080 | 1.001249 |
| .06 | -.443017 | -.477698 | -.514253 | -.553014 | -.594390 | -.638895 | 1.001798 |
| .07 | -.447363 | -.481952 | -.518407 | -.557058 | -.598313 | -.642685 | 1.002447 |
| .08 | -.451688 | -.486185 | -.522538 | -.561078 | -.602211 | -.646449 | 1.003195 |
| .09 | -.455994 | -.490396 | -.526647 | -.565074 | -.606084 | -.650187 | 1.004042 |
| .10 | -.460278 | -.494586 | -.530733 | -.569047 | -.609932 | -.653899 | 1.004988 |
| .11 | -.464543 | -.498754 | -.534796 | -.572995 | -.613756 | -.657585 | 1.006032 |
| .12 | -.468786 | -.502900 | -.538836 | -.576920 | -.617554 | -.661244 | 1.007174 |
| .13 | -.473009 | -.507024 | -.542853 | -.580820 | -.621326 | -.664878 | 1.008414 |
| .14 | -.477210 | -.511126 | -.546847 | -.584696 | -.625074 | -.668484 | 1.009752 |
| .15 | -.481390 | -.515205 | -.550816 | -.588547 | -.628795 | -.672065 | 1.011187 |
| .16 | -.485549 | -.519262 | -.554763 | -.592373 | -.632491 | -.675618 | 1.012718 |
| .17 | -.489685 | -.523296 | -.558685 | -.596174 | -.636160 | -.679144 | 1.014346 |
| .18 | -.493800 | -.527307 | -.562583 | -.599950 | -.639804 | -.682643 | 1.016069 |
| .19 | -.497893 | -.531294 | -.566457 | -.603701 | -.643421 | -.686115 | 1.017887 |
| .20 | -.501963 | -.535259 | -.570307 | -.607427 | -.647012 | -.689560 | 1.019800 |
| .21 | -.506011 | -.539200 | -.574132 | -.611127 | -.650577 | -.692977 | 1.021807 |
| .22 | -.510037 | -.543117 | -.577933 | -.614801 | -.654115 | -.696367 | 1.023908 |
| .23 | -.514040 | -.547010 | -.581708 | -.618450 | -.657626 | -.699729 | 1.026101 |
| .24 | -.518019 | -.550880 | -.585459 | -.622072 | -.661110 | -.703063 | 1.028387 |
| .25 | -.521976 | -.554725 | -.589185 | -.625669 | -.664567 | -.706369 | 1.030763 |
| .26 | -.525909 | -.558546 | -.592885 | -.629239 | -.667996 | -.709647 | 1.033231 |
| .27 | -.529819 | -.562343 | -.596560 | -.632783 | -.671399 | -.712896 | 1.035788 |
| .28 | -.533705 | -.566114 | -.600209 | -.636300 | -.674774 | -.716118 | 1.038435 |
| .29 | -.537568 | -.569862 | -.603832 | -.639791 | -.678122 | -.719311 | 1.041170 |
| .30 | -.541407 | -.573584 | -.607430 | -.643254 | -.681441 | -.722475 | 1.043993 |
| .31 | -.545221 | -.577281 | -.611002 | -.646691 | -.684733 | -.725611 | 1.046902 |
| .32 | -.549011 | -.580953 | -.614547 | -.650101 | -.687997 | -.728718 | 1.049897 |
| .33 | -.552777 | -.584600 | -.618066 | -.653484 | -.691233 | -.731796 | 1.052977 |
| .34 | -.556518 | -.588221 | -.621559 | -.656839 | -.694441 | -.734846 | 1.056140 |
| .35 | -.560235 | -.591816 | -.625025 | -.660167 | -.697621 | -.737866 | 1.059387 |
| .36 | -.563926 | -.595386 | -.628464 | -.663467 | -.700772 | -.740857 | 1.062716 |
| .37 | -.567593 | -.598929 | -.631877 | -.666740 | -.703895 | -.743819 | 1.066125 |
| .38 | -.571234 | -.602447 | -.635263 | -.669984 | -.706989 | -.746751 | 1.069614 |
| .39 | -.574851 | -.605938 | -.638621 | -.673201 | -.710054 | -.749654 | 1.073183 |
| .40 | -.578441 | -.609403 | -.641953 | -.676390 | -.713091 | -.752527 | 1.076828 |
| .41 | -.582006 | -.612842 | -.645257 | -.679551 | -.716098 | -.755371 | 1.080551 |
| .42 | -.585545 | -.616254 | -.648533 | -.682683 | -.719077 | -.758184 | 1.084348 |
| .43 | -.589059 | -.619639 | -.651782 | -.685787 | -.722026 | -.760968 | 1.088220 |
| .44 | -.592546 | -.622997 | -.655003 | -.688863 | -.724946 | -.763722 | 1.092165 |
| .45 | -.596007 | -.626328 | -.658197 | -.691910 | -.727837 | -.766446 | 1.096182 |
| .46 | -.599442 | -.629632 | -.661362 | -.694928 | -.730698 | -.769140 | 1.100269 |
| .47 | -.602850 | -.632909 | -.664499 | -.697917 | -.733530 | -.771804 | 1.104425 |
| .48 | -.606232 | -.636158 | -.667609 | -.700878 | -.736333 | -.774438 | 1.108649 |
| .49 | -.609587 | -.639380 | -.670689 | -.703809 | -.739105 | -.777041 | 1.112940 |
| .50 | -.612915 | -.642575 | -.673742 | -.706711 | -.741848 | -.779614 | 1.117295 |

$$R(y,\varphi) = R^*(y,\varphi) + \frac{1+f}{y} \cdot U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | .567398 | .530828 | .496014 | .462773 | .430945 | .400395 | 4.469181 |
| .51 | .550289 | .514239 | .479911 | .447126 | .415730 | .385587 | 4.312629 |
| .52 | .533573 | .498030 | .464176 | .431836 | .400860 | .371117 | 4.164929 |
| .53 | .517235 | .482186 | .448794 | .416889 | .386324 | .356971 | 4.025417 |
| .54 | .501261 | .466693 | .433752 | .402272 | .372109 | .343139 | 3.893492 |
| .55 | .485636 | .451539 | .419038 | .387973 | .358203 | .329607 | 3.768603 |
| .56 | .470348 | .436709 | .404639 | .373980 | .344596 | .316367 | 3.650253 |
| .57 | .455385 | .422194 | .390545 | .360284 | .331277 | .303408 | 3.537985 |
| .58 | .440734 | .407981 | .376744 | .346873 | .318236 | .290720 | 3.431381 |
| .59 | .426385 | .394061 | .363227 | .333737 | .305464 | .278295 | 3.330059 |
| .60 | .412328 | .380423 | .349985 | .320869 | .292952 | .266124 | 3.233670 |
| .61 | .398552 | .367058 | .337007 | .308259 | .280692 | .254198 | 3.141890 |
| .62 | .385049 | .353958 | .324287 | .295899 | .268676 | .242512 | 3.054423 |
| .63 | .371810 | .341113 | .311815 | .283782 | .256896 | .231056 | 2.970997 |
| .64 | .358827 | .328516 | .299584 | .271899 | .245346 | .219825 | 2.891360 |
| .65 | .346090 | .316160 | .287587 | .260244 | .234018 | .208812 | 2.815278 |
| .66 | .333594 | .304036 | .275817 | .248811 | .222907 | .198010 | 2.742538 |
| .67 | .321331 | .292139 | .264267 | .237592 | .212005 | .187413 | 2.672939 |
| .68 | .309294 | .280462 | .252932 | .226582 | .201308 | .177017 | 2.606298 |
| .69 | .297476 | .268998 | .241804 | .215775 | .190809 | .166815 | 2.542442 |
| .70 | .285871 | .257741 | .230878 | .205166 | .180503 | .156802 | 2.481213 |
| .71 | .274474 | .246687 | .220149 | .194749 | .170386 | .146974 | 2.422464 |
| .72 | .263279 | .235828 | .209612 | .184519 | .160452 | .137326 | 2.366055 |
| .73 | .252280 | .225161 | .199262 | .174472 | .150697 | .127853 | 2.311858 |
| .74 | .241473 | .214681 | .189093 | .164603 | .141116 | .118551 | 2.259755 |
| .75 | .230851 | .204382 | .179102 | .154907 | .131705 | .109415 | 2.209632 |
| .76 | .220411 | .194260 | .169284 | .145380 | .122459 | .100443 | 2.161386 |
| .77 | .210149 | .184310 | .159634 | .136019 | .113376 | .091629 | 2.114918 |
| .78 | .200059 | .174530 | .150149 | .126819 | .104451 | .082971 | 2.070137 |
| .79 | .190138 | .164913 | .140825 | .117776 | .095681 | .074465 | 2.026958 |
| .80 | .180381 | .155458 | .131659 | .108888 | .087062 | .066108 | 1.985299 |
| .81 | .170785 | .146160 | .122646 | .100150 | .078591 | .057895 | 1.945086 |
| .82 | .161347 | .137015 | .113784 | .091560 | .070264 | .049825 | 1.906248 |
| .83 | .152062 | .128021 | .105068 | .083114 | .062079 | .041895 | 1.868716 |
| .84 | .142928 | .119173 | .096497 | .074809 | .054033 | .034100 | 1.832431 |
| .85 | .133940 | .110470 | .088066 | .066643 | .046123 | .026440 | 1.797331 |
| .86 | .125097 | .101907 | .079774 | .058612 | .038345 | .018910 | 1.763361 |
| .87 | .116394 | .093482 | .071616 | .050713 | .030699 | .011509 | 1.730470 |
| .88 | .107830 | .085192 | .063592 | .042945 | .023180 | .004233 | 1.698607 |
| .89 | .099401 | .077035 | .055697 | .035304 | .015787 | -.002918 | 1.667726 |
| .90 | .091104 | .069008 | .047929 | .027789 | .008516 | -.009949 | 1.637783 |
| .91 | .082938 | .061108 | .040287 | .020396 | .001367 | -.016860 | 1.608736 |
| .92 | .074899 | .053333 | .032767 | .013124 | -.005664 | -.023655 | 1.580545 |
| .93 | .066985 | .045680 | .025368 | .005970 | -.012578 | -.030335 | 1.553174 |
| .94 | .059194 | .038148 | .018086 | -.001067 | -.019377 | -.036902 | 1.526587 |
| .95 | .051523 | .030735 | .010922 | -.007990 | -.026065 | -.043358 | 1.500751 |
| .96 | .043971 | .023437 | .003871 | -.014801 | -.032641 | -.049705 | 1.475634 |
| .97 | .036535 | .016254 | -.003068 | -.021502 | -.039109 | -.055945 | 1.451205 |
| .98 | .029214 | .009183 | -.009896 | -.028094 | -.045470 | -.062080 | 1.427436 |
| .99 | .022005 | .002222 | -.016616 | -.034579 | -.051726 | -.068111 | 1.404301 |
| 1.00 | .014906 | -.004631 | -.023230 | -.040959 | -.057879 | -.074040 | 1.381773 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | .014906 | -.004631 | -.023230 | -.040959 | -.057879 | -.074040 | 1.381773 |
| 1.01 | .007916 | -.011376 | -.029738 | -.047236 | -.063929 | -.079868 | 1.359828 |
| 1.02 | .001033 | -.018017 | -.036143 | -.053412 | -.069880 | -.085598 | 1.338443 |
| 1.03 | -.005745 | -.024554 | -.042447 | -.059487 | -.075732 | -.091230 | 1.317595 |
| 1.04 | -.012419 | -.030990 | -.048650 | -.065463 | -.081486 | -.096766 | 1.297264 |
| 1.05 | -.018992 | -.037326 | -.054755 | -.071343 | -.087145 | -.102208 | 1.277429 |
| 1.06 | -.025464 | -.043562 | -.060763 | -.077127 | -.092709 | -.107557 | 1.258071 |
| 1.07 | -.031838 | -.049702 | -.066675 | -.082816 | -.098181 | -.112814 | 1.239173 |
| 1.08 | -.038114 | -.055746 | -.072492 | -.088413 | -.103561 | -.117980 | 1.220716 |
| 1.09 | -.044294 | -.061696 | -.078217 | -.093918 | -.108850 | -.123058 | 1.202684 |
| 1.10 | -.050380 | -.067553 | -.083851 | -.099333 | -.114050 | -.128047 | 1.185061 |
| 1.11 | -.056373 | -.073317 | -.089394 | -.104659 | -.119163 | -.132950 | 1.167833 |
| 1.12 | -.062273 | -.078992 | -.094847 | -.109897 | -.124189 | -.137767 | 1.150984 |
| 1.13 | -.068083 | -.084577 | -.100213 | -.115048 | -.129129 | -.142499 | 1.134502 |
| 1.14 | -.073804 | -.090075 | -.105493 | -.120113 | -.133985 | -.147148 | 1.118372 |
| 1.15 | -.079437 | -.095485 | -.110686 | -.125095 | -.138757 | -.151715 | 1.102583 |
| 1.16 | -.084982 | -.100810 | -.115795 | -.129993 | -.143448 | -.156201 | 1.087122 |
| 1.17 | -.090442 | -.106050 | -.120821 | -.134808 | -.148057 | -.160607 | 1.071977 |
| 1.18 | -.095816 | -.111207 | -.125765 | -.139543 | -.152586 | -.164933 | 1.057139 |
| 1.19 | -.101107 | -.116281 | -.130627 | -.144197 | -.157036 | -.169182 | 1.042595 |
| 1.20 | -.106316 | -.121274 | -.135409 | -.148772 | -.161407 | -.173353 | 1.028337 |
| 1.21 | -.111443 | -.126186 | -.140111 | -.153269 | -.165702 | -.177447 | 1.014353 |
| 1.22 | -.116489 | -.131019 | -.144736 | -.157688 | -.169920 | -.181467 | 1.000636 |
| 1.23 | -.121455 | -.135773 | -.149282 | -.162031 | -.174062 | -.185412 | .987176 |
| 1.24 | -.126343 | -.140450 | -.153753 | -.166299 | -.178130 | -.189283 | .973965 |
| 1.25 | -.131153 | -.145050 | -.158147 | -.170492 | -.182125 | -.193081 | .960994 |
| 1.26 | -.135886 | -.149574 | -.162467 | -.174611 | -.186046 | -.196808 | .948256 |
| 1.27 | -.140543 | -.154023 | -.166713 | -.178657 | -.189895 | -.200463 | .935742 |
| 1.28 | -.145124 | -.158399 | -.170885 | -.182631 | -.193674 | -.204048 | .923447 |
| 1.29 | -.149632 | -.162700 | -.174986 | -.186533 | -.197381 | -.207564 | .911362 |
| 1.30 | -.154066 | -.166930 | -.179015 | -.190365 | -.201019 | -.211010 | .899482 |
| 1.31 | -.158427 | -.171087 | -.182973 | -.194127 | -.204589 | -.214389 | .887799 |
| 1.32 | -.162716 | -.175174 | -.186861 | -.197821 | -.208090 | -.217700 | .876308 |
| 1.33 | -.166934 | -.179191 | -.190680 | -.201445 | -.211523 | -.220945 | .865003 |
| 1.34 | -.171081 | -.183138 | -.194431 | -.205002 | -.214890 | -.224124 | .853877 |
| 1.35 | -.175159 | -.187016 | -.198113 | -.208493 | -.218191 | -.227238 | .842926 |
| 1.36 | -.179168 | -.190826 | -.201729 | -.211917 | -.221426 | -.230287 | .832145 |
| 1.37 | -.183109 | -.194569 | -.205278 | -.215275 | -.224597 | -.233272 | .821527 |
| 1.38 | -.186982 | -.198245 | -.208761 | -.218569 | -.227703 | -.236195 | .811068 |
| 1.39 | -.190788 | -.201856 | -.212179 | -.221798 | -.230747 | -.239054 | .800765 |
| 1.40 | -.194527 | -.205400 | -.215533 | -.224964 | -.233727 | -.241852 | .790611 |
| 1.41 | -.198202 | -.208881 | -.218823 | -.228067 | -.236646 | -.244588 | .780602 |
| 1.42 | -.201811 | -.212297 | -.222049 | -.231107 | -.239503 | -.247264 | .770735 |
| 1.43 | -.205355 | -.215649 | -.225214 | -.234086 | -.242298 | -.249880 | .761006 |
| 1.44 | -.208836 | -.218939 | -.228316 | -.237003 | -.245034 | -.252436 | .751410 |
| 1.45 | -.212254 | -.222167 | -.231356 | -.239860 | -.247710 | -.254933 | .741944 |
| 1.46 | -.215610 | -.225332 | -.234336 | -.242657 | -.250327 | -.257372 | .732603 |
| 1.47 | -.218903 | -.228437 | -.237256 | -.245394 | -.252885 | -.259753 | .723386 |
| 1.48 | -.222135 | -.231481 | -.240115 | -.248073 | -.255385 | -.262077 | .714287 |
| 1.49 | -.225306 | -.234465 | -.242916 | -.250693 | -.257827 | -.264344 | .705305 |
| 1.50 | -.228416 | -.237390 | -.245658 | -.253256 | -.260213 | -.266555 | .696435 |

Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | -.228416 | -.237390 | -.245658 | -.253256 | -.260213 | -.266555 | .696435 |
| 1.51 | -.231467 | -.240255 | -.248342 | -.255761 | -.262542 | -.268710 | .687676 |
| 1.52 | -.234459 | -.243063 | -.250968 | -.258209 | -.264815 | -.270811 | .679023 |
| 1.53 | -.237392 | -.245812 | -.253537 | -.260601 | -.267033 | -.272856 | .670474 |
| 1.54 | -.240266 | -.248504 | -.256050 | -.262938 | -.269196 | -.274848 | .662026 |
| 1.55 | -.243083 | -.251139 | -.258507 | -.265219 | -.271304 | -.276786 | .653677 |
| 1.56 | -.245843 | -.253718 | -.260908 | -.267445 | -.273358 | -.278671 | .645425 |
| 1.57 | -.248546 | -.256241 | -.263254 | -.269617 | -.275359 | -.280503 | .637266 |
| 1.58 | -.251192 | -.258708 | -.265545 | -.271736 | -.277308 | -.282283 | .629198 |
| 1.59 | -.253783 | -.261120 | -.267782 | -.273801 | -.279203 | -.284012 | .621219 |
| 1.60 | -.256319 | -.263478 | -.269966 | -.275813 | -.281047 | -.285689 | .613327 |
| 1.61 | -.258800 | -.265782 | -.272096 | -.277773 | -.282839 | -.287316 | .605520 |
| 1.62 | -.261226 | -.268032 | -.274174 | -.279681 | -.284580 | -.288892 | .597798 |
| 1.63 | -.263598 | -.270230 | -.276199 | -.281537 | -.286270 | -.290419 | .590152 |
| 1.64 | -.265917 | -.272374 | -.278173 | -.283343 | -.287910 | -.291896 | .582587 |
| 1.65 | -.268183 | -.274466 | -.280095 | -.285097 | -.289500 | -.293324 | .575099 |
| 1.66 | -.270396 | -.276507 | -.281966 | -.286802 | -.291041 | -.294704 | .567686 |
| 1.67 | -.272557 | -.278496 | -.283786 | -.288457 | -.292533 | -.296035 | .560346 |
| 1.68 | -.274666 | -.280434 | -.285556 | -.290062 | -.293976 | -.297319 | .553077 |
| 1.69 | -.276724 | -.282321 | -.287277 | -.291619 | -.295372 | -.298556 | .545879 |
| 1.70 | -.278731 | -.284159 | -.288948 | -.293127 | -.296720 | -.299746 | .538749 |
| 1.71 | -.280687 | -.285946 | -.290570 | -.294587 | -.298020 | -.300890 | .531686 |
| 1.72 | -.282593 | -.287685 | -.292144 | -.295999 | -.299274 | -.301988 | .524689 |
| 1.73 | -.284449 | -.289374 | -.293670 | -.297364 | -.300481 | -.303040 | .517755 |
| 1.74 | -.286256 | -.291015 | -.295148 | -.298683 | -.301642 | -.304047 | .510884 |
| 1.75 | -.288014 | -.292607 | -.296578 | -.299954 | -.302758 | -.305009 | .504075 |
| 1.76 | -.289723 | -.294152 | -.297962 | -.301180 | -.303828 | -.305926 | .497325 |
| 1.77 | -.291384 | -.295649 | -.299299 | -.302360 | -.304854 | -.306800 | .490634 |
| 1.78 | -.292998 | -.297100 | -.300590 | -.303494 | -.305835 | -.307630 | .484001 |
| 1.79 | -.294563 | -.298504 | -.301835 | -.304584 | -.306772 | -.308417 | .477424 |
| 1.80 | -.296082 | -.299861 | -.303035 | -.305629 | -.307665 | -.309162 | .470902 |
| 1.81 | -.297554 | -.301173 | -.304190 | -.306630 | -.308515 | -.309863 | .464435 |
| 1.82 | -.298979 | -.302439 | -.305300 | -.307587 | -.309322 | -.310523 | .458020 |
| 1.83 | -.300359 | -.303660 | -.306365 | -.308500 | -.310086 | -.311141 | .451658 |
| 1.84 | -.301693 | -.304836 | -.307387 | -.309370 | -.310808 | -.311717 | .445346 |
| 1.85 | -.302981 | -.305968 | -.308365 | -.310198 | -.311488 | -.312253 | .439085 |
| 1.86 | -.304225 | -.307055 | -.309300 | -.310983 | -.312127 | -.312748 | .432873 |
| 1.87 | -.305424 | -.308099 | -.310191 | -.311727 | -.312725 | -.313203 | .426709 |
| 1.88 | -.306579 | -.309099 | -.311041 | -.312428 | -.313281 | -.313618 | .420593 |
| 1.89 | -.307690 | -.310056 | -.311848 | -.313088 | -.313798 | -.313993 | .414523 |
| 1.90 | -.308757 | -.310971 | -.312613 | -.313707 | -.314274 | -.314329 | .408499 |
| 1.91 | -.309781 | -.311843 | -.313337 | -.314286 | -.314710 | -.314627 | .402520 |
| 1.92 | -.310762 | -.312673 | -.314020 | -.314824 | -.315108 | -.314886 | .396585 |
| 1.93 | -.311701 | -.313462 | -.314661 | -.315323 | -.315466 | -.315107 | .390693 |
| 1.94 | -.312597 | -.314209 | -.315262 | -.315781 | -.315785 | -.315290 | .384844 |
| 1.95 | -.313451 | -.314915 | -.315823 | -.316201 | -.316066 | -.315435 | .379038 |
| 1.96 | -.314264 | -.315580 | -.316345 | -.316581 | -.316309 | -.315544 | .373272 |
| 1.97 | -.315036 | -.316205 | -.316826 | -.316923 | -.316514 | -.315616 | .367548 |
| 1.98 | -.315766 | -.316789 | -.317269 | -.317227 | -.316682 | -.315651 | .361863 |
| 1.99 | -.316456 | -.317334 | -.317673 | -.317493 | -.316813 | -.315650 | .356218 |
| 2.00 | -.317106 | -.317840 | -.318038 | -.317721 | -.316907 | -.315614 | .350612 |

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 0.75 | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.317106 | -.317840 | -.318038 | -.317721 | -.316907 | -.315614 | .350612 |
| 2.01 | -.317715 | -.318306 | -.318365 | -.317911 | -.316965 | -.315542 | .345044 |
| 2.02 | -.318285 | -.318734 | -.318654 | -.318065 | -.316987 | -.315435 | .339514 |
| 2.03 | -.318816 | -.319123 | -.318905 | -.318182 | -.316973 | -.315293 | .334022 |
| 2.04 | -.319307 | -.319474 | -.319119 | -.318263 | -.316924 | -.315117 | .328566 |
| 2.05 | -.319760 | -.319788 | -.319297 | -.318308 | -.316840 | -.314907 | .323146 |
| 2.06 | -.320175 | -.320063 | -.319437 | -.318317 | -.316721 | -.314663 | .317762 |
| 2.07 | -.320551 | -.320302 | -.319542 | -.318291 | -.316567 | -.314386 | .312413 |
| 2.08 | -.320889 | -.320503 | -.319610 | -.318229 | -.316380 | -.314075 | .307099 |
| 2.09 | -.321190 | -.320668 | -.319643 | -.318133 | -.316158 | -.313732 | .301820 |
| 2.10 | -.321454 | -.320797 | -.319640 | -.318003 | -.315903 | -.313356 | .296574 |
| 2.11 | -.321681 | -.320890 | -.319602 | -.317838 | -.315615 | -.312948 | .291363 |
| 2.12 | -.321871 | -.320947 | -.319530 | -.317640 | -.315294 | -.312508 | .286184 |
| 2.13 | -.322025 | -.320968 | -.319423 | -.317408 | -.314941 | -.312037 | .281038 |
| 2.14 | -.322143 | -.320955 | -.319281 | -.317143 | -.314555 | -.311534 | .275925 |
| 2.15 | -.322225 | -.320906 | -.319106 | -.316845 | -.314138 | -.311000 | .270844 |
| 2.16 | -.322271 | -.320823 | -.318898 | -.316514 | -.313689 | -.310436 | .265794 |
| 2.17 | -.322283 | -.320706 | -.318656 | -.316151 | -.313208 | -.309842 | .260776 |
| 2.18 | -.322260 | -.320556 | -.318381 | -.315756 | -.312697 | -.309217 | .255789 |
| 2.19 | -.322202 | -.320371 | -.318074 | -.315329 | -.312155 | -.308563 | .250833 |
| 2.20 | -.322110 | -.320153 | -.317734 | -.314872 | -.311582 | -.307879 | .245907 |
| 2.21 | -.321984 | -.319902 | -.317362 | -.314382 | -.310979 | -.307167 | .241012 |
| 2.22 | -.321824 | -.319619 | -.316959 | -.313863 | -.310347 | -.306425 | .236146 |
| 2.23 | -.321631 | -.319303 | -.316524 | -.313312 | -.309685 | -.305656 | .231310 |
| 2.24 | -.321405 | -.318955 | -.316057 | -.312732 | -.308994 | -.304858 | .226504 |
| 2.25 | -.321146 | -.318575 | -.315560 | -.312121 | -.308274 | -.304032 | .221727 |
| 2.26 | -.320855 | -.318163 | -.315033 | -.311481 | -.307525 | -.303178 | .216978 |
| 2.27 | -.320531 | -.317720 | -.314475 | -.310812 | -.306749 | -.302298 | .212259 |
| 2.28 | -.320176 | -.317247 | -.313887 | -.310114 | -.305944 | -.301390 | .207567 |
| 2.29 | -.319788 | -.316742 | -.313269 | -.309387 | -.305111 | -.300455 | .202904 |
| 2.30 | -.319370 | -.316207 | -.312622 | -.308631 | -.304251 | -.299495 | .198270 |
| 2.31 | -.318920 | -.315642 | -.311945 | -.307848 | -.303364 | -.298508 | .193663 |
| 2.32 | -.318439 | -.315047 | -.311240 | -.307036 | -.302450 | -.297495 | .189083 |
| 2.33 | -.317928 | -.314423 | -.310507 | -.306197 | -.301510 | -.296457 | .184531 |
| 2.34 | -.317387 | -.313769 | -.309745 | -.305331 | -.300543 | -.295394 | .180007 |
| 2.35 | -.316815 | -.313086 | -.308955 | -.304438 | -.299550 | -.294306 | .175509 |
| 2.36 | -.316214 | -.312375 | -.308137 | -.303518 | -.298532 | -.293193 | .171039 |
| 2.37 | -.315584 | -.311635 | -.307292 | -.302571 | -.297488 | -.292056 | .166595 |
| 2.38 | -.314924 | -.310867 | -.306420 | -.301599 | -.296420 | -.290895 | .162178 |
| 2.39 | -.314236 | -.310071 | -.305521 | -.300601 | -.295326 | -.289710 | .157787 |
| 2.40 | -.313519 | -.309248 | -.304595 | -.299577 | -.294208 | -.288501 | .153423 |
| 2.41 | -.312773 | -.308397 | -.303643 | -.298528 | -.293066 | -.287270 | .149085 |
| 2.42 | -.312000 | -.307519 | -.302665 | -.297453 | -.291899 | -.286015 | .144774 |
| 2.43 | -.311199 | -.306615 | -.301661 | -.296355 | -.290709 | -.284738 | .140488 |
| 2.44 | -.310370 | -.305684 | -.300632 | -.295231 | -.289496 | -.283439 | .136228 |
| 2.45 | -.309514 | -.304727 | -.299578 | -.294084 | -.288260 | -.282117 | .131994 |
| 2.46 | -.308632 | -.303744 | -.298498 | -.292913 | -.287000 | -.280774 | .127785 |
| 2.47 | -.307722 | -.302735 | -.297395 | -.291718 | -.285719 | -.279410 | .123602 |
| 2.48 | -.306786 | -.301701 | -.296266 | -.290499 | -.284414 | -.278024 | .119445 |
| 2.49 | -.305825 | -.300641 | -.295114 | -.289258 | -.283088 | -.276617 | .115313 |
| 2.50 | -.304837 | -.299557 | -.293938 | -.287994 | -.281741 | -.275190 | .111206 |

