

PERMANENT-WAY
NOTES

TRIGONOMETRICAL FUNCTIONS, ETC., OF
CROSSING ANGLES

(2)

1 IN 7
TO
1 IN 2

THESE NOTES ARE INTENDED FOR THE GUIDANCE AND ASSISTANCE OF STAFF ENGAGED UPON PERMANENT-WAY WORK. THEY DO NOT IN ANY WAY MODIFY, SUPPLEMENT OR AMEND THE INSTRUCTIONS LAID DOWN IN E.P.I. STANDARD DRAWING CIRCULARS ETC., WHICH SHOULD BE REFERRED TO IN ALL CASES.

| ANGLE | DECS. MINUTES | SINE | LOG. SINE | COSINE | LOG. COS. | TANGENT | LOG. TA |
|--------------------------------|---------------|----------|-----------|----------|-----------|----------|----------|
| 1 ^{IN} 7 | 8° 10' 27499 | .1421320 | T'1526918 | .9898477 | T'9955684 | .1435897 | T'15712 |
| 7 ⁴ | 7° 53' 42407 | .1372781 | T'1376013 | .9905327 | T'9958688 | .1385902 | T'14173 |
| 7 ¹ / ₂ | 7° 37' 69014 | .1327433 | T'1230128 | .9911504 | T'9961396 | .1339286 | T'12687 |
| 7 ¹ / ₄ | 7° 22' 96857 | .1284974 | T'1088944 | .9917097 | T'9963846 | .1295713 | T'11250 |
| 8 | 7° 9' 16239 | .1245136 | T'0952169 | .9922180 | T'9966071 | .1254902 | T'09860 |
| 8 ¹ / ₄ | 6° 56' 18834 | .1207685 | T'0819537 | .9926804 | T'9968095 | .1216590 | T'08514 |
| 8 ¹ / ₂ | 6° 43' 97539 | .1172414 | T'0690809 | .9931034 | T'9969945 | .1180555 | T'07200 |
| 8 ³ / ₄ | 6° 32' 46036 | .1139137 | T'0565761 | .9934907 | T'9971638 | .1146601 | T'0594 |
| 9 | 6° 21' 58134 | .1107692 | T'0444191 | .9938460 | T'9973191 | .1114550 | T'04710 |
| 9 ¹ / ₄ | 6° 11' 28943 | .1077932 | T'0325912 | .9941734 | T'9974622 | .1084249 | T'03512 |
| 9 ¹ / ₂ | 6° 1' 53648 | .1049726 | T'0210750 | .9944750 | T'9975939 | .1055556 | T'02340 |
| 9 ³ / ₄ | 5° 52' 28219 | .1022951 | T'0098548 | .9947542 | T'9977158 | .1028345 | T'012130 |
| 10 | 5° 43' 49084 | .0997506 | T'9989156 | .9950124 | T'9978285 | .1002506 | T'00100 |
| 10 ¹ / ₄ | 5° 35' 12722 | .0973294 | T'9882439 | .9952522 | T'9979332 | .0977937 | T'99031 |
| 10 ¹ / ₂ | 5° 27' 16030 | .0950226 | T'9778270 | .9954750 | T'9980304 | .0954545 | T'97970 |
| 10 ³ / ₄ | 5° 19' 56224 | .0928224 | T'9676530 | .9956827 | T'9981210 | .0932249 | T'96950 |
| 11 | 5° 12' 30913 | .0907217 | T'9577110 | .9958765 | T'9982054 | .0910973 | T'95950 |
| 11 ¹ / ₄ | 5° 5' 37934 | .0887137 | T'9479905 | .9960575 | T'9982843 | .0890648 | T'94970 |
| 11 ¹ / ₂ | 4° 58' 74949 | .0867924 | T'9384819 | .9962262 | T'9983580 | .0871212 | T'94010 |
| 11 ³ / ₄ | 4° 52' 39996 | .0849525 | T'9291764 | .9963850 | T'9984272 | .0852608 | T'93070 |
| 12 | 4° 46' 31513 | .0831889 | T'9200654 | .9965337 | T'9984920 | .0834783 | T'92157 |
| 12 ¹ / ₄ | 4° 34' 87678 | .0798722 | T'9023957 | .9968052 | T'9986103 | .0801282 | T'90370 |
| 13 | 4° 24' 31377 | .0768094 | T'8854146 | .9970457 | T'9987151 | .0770370 | T'88660 |
| 13 ¹ / ₂ | 4° 14' 53463 | .0739726 | T'8690709 | .9972602 | T'9988085 | .0741758 | T'87020 |
| 14 | 4° 5' 45227 | .0713376 | T'8533183 | .9974522 | T'9988921 | .0715198 | T'85440 |
| 14 ¹ / ₂ | 3° 56' 99630 | .0688836 | T'8381159 | .9976249 | T'9989672 | .0690476 | T'83910 |
| 15 | 3° 49' 10262 | .0665927 | T'8234265 | .9977802 | T'9990349 | .0667408 | T'82430 |
| 15 ¹ / ₂ | 3° 41' 71545 | .0644491 | T'8092166 | .9979210 | T'9990961 | .0645833 | T'81010 |
| 16 | 3° 34' 79372 | .0624390 | T'7954561 | .9980488 | T'9991517 | .0625611 | T'79600 |
| 16 ¹ / ₂ | 3° 28' 28690 | .0605505 | T'7821174 | .9981651 | T'9992024 | .0606618 | T'78200 |
| 17 | 3° 22' 16359 | .0587727 | T'7691755 | .9982715 | T'9992486 | .0588745 | T'76900 |
| 17 ¹ / ₂ | 3° 16' 39244 | .0570962 | T'7566075 | .9983687 | T'9992909 | .0571895 | T'75700 |
| 18 | 3° 10' 94205 | .0555127 | T'7443925 | .9984582 | T'9993298 | .0555984 | T'74500 |
| 18 ¹ / ₂ | 3° 5' 78104 | .0540146 | T'7325111 | .9985400 | T'9993655 | .0540936 | T'73310 |
| 19 | 3° 0' 89775 | .0525952 | T'7209458 | .9986160 | T'9993985 | .0526681 | T'72150 |
| 20 | 2° 51' 85314 | .0499688 | T'6986987 | .9987510 | T'9994572 | .0500313 | T'69900 |