Table of $R(y, \varphi)$ and $T(y)$

| $y$ \ $\varphi$ | 0.75 | 0.80 | 0.85 | 0.90 | 9.95 | 1.00 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.304837 | -.299557 | -.293938 | -.287994 | -.281741 | -.275190 | .111206 |
| 2.51 | -.303824 | -.298449 | -.292738 | -.286708 | -.280372 | -.273742 | .107124 |
| 2.52 | -.302785 | -.297316 | -.291515 | -.285399 | -.278981 | -.272274 | .103068 |
| 2.53 | -.301721 | -.296159 | -.290270 | -.284069 | -.277570 | -.270787 | .099036 |
| 2.54 | -.300633 | -.294978 | -.289001 | -.282716 | -.276138 | -.269279 | .095030 |
| 2.55 | -.299520 | -.293774 | -.287710 | -.281343 | -.274686 | -.267753 | .091048 |
| 2.56 | -.298383 | -.292547 | -.286397 | -.279948 | -.273214 | -.266208 | .087091 |
| 2.57 | -.297222 | -.291297 | -.285062 | -.278533 | -.271722 | -.264644 | .083159 |
| 2.58 | -.296037 | -.290024 | -.283705 | -.277097 | -.270211 | -.263061 | .079252 |
| 2.59 | -.294829 | -.288729 | -.282327 | -.275640 | -.268681 | -.261461 | .075369 |
| 2.60 | -.293598 | -.287412 | -.280928 | -.274164 | -.267131 | -.259842 | .071511 |
| 2.61 | -.292344 | -.286072 | -.279509 | -.272668 | -.265563 | -.258206 | .067678 |
| 2.62 | -.291067 | -.284712 | -.278068 | -.271152 | -.263976 | -.256553 | .063868 |
| 2.63 | -.289768 | -.283330 | -.276608 | -.269617 | -.262371 | -.254882 | .060084 |
| 2.64 | -.288447 | -.281927 | -.275127 | -.268064 | -.260749 | -.253195 | .056324 |
| 2.65 | -.287104 | -.280503 | -.273627 | -.266491 | -.259109 | -.251491 | .052588 |
| 2.66 | -.285739 | -.279058 | -.272107 | -.264900 | -.257451 | -.249771 | .048876 |
| 2.67 | -.284353 | -.277594 | -.270568 | -.263292 | -.255777 | -.248035 | .045189 |
| 2.68 | -.282947 | -.276109 | -.269011 | -.261665 | -.254085 | -.246284 | .041526 |
| 2.69 | -.281519 | -.274605 | -.267434 | -.260020 | -.252377 | -.244517 | .037888 |
| 2.70 | -.280071 | -.273081 | -.265839 | -.258359 | -.250653 | -.242734 | .034273 |
| 2.71 | -.278603 | -.271539 | -.264226 | -.256680 | -.248913 | -.240937 | .030683 |
| 2.72 | -.277115 | -.269977 | -.262595 | -.254984 | -.247157 | -.239125 | .027117 |
| 2.73 | -.275607 | -.268396 | -.260947 | -.253272 | -.245386 | -.237299 | .023575 |
| 2.74 | -.274079 | -.266798 | -.259281 | -.251544 | -.243599 | -.235458 | .020058 |
| 2.75 | -.272533 | -.265181 | -.257598 | -.249800 | -.241798 | -.233604 | .016564 |
| 2.76 | -.270967 | -.263546 | -.255899 | -.248040 | -.239982 | -.231736 | .013094 |
| 2.77 | -.269383 | -.261894 | -.254182 | -.246264 | -.238151 | -.229855 | .009649 |
| 2.78 | -.267781 | -.260224 | -.252450 | -.244473 | -.236306 | -.227961 | .006228 |
| 2.79 | -.266160 | -.258537 | -.250701 | -.242667 | -.234448 | -.226053 | .002830 |
| 2.80 | -.264522 | -.256833 | -.248937 | -.240847 | -.232575 | -.224134 | -.000543 |
| 2.81 | -.262866 | -.255113 | -.247157 | -.239012 | -.230690 | -.222202 | -.003892 |
| 2.82 | -.261192 | -.253377 | -.245362 | -.237163 | -.228791 | -.220257 | -.007217 |
| 2.83 | -.259502 | -.251624 | -.243552 | -.235300 | -.226879 | -.218302 | -.010518 |
| 2.84 | -.257794 | -.249856 | -.241728 | -.233423 | -.224955 | -.216334 | -.013795 |
| 2.85 | -.256070 | -.248072 | -.239888 | -.231533 | -.223018 | -.214355 | -.017048 |
| 2.86 | -.254330 | -.246273 | -.238035 | -.229630 | -.221070 | -.212366 | -.020277 |
| 2.87 | -.252574 | -.244459 | -.236168 | -.227714 | -.219109 | -.210365 | -.023482 |
| 2.88 | -.250801 | -.242630 | -.234287 | -.225785 | -.217137 | -.208354 | -.026663 |
| 2.89 | -.249014 | -.240787 | -.232392 | -.223844 | -.215153 | -.206333 | -.029820 |
| 2.90 | -.247211 | -.238929 | -.230484 | -.221890 | -.213159 | -.204301 | -.032953 |
| 2.91 | -.245393 | -.237057 | -.228564 | -.219925 | -.211154 | -.202260 | -.036062 |
| 2.92 | -.243560 | -.235172 | -.226630 | -.217948 | -.209138 | -.200209 | -.039147 |
| 2.93 | -.241713 | -.233273 | -.224685 | -.215960 | -.207111 | -.198149 | -.042207 |
| 2.94 | -.239851 | -.231361 | -.222727 | -.213961 | -.205075 | -.196080 | -.045244 |
| 2.95 | -.237975 | -.229436 | -.220757 | -.211950 | -.203029 | -.194002 | -.048257 |
| 2.96 | -.236086 | -.227498 | -.218775 | -.209929 | -.200973 | -.191916 | -.051245 |
| 2.97 | -.234183 | -.225548 | -.216782 | -.207898 | -.198908 | -.189821 | -.054210 |
| 2.98 | -.232267 | -.223586 | -.214778 | -.205857 | -.196833 | -.187719 | -.057150 |
| 2.99 | -.230337 | -.221611 | -.212763 | -.203805 | -.194750 | -.185608 | -.060067 |
| 3.00 | -.228395 | -.219625 | -.210737 | -.201744 | -.192659 | -.183490 | -.062959 |

## Table of $R^*(y, \varphi)$ and $T^*(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | -.615626 | -.664778 | -.718680 | -.778517 | -.845936 | -.923328 | 1.000000 |
| .01 | -.619567 | -.668578 | -.722324 | -.781987 | -.849210 | -.926381 | 1.000050 |
| .02 | -.623483 | -.672353 | -.725942 | -.785429 | -.852456 | -.929404 | 1.000200 |
| .03 | -.627374 | -.676101 | -.729532 | -.788843 | -.855672 | -.932397 | 1.000450 |
| .04 | -.631239 | -.679824 | -.733095 | -.792229 | -.858859 | -.935360 | 1.000800 |
| .05 | -.635080 | -.683520 | -.736631 | -.795586 | -.862017 | -.938293 | 1.001249 |
| .06 | -.638895 | -.687189 | -.740139 | -.798915 | -.865145 | -.941196 | 1.001798 |
| .07 | -.642685 | -.690832 | -.743620 | -.802215 | -.868244 | -.944068 | 1.002447 |
| .08 | -.646449 | -.694448 | -.747073 | -.805487 | -.871313 | -.946910 | 1.003195 |
| .09 | -.650187 | -.698037 | -.750498 | -.808729 | -.874353 | -.949721 | 1.004042 |
| .10 | -.653899 | -.701600 | -.753895 | -.811943 | -.877362 | -.952502 | 1.004988 |
| .11 | -.657585 | -.705135 | -.757263 | -.815128 | -.880342 | -.955251 | 1.006032 |
| .12 | -.661244 | -.708643 | -.760604 | -.818283 | -.883292 | -.957970 | 1.007174 |
| .13 | -.664878 | -.712123 | -.763916 | -.821410 | -.886211 | -.960659 | 1.008414 |
| .14 | -.668484 | -.715576 | -.767200 | -.824507 | -.889101 | -.963316 | 1.009752 |
| .15 | -.672065 | -.719001 | -.770455 | -.827574 | -.891960 | -.965942 | 1.011187 |
| .16 | -.675618 | -.722399 | -.773682 | -.830612 | -.894789 | -.968537 | 1.012718 |
| .17 | -.679144 | -.725768 | -.776879 | -.833620 | -.897587 | -.971101 | 1.014346 |
| .18 | -.682643 | -.729110 | -.780048 | -.836598 | -.900354 | -.973634 | 1.016069 |
| .19 | -.686115 | -.732423 | -.783188 | -.839547 | -.903092 | -.976135 | 1.017887 |
| .20 | -.689560 | -.735708 | -.786298 | -.842466 | -.905798 | -.978605 | 1.019800 |
| .21 | -.692977 | -.738965 | -.789380 | -.845354 | -.908473 | -.981044 | 1.021807 |
| .22 | -.696367 | -.742193 | -.792432 | -.848213 | -.911118 | -.983451 | 1.023908 |
| .23 | -.699729 | -.745393 | -.795454 | -.851041 | -.913732 | -.985827 | 1.026101 |
| .24 | -.703063 | -.748564 | -.798447 | -.853839 | -.916315 | -.988170 | 1.028387 |
| .25 | -.706369 | -.751706 | -.801410 | -.856606 | -.918866 | -.990483 | 1.030763 |
| .26 | -.709647 | -.754819 | -.804344 | -.859343 | -.921387 | -.992763 | 1.033231 |
| .27 | -.712896 | -.757903 | -.807248 | -.862050 | -.923876 | -.995012 | 1.035788 |
| .28 | -.716118 | -.760958 | -.810121 | -.864725 | -.926334 | -.997228 | 1.038435 |
| .29 | -.719311 | -.763984 | -.812965 | -.867370 | -.928761 | -.999413 | 1.041170 |
| .30 | -.722475 | -.766980 | -.815779 | -.869985 | -.931156 | -1.001566 | 1.043993 |
| .31 | -.725611 | -.769947 | -.818562 | -.872568 | -.933520 | -1.003687 | 1.046902 |
| .32 | -.728718 | -.772885 | -.821316 | -.875120 | -.935852 | -1.005776 | 1.049897 |
| .33 | -.731796 | -.775793 | -.824039 | -.877642 | -.938153 | -1.007833 | 1.052977 |
| .34 | -.734846 | -.778670 | -.826731 | -.880132 | -.940422 | -1.009857 | 1.056140 |
| .35 | -.737866 | -.781519 | -.829393 | -.882591 | -.942659 | -1.011850 | 1.059387 |
| .36 | -.740857 | -.784337 | -.832024 | -.885019 | -.944864 | -1.013810 | 1.062716 |
| .37 | -.743819 | -.787125 | -.834625 | -.887416 | -.947038 | -1.015738 | 1.066125 |
| .38 | -.746751 | -.789883 | -.837195 | -.889781 | -.949180 | -1.017634 | 1.069614 |
| .39 | -.749654 | -.792611 | -.839734 | -.892115 | -.951290 | -1.019497 | 1.073183 |
| .40 | -.752527 | -.795309 | -.842242 | -.894418 | -.953368 | -1.021328 | 1.076828 |
| .41 | -.755371 | -.797976 | -.844719 | -.896689 | -.955414 | -1.023127 | 1.080551 |
| .42 | -.758184 | -.800613 | -.847165 | -.898928 | -.957427 | -1.024893 | 1.084348 |
| .43 | -.760968 | -.803220 | -.849580 | -.901136 | -.959409 | -1.026627 | 1.088220 |
| .44 | -.763722 | -.805796 | -.851964 | -.903312 | -.961359 | -1.028328 | 1.092165 |
| .45 | -.766446 | -.808341 | -.854317 | -.905456 | -.963276 | -1.029997 | 1.096182 |
| .46 | -.769140 | -.810855 | -.856638 | -.907569 | -.965162 | -1.031633 | 1.100269 |
| .47 | -.771804 | -.813339 | -.858928 | -.909649 | -.967015 | -1.033237 | 1.104425 |
| .48 | -.774438 | -.815792 | -.861187 | -.911698 | -.968836 | -1.034808 | 1.108649 |
| .49 | -.777041 | -.818214 | -.863414 | -.913715 | -.970624 | -1.036347 | 1.112940 |
| .50 | -.779614 | -.820605 | -.865610 | -.915700 | -.972381 | -1.037853 | 1.117295 |

$$R(y, \varphi) = R^*(y, \varphi) + \frac{1+f}{y} \cdot U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | .400395 | .371001 | .342658 | .315271 | .288758 | .263045 | 4.469181 |
| .51 | .385587 | .356582 | .328611 | .301581 | .275413 | .250032 | 4.312629 |
| .52 | .371117 | .342492 | .314885 | .288206 | .262375 | .237322 | 4.164929 |
| .53 | .356971 | .328719 | .301469 | .275133 | .249634 | .224904 | 4.025417 |
| .54 | .343139 | .315251 | .288351 | .262353 | .237180 | .212766 | 3.893492 |
| .55 | .329607 | .302078 | .275522 | .249855 | .225003 | .200901 | 3.768603 |
| .56 | .316367 | .289189 | .262970 | .237629 | .213093 | .189298 | 3.650253 |
| .57 | .303408 | .276574 | .250687 | .225666 | .201441 | .177949 | 3.537985 |
| .58 | .290720 | .264225 | .238664 | .213958 | .190039 | .166845 | 3.431381 |
| .59 | .278295 | .252133 | .226892 | .202497 | .178880 | .155980 | 3.330059 |
| .60 | .266124 | .240289 | .215364 | .191275 | .167955 | .145346 | 3.233670 |
| .61 | .254198 | .228686 | .204072 | .180284 | .157258 | .134935 | 3.141890 |
| .62 | .242512 | .217316 | .193009 | .169518 | .146781 | .124741 | 3.054423 |
| .63 | .231056 | .206173 | .182167 | .158970 | .136518 | .114759 | 2.970997 |
| .64 | .219825 | .195249 | .171541 | .148633 | .126464 | .104981 | 2.891360 |
| .65 | .208812 | .184539 | .161125 | .138502 | .116612 | .095402 | 2.815278 |
| .66 | .198010 | .174036 | .150911 | .128571 | .106956 | .086017 | 2.742538 |
| .67 | .187413 | .163734 | .140896 | .118834 | .097492 | .076821 | 2.672939 |
| .68 | .177017 | .153629 | .131073 | .109287 | .088214 | .067808 | 2.606298 |
| .69 | .166815 | .143714 | .121438 | .099924 | .079119 | .058974 | 2.542442 |
| .70 | .156802 | .133986 | .111985 | .090741 | .070199 | .050314 | 2.481213 |
| .71 | .146974 | .124438 | .102710 | .081732 | .061452 | .041825 | 2.422464 |
| .72 | .137326 | .115067 | .093609 | .072895 | .052874 | .033501 | 2.366055 |
| .73 | .127853 | .105868 | .084677 | .064224 | .044459 | .025339 | 2.311858 |
| .74 | .118551 | .096836 | .075910 | .055716 | .036205 | .017335 | 2.259755 |
| .75 | .109415 | .087969 | .067304 | .047366 | .028107 | .009486 | 2.209632 |
| .76 | .100443 | .079262 | .058856 | .039172 | .020163 | .001788 | 2.161386 |
| .77 | .091629 | .070711 | .050561 | .031129 | .012368 | -.005763 | 2.114918 |
| .78 | .082971 | .062313 | .042417 | .023234 | .004719 | -.013169 | 2.070137 |
| .79 | .074465 | .054064 | .034421 | .015485 | -.002787 | -.020434 | 2.026958 |
| .80 | .066108 | .045962 | .026568 | .007877 | -.010153 | -.027561 | 1.985299 |
| .81 | .057895 | .038002 | .018856 | .000409 | -.017382 | -.034552 | 1.945086 |
| .82 | .049825 | .030183 | .011282 | -.006924 | -.024476 | -.041411 | 1.906248 |
| .83 | .041895 | .022500 | .003843 | -.014123 | -.031439 | -.048140 | 1.868716 |
| .84 | .034100 | .014952 | -.003464 | -.021192 | -.038273 | -.054742 | 1.832431 |
| .85 | .026440 | .007536 | -.010640 | -.028133 | -.044981 | -.061218 | 1.797331 |
| .86 | .018910 | .000248 | -.017690 | -.034948 | -.051565 | -.067572 | 1.763361 |
| .87 | .011509 | -.006913 | -.024615 | -.041641 | -.058027 | -.073806 | 1.730470 |
| .88 | .004233 | -.013950 | -.031417 | -.048212 | -.064370 | -.079922 | 1.698607 |
| .89 | -.002918 | -.020865 | -.038100 | -.054665 | -.070595 | -.085923 | 1.667726 |
| .90 | -.009949 | -.027660 | -.044664 | -.061001 | -.076706 | -.091809 | 1.637783 |
| .91 | -.016860 | -.034338 | -.051113 | -.067223 | -.082704 | -.097584 | 1.608736 |
| .92 | -.023655 | -.040901 | -.057448 | -.073333 | -.088591 | -.103250 | 1.580545 |
| .93 | -.030335 | -.047351 | -.063671 | -.079332 | -.094368 | -.108807 | 1.553174 |
| .94 | -.036902 | -.053690 | -.069784 | -.085223 | -.100039 | -.114259 | 1.526587 |
| .95 | -.043358 | -.059919 | -.075790 | -.091007 | -.105604 | -.119606 | 1.500751 |
| .96 | -.049705 | -.066041 | -.081689 | -.096687 | -.111065 | -.124851 | 1.475634 |
| .97 | -.055945 | -.072057 | -.087484 | -.102264 | -.116425 | -.129995 | 1.451205 |
| .98 | -.062080 | -.077968 | -.093176 | -.107738 | -.121684 | -.135040 | 1.427436 |
| .99 | -.068111 | -.083778 | -.098767 | -.113113 | -.126845 | -.139987 | 1.404301 |
| 1.00 | -.074040 | -.089487 | -.104259 | -.118390 | -.131908 | -.144838 | 1.381773 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | -.074040 | -.089487 | -.104259 | -.118390 | -.131908 | -.144838 | 1.381773 |
| 1.01 | -.079868 | -.095097 | -.109653 | -.123570 | -.136876 | -.149595 | 1.359828 |
| 1.02 | -.085598 | -.100609 | -.114950 | -.128655 | -.141750 | -.154258 | 1.338443 |
| 1.03 | -.091230 | -.106025 | -.120153 | -.133646 | -.146531 | -.158830 | 1.317595 |
| 1.04 | -.096766 | -.111346 | -.125262 | -.138544 | -.151220 | -.163311 | 1.297264 |
| 1.05 | -.102208 | -.116574 | -.130278 | -.143351 | -.155819 | -.167704 | 1.277429 |
| 1.06 | -.107557 | -.121710 | -.135204 | -.148069 | -.160330 | -.172008 | 1.258071 |
| 1.07 | -.112814 | -.126756 | -.140040 | -.152698 | -.164753 | -.176227 | 1.239173 |
| 1.08 | -.117980 | -.131712 | -.144789 | -.157240 | -.169090 | -.180359 | 1.220716 |
| 1.09 | -.123058 | -.136580 | -.149450 | -.161696 | -.173342 | -.184408 | 1.202684 |
| 1.10 | -.128047 | -.141361 | -.154025 | -.166067 | -.177510 | -.188374 | 1.185061 |
| 1.11 | -.132950 | -.146056 | -.158515 | -.170354 | -.181595 | -.192258 | 1.167833 |
| 1.12 | -.137767 | -.150667 | -.162922 | -.174559 | -.185599 | -.196062 | 1.150984 |
| 1.13 | -.142499 | -.155195 | -.167247 | -.178682 | -.189522 | -.199785 | 1.134502 |
| 1.14 | -.147148 | -.159640 | -.171490 | -.182725 | -.193366 | -.203431 | 1.117372 |
| 1.15 | -.151715 | -.164004 | -.175653 | -.186688 | -.197131 | -.206999 | 1.102583 |
| 1.16 | -.156201 | -.168288 | -.179737 | -.190574 | -.200819 | -.210490 | 1.087122 |
| 1.17 | -.160607 | -.172492 | -.183742 | -.194381 | -.204430 | -.213906 | 1.071977 |
| 1.18 | -.164933 | -.176619 | -.187670 | -.198113 | -.207967 | -.217247 | 1.057139 |
| 1.19 | -.169182 | -.180668 | -.191522 | -.201769 | -.211428 | -.220515 | 1.042595 |
| 1.20 | -.173353 | -.184641 | -.195299 | -.205351 | -.214816 | -.223710 | 1.028337 |
| 1.21 | -.177447 | -.188538 | -.199001 | -.208859 | -.218131 | -.226833 | 1.014353 |
| 1.22 | -.181467 | -.192361 | -.202629 | -.212295 | -.221375 | -.229886 | 1.000636 |
| 1.23 | -.185412 | -.196110 | -.206185 | -.215658 | -.224548 | -.232868 | .987176 |
| 1.24 | -.189283 | -.199787 | -.209669 | -.218951 | -.227650 | -.235781 | .973965 |
| 1.25 | -.193081 | -.203392 | -.213082 | -.222174 | -.230684 | -.238626 | .960994 |
| 1.26 | -.196808 | -.206926 | -.216425 | -.225327 | -.233649 | -.241404 | .948256 |
| 1.27 | -.200463 | -.210389 | -.219698 | -.228412 | -.236546 | -.244114 | .935742 |
| 1.28 | -.204048 | -.213783 | -.222903 | -.231429 | -.239376 | -.246759 | .923447 |
| 1.29 | -.207564 | -.217109 | -.226040 | -.234379 | -.242141 | -.249338 | .911362 |
| 1.30 | -.211010 | -.220366 | -.229110 | -.237263 | -.244840 | -.251853 | .899482 |
| 1.31 | -.214389 | -.223556 | -.232114 | -.240081 | -.247474 | -.254304 | .887799 |
| 1.32 | -.217700 | -.226680 | -.235052 | -.242835 | -.250045 | -.256693 | .876308 |
| 1.33 | -.220945 | -.229738 | -.237925 | -.245525 | -.252552 | -.259019 | .865003 |
| 1.34 | -.224124 | -.232731 | -.240734 | -.248151 | -.254997 | -.261283 | .853877 |
| 1.35 | -.227238 | -.235660 | -.243480 | -.250715 | -.257380 | -.263487 | .842926 |
| 1.36 | -.230287 | -.238525 | -.246163 | -.253217 | -.259702 | -.265630 | .832145 |
| 1.37 | -.233272 | -.241327 | -.248783 | -.255658 | -.261964 | -.267714 | .821527 |
| 1.38 | -.236195 | -.244067 | -.251342 | -.258037 | -.264166 | -.269739 | .811068 |
| 1.39 | -.239054 | -.246745 | -.253841 | -.260357 | -.266309 | -.271705 | .800765 |
| 1.40 | -.241852 | -.249362 | -.256279 | -.262618 | -.268393 | -.273614 | .790611 |
| 1.41 | -.244588 | -.251919 | -.258657 | -.264819 | -.270419 | -.275466 | .780602 |
| 1.42 | -.247264 | -.254415 | -.260976 | -.266963 | -.272388 | -.277262 | .770735 |
| 1.43 | -.249880 | -.256853 | -.263237 | -.269049 | -.274301 | -.279002 | .761006 |
| 1.44 | -.252436 | -.259231 | -.265440 | -.271078 | -.276157 | -.280686 | .751410 |
| 1.45 | -.254933 | -.261552 | -.267586 | -.273051 | -.277958 | -.282316 | .741944 |
| 1.46 | -.257372 | -.263815 | -.269675 | -.274967 | -.279703 | -.283892 | .732603 |
| 1.47 | -.259753 | -.266021 | -.271708 | -.276829 | -.281395 | -.285415 | .723386 |
| 1.48 | -.262077 | -.268171 | -.273686 | -.278636 | -.283033 | -.286884 | .714287 |
| 1.49 | -.264344 | -.270265 | -.275608 | -.280389 | -.284617 | -.288302 | .705305 |
| 1.50 | -.266555 | -.272304 | -.277476 | -.282088 | -.286149 | -.289667 | .696435 |

Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | -.266555 | -.272304 | -.277476 | -.282088 | -.286149 | -.289667 | .696435 |
| 1.51 | -.268710 | -.274287 | -.279291 | -.283734 | -.287628 | -.290981 | .687676 |
| 1.52 | -.270811 | -.276217 | -.281051 | -.285327 | -.289056 | -.292245 | .679023 |
| 1.53 | -.272856 | -.278093 | -.282759 | -.286869 | -.290432 | -.293458 | .670474 |
| 1.54 | -.274848 | -.279915 | -.284414 | -.288359 | -.291759 | -.294622 | .662026 |
| 1.55 | -.276786 | -.281685 | -.286018 | -.289798 | -.293034 | -.295736 | .653677 |
| 1.56 | -.278671 | -.283403 | -.287570 | -.291186 | -.294261 | -.296802 | .645425 |
| 1.57 | -.280503 | -.285068 | -.289071 | -.292524 | -.295438 | -.297819 | .637266 |
| 1.58 | -.282283 | -.286683 | -.290522 | -.293813 | -.296567 | -.298789 | .629198 |
| 1.59 | -.284012 | -.288247 | -.291923 | -.295053 | -.297647 | -.299712 | .621219 |
| 1.60 | -.285689 | -.289760 | -.293274 | -.296244 | -.298680 | -.300588 | .613327 |
| 1.61 | -.287316 | -.291223 | -.294576 | -.297387 | -.299666 | -.301418 | .605520 |
| 1.62 | -.288892 | -.292637 | -.295830 | -.298483 | -.300604 | -.302202 | .597796 |
| 1.63 | -.290419 | -.294002 | -.297036 | -.299531 | -.301497 | -.302940 | .590152 |
| 1.64 | -.291896 | -.295319 | -.298194 | -.300533 | -.302344 | -.303634 | .582587 |
| 1.65 | -.293324 | -.296587 | -.299305 | -.301488 | -.303145 | -.304284 | .575099 |
| 1.66 | -.294704 | -.297808 | -.300369 | -.302397 | -.303902 | -.304889 | .567686 |
| 1.67 | -.296035 | -.298982 | -.301387 | -.303261 | -.304614 | -.305451 | .560346 |
| 1.68 | -.297319 | -.300109 | -.302359 | -.304080 | -.305282 | -.305970 | .553077 |
| 1.69 | -.298556 | -.301189 | -.303285 | -.304855 | -.305907 | -.306447 | .545879 |
| 1.70 | -.299746 | -.302224 | -.304167 | -.305585 | -.306488 | -.306881 | .538749 |
| 1.71 | -.300890 | -.303213 | -.305004 | -.306272 | -.307027 | -.307273 | .531686 |
| 1.72 | -.301988 | -.304157 | -.305796 | -.306916 | -.307523 | -.307625 | .524689 |
| 1.73 | -.303040 | -.305057 | -.306545 | -.307516 | -.307978 | -.307935 | .517755 |
| 1.74 | -.304047 | -.305912 | -.307251 | -.308075 | -.308391 | -.308205 | .510884 |
| 1.75 | -.305009 | -.306723 | -.307913 | -.308591 | -.308763 | -.308435 | .504075 |
| 1.76 | -.305926 | -.307490 | -.308533 | -.309065 | -.309094 | -.308625 | .497325 |
| 1.77 | -.306800 | -.308215 | -.309111 | -.309499 | -.309385 | -.308776 | .490634 |
| 1.78 | -.307630 | -.308897 | -.309647 | -.309891 | -.309637 | -.308888 | .484001 |
| 1.79 | -.308417 | -.309537 | -.310142 | -.310243 | -.309848 | -.308962 | .477424 |
| 1.80 | -.309162 | -.310134 | -.310596 | -.310556 | -.310021 | -.308998 | .470902 |
| 1.81 | -.309863 | -.310690 | -.311009 | -.310828 | -.310155 | -.308996 | .464435 |
| 1.82 | -.310523 | -.311205 | -.311382 | -.311061 | -.310251 | -.308957 | .458020 |
| 1.83 | -.311141 | -.311680 | -.311715 | -.311256 | -.310309 | -.308881 | .451658 |
| 1.84 | -.311717 | -.312113 | -.312008 | -.311411 | -.310330 | -.308769 | .445346 |
| 1.85 | -.312253 | -.312507 | -.312263 | -.311529 | -.310313 | -.308621 | .439085 |
| 1.86 | -.312748 | -.312861 | -.312479 | -.311609 | -.310260 | -.308437 | .432873 |
| 1.87 | -.313203 | -.313176 | -.312656 | -.311652 | -.310171 | -.308217 | .426709 |
| 1.88 | -.313618 | -.313452 | -.312795 | -.311657 | -.310045 | -.307963 | .420593 |
| 1.89 | -.313993 | -.313689 | -.312897 | -.311626 | -.309884 | -.307674 | .414523 |
| 1.90 | -.314329 | -.313888 | -.312962 | -.311559 | -.309687 | -.307351 | .408499 |
| 1.91 | -.314627 | -.314049 | -.312989 | -.311456 | -.309456 | -.306994 | .402520 |
| 1.92 | -.314886 | -.314173 | -.312980 | -.311317 | -.309190 | -.306604 | .396585 |
| 1.93 | -.315107 | -.314259 | -.312935 | -.311143 | -.308890 | -.306181 | .390693 |
| 1.94 | -.315290 | -.314309 | -.312854 | -.310935 | -.308557 | -.305725 | .384844 |
| 1.95 | -.315435 | -.314322 | -.312738 | -.310691 | -.308189 | -.305236 | .379038 |
| 1.96 | -.315544 | -.314299 | -.312586 | -.310414 | -.307789 | -.304716 | .373272 |
| 1.97 | -.315616 | -.314241 | -.312400 | -.310103 | -.307356 | -.304164 | .367548 |
| 1.98 | -.315651 | -.314146 | -.312179 | -.309759 | -.306891 | -.303581 | .361863 |
| 1.99 | -.315650 | -.314017 | -.311924 | -.309381 | -.306393 | -.302966 | .356218 |
| 2.00 | -.315614 | -.313853 | -.311636 | -.308971 | -.305864 | -.302321 | .350612 |

Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.315614 | -.313853 | -.311636 | -.308971 | -.305864 | -.302321 | .350612 |
| 2.01 | -.315542 | -.313655 | -.311314 | -.308528 | -.305304 | -.301646 | .345044 |
| 2.02 | -.315435 | -.313422 | -.310958 | -.308053 | -.304712 | -.300941 | .339514 |
| 2.03 | -.315293 | -.313156 | -.310570 | -.307547 | -.304090 | -.300207 | .334022 |
| 2.04 | -.315117 | -.312856 | -.310150 | -.307009 | -.303438 | -.299443 | .328566 |
| 2.05 | -.314907 | -.312523 | -.309698 | -.306440 | -.302756 | -.298650 | .323146 |
| 2.06 | -.314663 | -.312157 | -.309213 | -.305840 | -.302044 | -.297829 | .317762 |
| 2.07 | -.314386 | -.311759 | -.308698 | -.305210 | -.301302 | -.296980 | .312413 |
| 2.08 | -.314075 | -.311329 | -.308151 | -.304550 | -.300532 | -.296102 | .307099 |
| 2.09 | -.313732 | -.310867 | -.307573 | -.303860 | -.299733 | -.295198 | .301820 |
| 2.10 | -.313356 | -.310373 | -.306965 | -.303141 | -.298906 | -.294266 | .296574 |
| 2.11 | -.312948 | -.309849 | -.306327 | -.302392 | -.298051 | -.293307 | .291363 |
| 2.12 | -.312508 | -.309293 | -.305659 | -.301615 | -.297168 | -.292321 | .286184 |
| 2.13 | -.312037 | -.308707 | -.304962 | -.300810 | -.296258 | -.291310 | .281038 |
| 2.14 | -.311534 | -.308091 | -.304235 | -.299976 | -.295320 | -.290272 | .275925 |
| 2.15 | -.311000 | -.307444 | -.303480 | -.299115 | -.294356 | -.289209 | .270844 |
| 2.16 | -.310436 | -.306769 | -.302696 | -.298226 | -.293366 | -.288121 | .265794 |
| 2.17 | -.309842 | -.306063 | -.301884 | -.297310 | -.292350 | -.287008 | .260776 |
| 2.18 | -.309217 | -.305329 | -.301043 | -.296367 | -.291308 | -.285870 | .255789 |
| 2.19 | -.308563 | -.304567 | -.300176 | -.295398 | -.290240 | -.284708 | .250833 |
| 2.20 | -.307879 | -.303776 | -.299281 | -.294402 | -.289148 | -.283522 | .245907 |
| 2.21 | -.307167 | -.302957 | -.298359 | -.293381 | -.288030 | -.282312 | .241012 |
| 2.22 | -.306425 | -.302110 | -.297410 | -.292334 | -.286889 | -.281079 | .236146 |
| 2.23 | -.305656 | -.301236 | -.296435 | -.291262 | -.285723 | -.279823 | .231310 |
| 2.24 | -.304858 | -.300334 | -.295434 | -.290164 | -.284533 | -.278544 | .226504 |
| 2.25 | -.304032 | -.299406 | -.294407 | -.289042 | -.283319 | -.277243 | .221727 |
| 2.26 | -.303178 | -.298451 | -.293355 | -.287896 | -.282083 | -.275920 | .216978 |
| 2.27 | -.302298 | -.297470 | -.292277 | -.286726 | -.280823 | -.274575 | .212259 |
| 2.28 | -.301390 | -.296464 | -.291175 | -.285532 | -.279541 | -.273208 | .207567 |
| 2.29 | -.300455 | -.295431 | -.290048 | -.284314 | -.278236 | -.271820 | .202904 |
| 2.30 | -.299495 | -.294373 | -.288897 | -.283073 | -.276910 | -.270412 | .198270 |
| 2.31 | -.298508 | -.293291 | -.287722 | -.281810 | -.275561 | -.268983 | .193663 |
| 2.32 | -.297495 | -.292183 | -.286523 | -.280524 | -.274192 | -.267533 | .189083 |
| 2.33 | -.296457 | -.291051 | -.285301 | -.279215 | -.272801 | -.266064 | .184531 |
| 2.34 | -.295394 | -.289895 | -.284056 | -.277885 | -.271389 | -.264574 | .180007 |
| 2.35 | -.294306 | -.288715 | -.282788 | -.276533 | -.269957 | -.263066 | .175509 |
| 2.36 | -.293193 | -.287512 | -.281498 | -.275160 | -.268505 | -.261538 | .171039 |
| 2.37 | -.292056 | -.286285 | -.280185 | -.273765 | -.267032 | -.259992 | .166595 |
| 2.38 | -.290895 | -.285035 | -.278851 | -.272350 | -.265540 | -.258427 | .162178 |
| 2.39 | -.289710 | -.283763 | -.277495 | -.270915 | -.264029 | -.256844 | .157787 |
| 2.40 | -.288501 | -.282468 | -.276118 | -.269459 | -.262498 | -.255243 | .153423 |
| 2.41 | -.287270 | -.281151 | -.274720 | -.267983 | -.260949 | -.253624 | .149085 |
| 2.42 | -.286015 | -.279813 | -.273301 | -.266488 | -.259382 | -.251988 | .144774 |
| 2.43 | -.284738 | -.278452 | -.271861 | -.264973 | -.257796 | -.250335 | .140488 |
| 2.44 | -.283439 | -.277071 | -.270402 | -.263440 | -.256192 | -.248665 | .136228 |
| 2.45 | -.282117 | -.275668 | -.268922 | -.261887 | -.254571 | -.246979 | .131994 |
| 2.46 | -.280774 | -.274245 | -.267423 | -.260316 | -.252932 | -.245277 | .127785 |
| 2.47 | -.279410 | -.272802 | -.265905 | -.258727 | -.251276 | -.243558 | .123602 |
| 2.48 | -.278024 | -.271338 | -.264368 | -.257120 | -.249603 | -.241824 | .119445 |
| 2.49 | -.276617 | -.269855 | -.262811 | -.255495 | -.247914 | -.240075 | .115313 |
| 2.50 | -.275190 | -.268352 | -.261237 | -.253854 | -.246209 | -.238311 | .111206 |

Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.275190 | -.268352 | -.261237 | -.253854 | -.246209 | -.238311 | .111206 |
| 2.51 | -.273742 | -.266830 | -.259644 | -.252195 | -.244488 | -.236532 | .107124 |
| 2.52 | -.272274 | -.265288 | -.258034 | -.250519 | -.242751 | -.234738 | .103068 |
| 2.53 | -.270787 | -.263728 | -.256406 | -.248826 | -.240999 | -.232930 | .099036 |
| 2.54 | -.269279 | -.262150 | -.254760 | -.247118 | -.239232 | -.231108 | .095030 |
| 2.55 | -.267753 | -.260554 | -.253097 | -.245394 | -.237450 | -.229273 | .091048 |
| 2.56 | -.266208 | -.258939 | -.251418 | -.243653 | -.235653 | -.227424 | .087091 |
| 2.57 | -.264644 | -.257307 | -.249722 | -.241898 | -.233842 | -.225562 | .083159 |
| 2.58 | -.263061 | -.255658 | -.248010 | -.240127 | -.232017 | -.223687 | .079252 |
| 2.59 | -.261461 | -.253991 | -.246282 | -.238342 | -.230178 | -.221799 | .075369 |
| 2.60 | -.259842 | -.252308 | -.244538 | -.236542 | -.228326 | -.219899 | .071511 |
| 2.61 | -.258206 | -.250608 | -.242779 | -.234727 | -.226461 | -.217987 | .067678 |
| 2.62 | -.256553 | -.248892 | -.241005 | -.232899 | -.224583 | -.216064 | .063868 |
| 2.63 | -.254882 | -.247161 | -.239216 | -.231057 | -.222692 | -.214129 | .060084 |
| 2.64 | -.253195 | -.245413 | -.237412 | -.229201 | -.220789 | -.212182 | .056324 |
| 2.65 | -.251491 | -.243650 | -.235594 | -.227332 | -.218873 | -.210225 | .052588 |
| 2.66 | -.249771 | -.241872 | -.233762 | -.225450 | -.216946 | -.208256 | .048876 |
| 2.67 | -.248035 | -.240079 | -.231916 | -.223556 | -.215007 | -.206278 | .045189 |
| 2.68 | -.246284 | -.238271 | -.230056 | -.221649 | -.213057 | -.204289 | .041526 |
| 2.69 | -.244517 | -.236449 | -.228183 | -.219730 | -.211096 | -.202290 | .037888 |
| 2.70 | -.242734 | -.234612 | -.226298 | -.217799 | -.209124 | -.200282 | .034273 |
| 2.71 | -.240937 | -.232762 | -.224399 | -.215856 | -.207141 | -.198264 | .030683 |
| 2.72 | -.239125 | -.230899 | -.222488 | -.213902 | -.205149 | -.196237 | .027117 |
| 2.73 | -.237299 | -.229022 | -.220565 | -.211936 | -.203146 | -.194201 | .023575 |
| 2.74 | -.235458 | -.227132 | -.218629 | -.209960 | -.201133 | -.192156 | .020058 |
| 2.75 | -.233604 | -.225229 | -.216682 | -.207974 | -.199111 | -.190103 | .016564 |
| 2.76 | -.231736 | -.223314 | -.214724 | -.205976 | -.197079 | -.188042 | .013094 |
| 2.77 | -.229855 | -.221386 | -.212755 | -.203969 | -.195039 | -.185972 | .009649 |
| 2.78 | -.227961 | -.219447 | -.210774 | -.201952 | -.192990 | -.183896 | .006228 |
| 2.79 | -.226053 | -.217495 | -.208783 | -.199926 | -.190932 | -.181811 | .002830 |
| 2.80 | -.224134 | -.215532 | -.206781 | -.197890 | -.188866 | -.179720 | -.000543 |
| 2.81 | -.222202 | -.213558 | -.204770 | -.195845 | -.186792 | -.177622 | -.003892 |
| 2.82 | -.220257 | -.211573 | -.202748 | -.193791 | -.184711 | -.175517 | -.007217 |
| 2.83 | -.218302 | -.209577 | -.200717 | -.191728 | -.182622 | -.173405 | -.010518 |
| 2.84 | -.216334 | -.207571 | -.198676 | -.189657 | -.180525 | -.171288 | -.013795 |
| 2.85 | -.214355 | -.205555 | -.196626 | -.187579 | -.178422 | -.169164 | -.017048 |
| 2.86 | -.212366 | -.203528 | -.194567 | -.185492 | -.176311 | -.167035 | -.020277 |
| 2.87 | -.210365 | -.201492 | -.192500 | -.183398 | -.174195 | -.164900 | -.023482 |
| 2.88 | -.208354 | -.199446 | -.190424 | -.181296 | -.172072 | -.162760 | -.026663 |
| 2.89 | -.206333 | -.197391 | -.188340 | -.179187 | -.169943 | -.160615 | -.029820 |
| 2.90 | -.204301 | -.195328 | -.186248 | -.177071 | -.167808 | -.158466 | -.032953 |
| 2.91 | -.202260 | -.193255 | -.184148 | -.174949 | -.165667 | -.156311 | -.036062 |
| 2.92 | -.200209 | -.191174 | -.182041 | -.172821 | -.163521 | -.154153 | -.039147 |
| 2.93 | -.198149 | -.189085 | -.179927 | -.170686 | -.161371 | -.151990 | -.042207 |
| 2.94 | -.196080 | -.186987 | -.177806 | -.168545 | -.159215 | -.149824 | -.045244 |
| 2.95 | -.194002 | -.184882 | -.175678 | -.166399 | -.157055 | -.147654 | -.048257 |
| 2.96 | -.191916 | -.182770 | -.173544 | -.164247 | -.154890 | -.145481 | .051245 |
| 2.97 | -.189821 | -.180650 | -.171403 | -.162090 | -.152721 | -.143305 | -.054210 |
| 2.98 | -.187719 | -.178523 | -.169257 | -.159928 | -.150548 | -.141125 | -.057150 |
| 2.99 | -.185608 | -.176390 | -.167104 | -.157762 | -.148372 | -.138943 | -.060067 |
| 3.00 | -.183490 | -.174250 | -.164947 | -.155591 | -.146192 | -.136759 | -.062959 |

## Table of $R^*(y,\varphi)$ and $T^*(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.50 | R(y,π/2) | T*(y) |
|---|---|---|---|---|---|---|---|
| .00 | - .923328 | -1.014339 | -1.124928 | -1.265822 | -1.459367 | ∞ | 1.000000 |
| .01 | - .926381 | -1.017139 | -1.127437 | -1.267989 | -1.461123 | 2.564291 | 1.000050 |
| .02 | - .929404 | -1.019909 | -1.129915 | -1.270124 | -1.462846 | 2.123068 | 1.000200 |
| .03 | - .932397 | -1.022648 | -1.132362 | -1.272227 | -1.464536 | 1.865020 | 1.000450 |
| .04 | - .935360 | -1.025356 | -1.134776 | -1.274298 | -1.466194 | 1.681988 | 1.000800 |
| .05 | - .938293 | -1.028034 | -1.137159 | -1.276337 | -1.467820 | 1.540073 | 1.001249 |
| .06 | - .941196 | -1.030680 | -1.139511 | -1.278344 | -1.469413 | 1.424179 | 1.001798 |
| .07 | - .944068 | -1.033295 | -1.141831 | -1.280319 | -1.470973 | 1.326250 | 1.002447 |
| .08 | - .946910 | -1.035879 | -1.144118 | -1.282261 | -1.472501 | 1.241480 | 1.003195 |
| .09 | - .949721 | -1.038431 | -1.146374 | -1.284171 | -1.473997 | 1.166768 | 1.004042 |
| .10 | - .952502 | -1.040952 | -1.148598 | -1.286048 | -1.475460 | 1.099995 | 1.004988 |
| .11 | - .955251 | -1.043442 | -1.150790 | -1.287893 | -1.476890 | 1.039653 | 1.006032 |
| .12 | - .957970 | -1.045901 | -1.152950 | -1.289706 | -1.478287 | .984625 | 1.007174 |
| .13 | - .960659 | -1.048327 | -1.155078 | -1.291486 | -1.479652 | .934066 | 1.008414 |
| .14 | - .963316 | -1.050723 | -1.157174 | -1.293234 | -1.480984 | .887316 | 1.009752 |
| .15 | - .965942 | -1.053086 | -1.159238 | -1.294949 | -1.482284 | .843855 | 1.011187 |
| .16 | - .968537 | -1.055418 | -1.161269 | -1.296631 | -1.483550 | .803261 | 1.012718 |
| .17 | - .971101 | -1.057718 | -1.163268 | -1.298281 | -1.484784 | .765190 | 1.014346 |
| .18 | - .973634 | -1.059986 | -1.165235 | -1.299898 | -1.485985 | .729357 | 1.016069 |
| .19 | - .976135 | -1.062223 | -1.167169 | -1.301483 | -1.487154 | .695524 | 1.017887 |
| .20 | - .978605 | -1.064427 | -1.169071 | -1.303035 | -1.488289 | .663489 | 1.019800 |
| .21 | - .981044 | -1.066599 | -1.170941 | -1.304554 | -1.489392 | .633078 | 1.021807 |
| .22 | - .983451 | -1.068740 | -1.172778 | -1.306040 | -1.490462 | .604144 | 1.023908 |
| .23 | - .985827 | -1.070848 | -1.174582 | -1.307494 | -1.491500 | .576559 | 1.026101 |
| .24 | - .988170 | -1.072924 | -1.176354 | -1.308915 | -1.492504 | .550209 | 1.028387 |
| .25 | - .990483 | -1.074968 | -1.178094 | -1.310303 | -1.493476 | .524997 | 1.030763 |
| .26 | - .992763 | -1.076979 | -1.179801 | -1.311658 | -1.494415 | .500835 | 1.033231 |
| .27 | - .995012 | -1.078959 | -1.181475 | -1.312981 | -1.495321 | .477648 | 1.035788 |
| .28 | - .997228 | -1.080906 | -1.183117 | -1.314271 | -1.496194 | .455365 | 1.038435 |
| .29 | - .999413 | -1.082820 | -1.184725 | -1.315528 | -1.497035 | .433927 | 1.041170 |
| .30 | -1.001566 | -1.084703 | -1.186302 | -1.316752 | -1.497843 | .413276 | 1.043993 |
| .31 | -1.003687 | -1.086552 | -1.187845 | -1.317943 | -1.498618 | .393365 | 1.046902 |
| .32 | -1.005776 | -1.088370 | -1.189356 | -1.319101 | -1.499360 | .374148 | 1.049897 |
| .33 | -1.007833 | -1.090155 | -1.190834 | -1.320227 | -1.500070 | .335583 | 1.052977 |
| .34 | -1.009857 | -1.091907 | -1.192280 | -1.321320 | -1.500746 | .337635 | 1.056140 |
| .35 | -1.011850 | -1.093627 | -1.193692 | -1.322380 | -1.501391 | .320268 | 1.059387 |
| .36 | -1.013810 | -1.095314 | -1.195072 | -1.323407 | -1.502002 | .303452 | 1.062716 |
| .37 | -1.015738 | -1.096969 | -1.196419 | -1.324401 | -1.502581 | .287158 | 1.066125 |
| .38 | -1.017634 | -1.098591 | -1.197733 | -1.325362 | -1.503127 | .271360 | 1.069614 |
| .39 | -1.019497 | -1.100181 | -1.199015 | -1.326291 | -1.503641 | .256034 | 1.073183 |
| .40 | -1.021328 | -1.101738 | -1.200263 | -1.327187 | -1.504122 | .241158 | 1.076828 |
| .41 | -1.023127 | -1.103262 | -1.201479 | -1.328050 | -1.504571 | .226709 | 1.080551 |
| .42 | -1.024893 | -1.104753 | -1.202662 | -1.328880 | -1.504987 | .212670 | 1.084348 |
| .43 | -1.026627 | -1.106212 | -1.203812 | -1.329678 | -1.505370 | .199023 | 1.088220 |
| .44 | -1.028328 | -1.107638 | -1.204930 | -1.330443 | -1.505721 | .185750 | 1.092165 |
| .45 | -1.029997 | -1.109032 | -1.206014 | -1.331175 | -1.506040 | .172837 | 1.096182 |
| .46 | -1.031633 | -1.110393 | -1.207066 | -1.331874 | -1.506326 | .160268 | 1.100269 |
| .47 | -1.033237 | -1.111721 | -1.208085 | -1.332541 | -1.506580 | .148031 | 1.104425 |
| .48 | -1.034808 | -1.113016 | -1.209072 | -1.333175 | -1.506802 | .136111 | 1.108649 |
| .49 | -1.036347 | -1.114278 | -1.210025 | -1.333777 | -1.506991 | .124499 | 1.112940 |
| .50 | -1.037853 | -1.115508 | -1.210946 | -1.334345 | -1.507148 | .113181 | 1.117295 |

$$R(y,\varphi) = R^*(y,\varphi) + \frac{1+f}{y}\cdot U(y/k) \qquad T(y) = T^*(y)/y^2$$

## Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | T(y) |
|---|---|---|---|---|---|---|---|
| .50 | .263045 | .238063 | .213754 | .190064 | .166944 | .113181 | 4.469181 |
| .51 | .250032 | .225375 | .201383 | .178003 | .155187 | .102148 | 4.312629 |
| .52 | .237322 | .212984 | .189303 | .166228 | .143714 | .091389 | 4.164929 |
| .53 | .224904 | .200879 | .177505 | .154731 | .132514 | .080896 | 4.025417 |
| .54 | .212766 | .189051 | .165979 | .143503 | .121578 | .070659 | 3.893492 |
| .55 | .200901 | .177490 | .154716 | .132533 | .110898 | .060670 | 3.768603 |
| .56 | .189298 | .166187 | .143707 | .121814 | .100465 | .050920 | 3.650253 |
| .57 | .177949 | .155133 | .132944 | .111337 | .090271 | .041404 | 3.537985 |
| .58 | .166845 | .144322 | .122420 | .101095 | .080309 | .032112 | 3.431381 |
| .59 | .155980 | .133745 | .112126 | .091081 | .070571 | .023039 | 3.330059 |
| .60 | .145346 | .123395 | .102056 | .081287 | .061052 | .014178 | 3.233670 |
| .61 | .134935 | .113265 | .092203 | .071708 | .051744 | .005523 | 3.141890 |
| .62 | .124741 | .103350 | .082561 | .062337 | .042642 | -.002932 | 3.054423 |
| .63 | .114758 | .093642 | .073124 | .053168 | .033740 | -.011193 | 2.970997 |
| .64 | .104981 | .084136 | .063886 | .044196 | .025031 | -.019264 | 2.891360 |
| .65 | .095402 | .074826 | .054842 | .035415 | .016512 | -.027152 | 2.815278 |
| .66 | .086017 | .065707 | .045987 | .026820 | .008177 | -.034860 | 2.742538 |
| .67 | .076820 | .056774 | .037314 | .018407 | .000021 | -.042393 | 2.672939 |
| .68 | .067808 | .048022 | .028821 | .010170 | -.007961 | -.049757 | 2.606298 |
| .69 | .058974 | .039447 | .020502 | .002105 | -.015772 | -.056954 | 2.542442 |
| .70 | .050314 | .031044 | .012352 | -.005792 | -.023418 | -.063990 | 2.481213 |
| .71 | .041825 | .022808 | .004369 | -.013526 | -.030901 | -.070867 | 2.422464 |
| .72 | .033501 | .014737 | -.003453 | -.021099 | -.038227 | -.077591 | 2.366055 |
| .73 | .025339 | .006825 | -.011117 | -.028516 | -.045398 | -.084163 | 2.311858 |
| .74 | .017335 | -.000931 | -.018627 | -.035781 | -.052418 | -.090589 | 2.259755 |
| .75 | .009486 | -.008534 | -.025986 | -.042897 | -.059291 | -.096870 | 2.209632 |
| .76 | .001788 | -.015989 | -.033198 | -.049867 | -.066019 | -.103011 | 2.161386 |
| .77 | -.005763 | -.023297 | -.040266 | -.056695 | -.072607 | -.109015 | 2.114918 |
| .78 | -.013169 | -.030463 | -.047192 | -.063383 | -.079056 | -.114883 | 2.070137 |
| .79 | -.020434 | -.037489 | -.053981 | -.069935 | -.085371 | -.120620 | 2.026958 |
| .80 | -.027561 | -.044379 | -.060635 | -.076353 | -.091554 | -.126228 | 1.985299 |
| .81 | -.034552 | -.051135 | -.067156 | -.082640 | -.097606 | -.131710 | 1.945086 |
| .82 | -.041411 | -.057759 | -.073548 | -.088800 | -.103532 | -.137067 | 1.906248 |
| .83 | -.048140 | -.064256 | -.079813 | -.094833 | -.109334 | -.142303 | 1.868716 |
| .84 | -.054742 | -.070626 | -.085953 | -.100743 | -.115014 | -.147421 | 1.832431 |
| .85 | -.061218 | -.076873 | -.091971 | -.106533 | -.120574 | -.152421 | 1.797331 |
| .86 | -.067572 | -.082999 | -.097870 | -.112204 | -.126017 | -.157308 | 1.763361 |
| .87 | -.073806 | -.089006 | -.103651 | -.117758 | -.131345 | -.162081 | 1.730470 |
| .88 | -.079922 | -.094897 | -.109316 | -.123199 | -.136560 | -.166745 | 1.698607 |
| .89 | -.085923 | -.100673 | -.114869 | -.128527 | -.141664 | -.171301 | 1.667726 |
| .90 | -.091809 | -.106337 | -.120310 | -.133746 | -.146659 | -.175750 | 1.637783 |
| .91 | -.097584 | -.111890 | -.125642 | -.138856 | -.151547 | -.180095 | 1.608736 |
| .92 | -.103250 | -.117335 | -.130866 | -.143860 | -.156330 | -.184338 | 1.580545 |
| .93 | -.108807 | -.122673 | -.135985 | -.148760 | -.161010 | -.188480 | 1.553174 |
| .94 | -.114259 | -.127906 | -.141001 | -.153557 | -.165588 | -.192524 | 1.526587 |
| .95 | -.119606 | -.133036 | -.145914 | -.158254 | -.170067 | -.196470 | 1.500751 |
| .96 | -.124851 | -.138065 | -.150727 | -.162851 | -.174447 | -.200320 | 1.475634 |
| .97 | -.129995 | -.142995 | -.155442 | -.167351 | -.178731 | -.204077 | 1.451205 |
| .98 | -.135040 | -.147826 | -.160059 | -.171754 | -.182920 | -.207741 | 1.427436 |
| .99 | -.139987 | -.152560 | -.164581 | -.176063 | -.187016 | -.211314 | 1.404301 |
| 1.00 | -.144838 | -.157200 | -.169010 | -.180280 | -.191019 | -.214798 | 1.381773 |

Table of $R(y,\varphi)$ and $T(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.00 | -.144838 | -.157200 | -.169010 | -.180280 | -.191019 | -.214798 | 1.381773 |
| 1.01 | -.149595 | -.161746 | -.173345 | -.184404 | -.194932 | -.218194 | 1.359828 |
| 1.02 | -.154258 | -.166200 | -.177590 | -.188439 | -.198756 | -.221503 | 1.338443 |
| 1.03 | -.158830 | -.170563 | -.181744 | -.192385 | -.202492 | -.224727 | 1.317595 |
| 1.04 | -.163311 | -.174837 | -.185811 | -.196243 | -.206142 | -.227868 | 1.297264 |
| 1.05 | -.167704 | -.179023 | -.189790 | -.200016 | -.209707 | -.230925 | 1.277429 |
| 1.06 | -.172008 | -.183122 | -.193683 | -.203704 | -.213188 | -.233902 | 1.258071 |
| 1.07 | -.176227 | -.187135 | -.197492 | -.207308 | -.216587 | -.236798 | 1.239173 |
| 1.08 | -.180359 | -.191064 | -.201218 | -.210829 | -.219904 | -.239615 | 1.220716 |
| 1.09 | -.184408 | -.194911 | -.204862 | -.214270 | -.223140 | -.242355 | 1.202684 |
| 1.10 | -.188374 | -.198675 | -.208424 | -.217630 | -.226298 | -.245018 | 1.185061 |
| 1.11 | -.192258 | -.202358 | -.211907 | -.220912 | -.229378 | -.247606 | 1.167833 |
| 1.12 | -.196062 | -.205962 | -.215310 | -.224115 | -.232381 | -.250119 | 1.150984 |
| 1.13 | -.199785 | -.209487 | -.218636 | -.227242 | -.235308 | -.252559 | 1.134502 |
| 1.14 | -.203431 | -.212934 | -.221886 | -.230294 | -.238160 | -.254927 | 1.118372 |
| 1.15 | -.206999 | -.216305 | -.225060 | -.233270 | -.240939 | -.257223 | 1.102583 |
| 1.16 | -.210490 | -.219600 | -.228159 | -.236173 | -.243645 | -.259450 | 1.087122 |
| 1.17 | -.213906 | -.222821 | -.231184 | -.239003 | -.246279 | -.261607 | 1.071977 |
| 1.18 | -.217247 | -.225968 | -.234137 | -.241761 | -.248843 | -.263696 | 1.057139 |
| 1.19 | -.220515 | -.229042 | -.237018 | -.244449 | -.251336 | -.265717 | 1.042595 |
| 1.20 | -.223710 | -.232045 | -.239828 | -.247067 | -.253761 | -.267673 | 1.028337 |
| 1.21 | -.226833 | -.234976 | -.242569 | -.249615 | -.256118 | -.269562 | 1.014353 |
| 1.22 | -.229886 | -.237838 | -.245240 | -.252096 | -.258407 | -.271388 | 1.000636 |
| 1.23 | -.232868 | -.240631 | -.247843 | -.254509 | -.260630 | -.273149 | .987176 |
| 1.24 | -.235781 | -.243355 | -.250379 | -.256856 | -.262788 | -.274848 | .973965 |
| 1.25 | -.238626 | -.246012 | -.252848 | -.259137 | -.264882 | -.276484 | .960994 |
| 1.26 | -.241404 | -.248602 | -.255251 | -.261354 | -.266911 | -.278060 | .948256 |
| 1.27 | -.244114 | -.251126 | -.257589 | -.263506 | -.268878 | -.279575 | .935742 |
| 1.28 | -.246759 | -.253586 | -.259864 | -.265596 | -.270782 | -.281031 | .923447 |
| 1.29 | -.249338 | -.255981 | -.262075 | -.267623 | -.272625 | -.282427 | .911362 |
| 1.30 | -.251853 | -.258312 | -.264223 | -.269588 | -.274407 | -.283766 | .899482 |
| 1.31 | -.254304 | -.260581 | -.266310 | -.271493 | -.276129 | -.285047 | .887799 |
| 1.32 | -.256693 | -.262788 | -.268335 | -.273337 | -.277793 | -.286272 | .876308 |
| 1.33 | -.259019 | -.264933 | -.270300 | -.275122 | -.279397 | -.287442 | .865003 |
| 1.34 | -.261283 | -.267017 | -.272205 | -.276848 | -.280944 | -.288556 | .853877 |
| 1.35 | -.263487 | -.269042 | -.274051 | -.278516 | -.282434 | -.289615 | .842926 |
| 1.36 | -.265630 | -.271007 | -.275839 | -.280126 | -.283868 | -.290621 | .832145 |
| 1.37 | -.267714 | -.272914 | -.277569 | -.281680 | -.285246 | -.291574 | .821527 |
| 1.38 | -.269739 | -.274762 | -.279242 | -.283178 | -.286569 | -.292475 | .811068 |
| 1.39 | -.271705 | -.276554 | -.280858 | -.284620 | -.287837 | -.293324 | .800765 |
| 1.40 | -.273614 | -.278288 | -.282419 | -.286008 | -.289052 | -.294123 | .790611 |
| 1.41 | -.275466 | -.279967 | -.283925 | -.287341 | -.290214 | -.294870 | .780602 |
| 1.42 | -.277262 | -.281590 | -.285376 | -.288621 | -.291323 | -.295568 | .770735 |
| 1.43 | -.279002 | -.283158 | -.286774 | -.289848 | -.292380 | -.296218 | .761006 |
| 1.44 | -.280686 | -.284672 | -.288118 | -.291023 | -.293387 | -.296818 | .751410 |
| 1.45 | -.282316 | -.286132 | -.289409 | -.292146 | -.294342 | -.297371 | .741944 |
| 1.46 | -.283892 | -.287539 | -.290648 | -.293219 | -.295248 | -.297877 | .732603 |
| 1.47 | -.285415 | -.288894 | -.291836 | -.294240 | -.296104 | -.298335 | .723386 |
| 1.48 | -.286884 | -.290197 | -.292973 | -.295212 | -.296911 | -.298748 | .714287 |
| 1.49 | -.288302 | -.291448 | -.294059 | -.296134 | -.297670 | -.299116 | .705305 |
| 1.50 | -.289667 | -.292649 | -.295095 | -.297007 | -.298381 | -.299438 | .696435 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | T(y) |
|---|---|---|---|---|---|---|---|
| 1.50 | -.289667 | -.292649 | -.295095 | -.297007 | -.298381 | -.299438 | .696435 |
| 1.51 | -.290981 | -.293799 | -.296082 | -.297832 | -.299045 | -.299716 | .687676 |
| 1.52 | -.292245 | -.294899 | -.297021 | -.298609 | -.299662 | -.299951 | .679023 |
| 1.53 | -.293458 | -.295950 | -.297911 | -.299340 | -.300233 | -.300142 | .670474 |
| 1.54 | -.294622 | -.296952 | -.298753 | -.300023 | -.300759 | -.300290 | .662026 |
| 1.55 | -.295736 | -.297907 | -.299548 | -.300660 | -.301239 | -.300397 | .653677 |
| 1.56 | -.296802 | -.298813 | -.300297 | -.301252 | -.301675 | -.300461 | .645425 |
| 1.57 | -.297819 | -.299672 | -.300999 | -.301799 | -.302067 | -.300485 | .637266 |
| 1.58 | -.298789 | -.300485 | -.301656 | -.302301 | -.302416 | -.300468 | .629198 |
| 1.59 | -.299712 | -.301251 | -.302267 | -.302758 | -.302721 | -.300411 | .621219 |
| 1.60 | -.300588 | -.301972 | -.302834 | -.303173 | -.302984 | -.300314 | .613327 |
| 1.61 | -.301418 | -.302647 | -.303356 | -.303544 | -.303205 | -.300179 | .605520 |
| 1.62 | -.302202 | -.303278 | -.303835 | -.303872 | -.303385 | -.300004 | .597796 |
| 1.63 | -.302940 | -.303864 | -.304271 | -.304158 | -.303523 | -.299792 | .590152 |
| 1.64 | -.303634 | -.304407 | -.304663 | -.304403 | -.303621 | -.299542 | .582587 |
| 1.65 | -.304284 | -.304906 | -.305014 | -.304606 | -.303679 | -.299256 | .575099 |
| 1.66 | -.304889 | -.305362 | -.305322 | -.304769 | -.303697 | -.298932 | .567686 |
| 1.67 | -.305451 | -.305776 | -.305590 | -.304891 | -.303676 | -.298572 | .560346 |
| 1.68 | -.305970 | -.306148 | -.305816 | -.304973 | -.303617 | -.298177 | .553077 |
| 1.69 | -.306447 | -.306478 | -.306002 | -.305016 | -.303519 | -.297747 | .545879 |
| 1.70 | -.306881 | -.306767 | -.306147 | -.305020 | -.303383 | -.297281 | .538749 |
| 1.71 | -.307273 | -.307015 | -.306253 | -.304986 | -.303210 | -.296782 | .531686 |
| 1.72 | -.307625 | -.307223 | -.306320 | -.304913 | -.303000 | -.296248 | .524689 |
| 1.73 | -.307935 | -.307392 | -.306348 | -.304803 | -.302754 | -.295681 | .517755 |
| 1.74 | -.308205 | -.307520 | -.306338 | -.304656 | -.302471 | -.295082 | .510884 |
| 1.75 | -.308435 | -.307610 | -.306290 | -.304472 | -.302153 | -.294449 | .504075 |
| 1.76 | -.308625 | -.307662 | -.306204 | -.304251 | -.301800 | -.293785 | .497325 |
| 1.77 | -.308776 | -.307675 | -.306081 | -.303995 | -.301412 | -.293089 | .490634 |
| 1.78 | -.308888 | -.307650 | -.305922 | -.303703 | -.300990 | -.292362 | .484001 |
| 1.79 | -.308962 | -.307588 | -.305726 | -.303376 | -.300534 | -.291604 | .477424 |
| 1.80 | -.308998 | -.307489 | -.305495 | -.303014 | -.300044 | -.290815 | .470902 |
| 1.81 | -.308996 | -.307353 | -.305228 | -.302618 | -.299521 | -.289997 | .464435 |
| 1.82 | -.308957 | -.307182 | -.304926 | -.302188 | -.298966 | -.289148 | .458020 |
| 1.83 | -.308881 | -.306974 | -.304589 | -.301725 | -.298378 | -.288271 | .451658 |
| 1.84 | -.308769 | -.306732 | -.304218 | -.301228 | -.297758 | -.287365 | .445346 |
| 1.85 | -.308621 | -.306454 | -.303813 | -.300699 | -.297107 | -.286431 | .439085 |
| 1.86 | -.308437 | -.306141 | -.303375 | -.300137 | -.296425 | -.285469 | .432873 |
| 1.87 | -.308217 | -.305795 | -.302904 | -.299544 | -.295712 | -.284479 | .426709 |
| 1.88 | -.307963 | -.305414 | -.302400 | -.298919 | -.294969 | -.283462 | .420593 |
| 1.89 | -.307674 | -.305000 | -.301864 | -.298263 | -.294196 | -.282418 | .414523 |
| 1.90 | -.307351 | -.304554 | -.301295 | -.297576 | -.293393 | -.281348 | .408499 |
| 1.91 | -.306994 | -.304074 | -.300696 | -.296859 | -.292561 | -.280252 | .402520 |
| 1.92 | -.306604 | -.303562 | -.300065 | -.296112 | -.291701 | -.279130 | .396585 |
| 1.93 | -.306181 | -.303018 | -.299403 | -.295335 | -.290812 | -.277983 | .390693 |
| 1.94 | -.305725 | -.302442 | -.298710 | -.294528 | -.289895 | -.276811 | .384844 |
| 1.95 | -.305236 | -.301835 | -.297988 | -.293693 | -.288950 | -.275615 | .379038 |
| 1.96 | -.304716 | -.301198 | -.297236 | -.292830 | -.287978 | -.274394 | .373272 |
| 1.97 | -.304164 | -.300529 | -.296454 | -.291938 | -.286979 | -.273150 | .367548 |
| 1.98 | -.303581 | -.299831 | -.295644 | -.291018 | -.285953 | -.271882 | .361863 |
| 1.99 | -.302966 | -.299103 | -.294805 | -.290071 | -.284901 | -.270591 | .356218 |
| 2.00 | -.302321 | -.298345 | -.293937 | -.289097 | -.283824 | -.269278 | .350612 |

## Table of $R(y, \varphi)$ and $T(y)$

| y \ φ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | π/2 | T(y) |
|---|---|---|---|---|---|---|---|
| 2.00 | -.302321 | -.298345 | -.293937 | -.289097 | -.283824 | -.269278 | .350612 |
| 2.01 | -.301646 | -.297558 | -.293042 | -.288096 | -.282721 | -.267942 | .345044 |
| 2.02 | -.300941 | -.296743 | -.292119 | -.287069 | -.281592 | -.266585 | .339514 |
| 2.03 | -.300207 | -.295899 | -.291168 | -.286015 | -.280439 | -.265205 | .334022 |
| 2.04 | -.299443 | -.295027 | -.290191 | -.284936 | -.279262 | -.263805 | .328566 |
| 2.05 | -.298650 | -.294127 | -.289187 | -.283832 | -.278060 | -.262383 | .323146 |
| 2.06 | -.297829 | -.293200 | -.288157 | -.282702 | -.276835 | -.260941 | .317762 |
| 2.07 | -.296980 | -.292245 | -.287101 | -.281548 | -.275586 | -.259479 | .312413 |
| 2.08 | -.296102 | -.291264 | -.286020 | -.280370 | -.274314 | -.257997 | .307099 |
| 2.09 | -.295198 | -.290257 | -.284913 | -.279168 | -.273019 | -.256495 | .301820 |
| 2.10 | -.294266 | -.289224 | -.283782 | -.277941 | -.271702 | -.254974 | .296574 |
| 2.11 | -.293307 | -.288165 | -.282626 | -.276692 | -.270363 | -.253434 | .291363 |
| 2.12 | -.292321 | -.287080 | -.281446 | -.275420 | -.269002 | -.251876 | .286184 |
| 2.13 | -.291310 | -.285970 | -.280242 | -.274125 | -.267620 | -.250299 | .281038 |
| 2.14 | -.290272 | -.284836 | -.279014 | -.272807 | -.266217 | -.248705 | .275925 |
| 2.15 | -.289209 | -.283677 | -.277763 | -.271468 | -.264793 | -.247092 | .270844 |
| 2.16 | -.288121 | -.282495 | -.276489 | -.270107 | -.263348 | -.245463 | .265794 |
| 2.17 | -.287008 | -.281288 | -.275193 | -.268725 | -.261883 | -.243817 | .260776 |
| 2.18 | -.285870 | -.280058 | -.273874 | -.267321 | -.260399 | -.242154 | .255789 |
| 2.19 | -.284708 | -.278805 | -.272534 | -.265897 | -.258895 | -.240475 | .250833 |
| 2.20 | -.283522 | -.277529 | -.271172 | -.264453 | -.257372 | -.238780 | .245907 |
| 2.21 | -.282312 | -.276231 | -.269788 | -.262988 | -.255831 | -.237069 | .241012 |
| 2.22 | -.281079 | -.274910 | -.268384 | -.261504 | -.254270 | -.235343 | .236146 |
| 2.23 | -.279823 | -.273567 | -.266959 | -.260000 | -.252692 | -.233602 | .231310 |
| 2.24 | -.278544 | -.272203 | -.265514 | -.258477 | -.251095 | -.231846 | .226504 |
| 2.25 | -.277243 | -.270818 | -.264048 | -.256935 | -.249482 | -.230076 | .221727 |
| 2.26 | -.275920 | -.269412 | -.262563 | -.255375 | -.247850 | -.228292 | .216978 |
| 2.27 | -.274575 | -.267985 | -.261058 | -.253796 | -.246202 | -.226493 | .212259 |
| 2.28 | -.273208 | -.266538 | -.259534 | -.252200 | -.244537 | -.224682 | .207567 |
| 2.29 | -.271820 | -.265071 | -.257992 | -.250586 | -.242856 | -.222857 | .202904 |
| 2.30 | -.270412 | -.263584 | -.256431 | -.248955 | -.241159 | -.221019 | .198270 |
| 2.31 | -.268983 | -.262078 | -.254852 | -.247307 | -.239446 | -.219168 | .193663 |
| 2.32 | -.267533 | -.260553 | -.253254 | -.245642 | -.237718 | -.217306 | .189083 |
| 2.33 | -.266064 | -.259008 | -.251639 | -.243960 | -.235974 | -.215431 | .184531 |
| 2.34 | -.264574 | -.257446 | -.250007 | -.242263 | -.234216 | -.213544 | .180007 |
| 2.35 | -.263066 | -.255865 | -.248358 | -.240550 | -.232443 | -.211646 | .175509 |
| 2.36 | -.261538 | -.254266 | -.246692 | -.238821 | -.230656 | -.209737 | .171039 |
| 2.37 | -.259992 | -.252650 | -.245010 | -.237077 | -.228855 | -.207817 | .166595 |
| 2.38 | -.258427 | -.251016 | -.243312 | -.235318 | -.227040 | -.205886 | .162178 |
| 2.39 | -.256844 | -.249365 | -.241597 | -.233545 | -.225212 | -.203945 | .157787 |
| 2.40 | -.255243 | -.247698 | -.239867 | -.231757 | -.223370 | -.201994 | .153423 |
| 2.41 | -.253624 | -.246014 | -.238122 | -.229955 | -.221516 | -.200033 | .149085 |
| 2.42 | -.251988 | -.244313 | -.236362 | -.228139 | -.219649 | -.198063 | .144774 |
| 2.43 | -.250335 | -.242597 | -.234588 | -.226310 | -.217770 | -.196083 | .140488 |
| 2.44 | -.248665 | -.240866 | -.232798 | -.224468 | -.215880 | -.194095 | .136228 |
| 2.45 | -.246979 | -.239119 | -.230995 | -.222613 | -.213977 | -.192098 | .131994 |
| 2.46 | -.245277 | -.237357 | -.229178 | -.220745 | -.212063 | -.190092 | .127785 |
| 2.47 | -.243558 | -.235580 | -.227347 | -.218865 | -.210138 | -.188079 | .123602 |
| 2.48 | -.241824 | -.233789 | -.225503 | -.216972 | -.208202 | -.186057 | .119445 |
| 2.49 | -.240075 | -.231984 | -.223646 | -.215068 | -.206255 | -.184028 | .115313 |
| 2.50 | -.238311 | -.230165 | -.221777 | -.213153 | -.204298 | -.181991 | .111206 |

## Table of $R(y, \varphi)$ and $T(y)$

| $y$ \ $\varphi$ | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | $\pi/2$ | T(y) |
|---|---|---|---|---|---|---|---|
| 2.50 | -.238311 | -.230165 | -.221777 | -.213153 | -.204298 | -.181991 | .111206 |
| 2.51 | -.236532 | -.228332 | -.219894 | -.211226 | -.202331 | -.179948 | .107124 |
| 2.52 | -.234738 | -.226486 | -.218000 | -.209288 | -.200354 | -.177897 | .103068 |
| 2.53 | -.232930 | -.224626 | -.216094 | -.207339 | -.198368 | -.175840 | .099036 |
| 2.54 | -.231108 | -.222754 | -.214176 | -.205380 | -.196372 | -.173777 | .095030 |
| 2.55 | -.229273 | -.220870 | -.212247 | -.203411 | -.194368 | -.171708 | .091048 |
| 2.56 | -.227424 | -.218973 | -.210307 | -.201432 | -.192354 | -.169633 | .087091 |
| 2.57 | -.225562 | -.217064 | -.208355 | -.199443 | -.190333 | -.167552 | .083159 |
| 2.58 | -.223687 | -.215143 | -.206394 | -.197445 | -.188303 | -.165466 | .079252 |
| 2.59 | -.221799 | -.213211 | -.204422 | -.195437 | -.186265 | -.163375 | .075369 |
| 2.60 | -.219899 | -.211268 | -.202440 | -.193421 | -.184219 | -.161279 | .071511 |
| 2.61 | -.217987 | -.209314 | -.200448 | -.191396 | -.182166 | -.159179 | .067678 |
| 2.62 | -.216064 | -.207349 | -.198447 | -.189363 | -.180106 | -.157074 | .063868 |
| 2.63 | -.214129 | -.205374 | -.196437 | -.187322 | -.178039 | -.154965 | .060084 |
| 2.64 | -.212182 | -.203389 | -.194417 | -.185273 | -.175965 | -.152853 | .056324 |
| 2.65 | -.210225 | -.201394 | -.192389 | -.183217 | -.173885 | -.150737 | .052588 |
| 2.66 | -.208256 | -.199389 | -.190352 | -.181153 | -.171799 | -.148617 | .048876 |
| 2.67 | -.206278 | -.197375 | -.188308 | -.179082 | -.169707 | -.146495 | .045189 |
| 2.68 | -.204289 | -.195352 | -.186255 | -.177004 | -.167609 | -.144369 | .041526 |
| 2.69 | -.202290 | -.193320 | -.184194 | -.174920 | -.165506 | -.142241 | .037888 |
| 2.70 | -.200282 | -.191280 | -.182126 | -.172829 | -.163397 | -.140110 | .034273 |
| 2.71 | -.198264 | -.189231 | -.180051 | -.170733 | -.161284 | -.137978 | .030683 |
| 2.72 | -.196237 | -.187174 | -.177969 | -.168630 | -.159166 | -.135843 | .027117 |
| 2.73 | -.194201 | -.185110 | -.175881 | -.166522 | -.157044 | -.133707 | .023575 |
| 2.74 | -.192156 | -.183037 | -.173786 | -.164409 | -.154917 | -.131569 | .020058 |
| 2.75 | -.190103 | -.180958 | -.171684 | -.162291 | -.152786 | -.129430 | .016564 |
| 2.76 | -.188042 | -.178871 | -.169577 | -.160167 | -.150652 | -.127289 | .013094 |
| 2.77 | -.185972 | -.176778 | -.167464 | -.158040 | -.148514 | -.125148 | .009649 |
| 2.78 | -.183896 | -.174678 | -.165346 | -.155907 | -.146373 | -.123007 | .006228 |
| 2.79 | -.181811 | -.172572 | -.163222 | -.153771 | -.144229 | -.120864 | .002830 |
| 2.80 | -.179720 | -.170459 | -.161093 | -.151631 | -.142082 | -.118722 | -.000543 |
| 2.81 | -.177622 | -.168341 | -.158960 | -.149487 | -.139932 | -.116580 | -.003892 |
| 2.82 | -.175517 | -.166217 | -.156822 | -.147340 | -.137780 | -.114438 | -.007217 |
| 2.83 | -.173405 | -.164088 | -.154680 | -.145189 | -.135626 | -.112296 | -.010518 |
| 2.84 | -.171288 | -.161954 | -.152533 | -.143036 | -.133471 | -.110156 | -.013795 |
| 2.85 | -.169164 | -.159815 | -.150383 | -.140879 | -.131313 | -.108016 | -.017048 |
| 2.86 | -.167035 | -.157671 | -.148230 | -.138721 | -.129154 | -.105877 | -.020277 |
| 2.87 | -.164900 | -.155523 | -.146073 | -.136560 | -.126994 | -.103739 | -.023482 |
| 2.88 | -.162760 | -.153371 | -.143913 | -.134397 | -.124833 | -.101603 | -.026663 |
| 2.89 | -.160615 | -.151215 | -.141750 | -.132232 | -.122671 | -.099469 | -.029820 |
| 2.90 | -.158466 | -.149055 | -.139585 | -.130065 | -.120508 | -.097336 | -.032953 |
| 2.91 | -.156311 | -.146891 | -.137417 | -.127898 | -.118345 | -.095206 | -.036062 |
| 2.92 | -.154153 | -.144725 | -.135246 | -.125729 | -.116182 | -.093078 | -.039147 |
| 2.93 | -.151990 | -.142555 | -.133074 | -.123559 | -.114019 | -.090952 | -.042207 |
| 2.94 | -.149824 | -.140383 | -.130900 | -.121388 | -.111856 | -.088829 | -.045244 |
| 2.95 | -.147654 | -.138208 | -.128725 | -.119217 | -.109694 | -.086709 | -.048257 |
| 2.96 | -.145481 | -.136030 | -.126548 | -.117045 | -.107533 | -.084592 | .051245 |
| 2.97 | -.143305 | -.133851 | -.124370 | -.114874 | -.105372 | -.082478 | -.054210 |
| 2.98 | -.141125 | -.131670 | -.122192 | -.112702 | -.103213 | -.080368 | -.057150 |
| 2.99 | -.138943 | -.129487 | -.120012 | -.110531 | -.101055 | -.078261 | -.060067 |
| 3.00 | -.136759 | -.127302 | -.117833 | -.108360 | -.098898 | -.076159 | -.062959 |