

Precalc SECTION 7-1 (Part 1) NAME _____

Find the exact value w/o using a calculator. (no decimals allowed)

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|--|--|--|---|
| ① $\sin^{-1} 0$
0 | ② $\cos^{-1} 1$
0 | ③ $\sin^{-1}(-1)$
$-\frac{\pi}{2}$ | ④ $\cos^{-1}(-1)$
π |
| ⑤ $\tan^{-1} 0$
0 | ⑥ $\arctan(-1)$
$-\frac{\pi}{4}$ | ⑦ $\arcsin \frac{\sqrt{2}}{2}$
$\frac{\pi}{4}$ | ⑧ $\tan^{-1} \frac{\sqrt{3}}{3}$
$\frac{\pi}{6}$ |
| ⑨ $\arctan \sqrt{3}$
$\frac{\pi}{3}$ | ⑩ $\sin^{-1}(-\frac{\sqrt{3}}{2})$
$-\frac{\pi}{3}$ | ⑪ $\arccos(-\frac{\sqrt{3}}{2})$
$\frac{5\pi}{6}$ | ⑫ $\arcsin(-\frac{\sqrt{2}}{2})$
$-\frac{\pi}{4}$ |
| ⑬ $\cot^{-1} \sqrt{3}$
$\frac{\pi}{6}$ | ⑭ $\cot^{-1} 1$
$\frac{\pi}{4}$ | ⑮ $\operatorname{arccsc}(-1)$
$-\frac{\pi}{2}$ | ⑯ $\csc^{-1} \sqrt{2}$
$\frac{\pi}{4}$ |
| ⑰ $\sec^{-1} \frac{2\sqrt{3}}{3}$
$\frac{\pi}{6}$ | ⑱ $\operatorname{arcsec}(-2)$
$\frac{2\pi}{3}$ | ⑲ $\cot^{-1}(-\frac{\sqrt{3}}{3})$
$\frac{2\pi}{3}$ | ⑳ $\csc^{-1}(-\frac{2\sqrt{3}}{3})$
$-\frac{\pi}{3}$ |

Use a calculator to find the angles in radians to the nearest 100th

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|-------------------------------------|--|---------------------------------|--|
| ⑳ $\sin^{-1} .1$
0.10 | ㉑ $\cos^{-1} .6$
0.93 | ㉒ $\tan^{-1} 5$
1.37 | ㉓ $\sec^{-1} 4$
1.32 |
| ㉔ $\cot^{-1}(-\frac{1}{2})$
2.03 | ㉕ $\csc^{-1} 5$
0.20 | ㉖ $\arccos \frac{7}{8}$
0.51 | ㉗ $\arcsin \frac{\sqrt{3}}{5}$
0.35 |
| ㉘ $\cos^{-1} 2$
Not defined | ㉙ $\sin^{-1} \frac{1}{3}$
Not defined | | |

Find the exact value of each expression w/o using a calculator.

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|---|--|--|
| ⑳ $\sin[\sin^{-1} .54]$
0.54 | ㉑ $\tan(\tan^{-1} 7.4)$
7.4 | ㉒ $\cos^{-1}(\cos \frac{5\pi}{4})$
$\frac{3\pi}{4}$ |
| ㉓ $\sin^{-1}(\sin \frac{3\pi}{4})$
$\frac{\pi}{4}$ | ㉔ $\cos(\cos^{-1} 1.2)$
Not defined | ㉕ $\tan^{-1}(\tan(\frac{\pi}{3}))$
$\frac{\pi}{3}$ |

WRITE THE ALLOWABLE RANGES FOR THE PRINCIPAL INVERSES:

- | | | |
|---|--|---|
| ㉖ $\sin^{-1} x$
$-\frac{\pi}{2} \leq y \leq \frac{\pi}{2}$ | ㉗ $\cos^{-1} x$
$0 \leq y \leq \pi$ | ㉘ $\tan^{-1} x$
$-\frac{\pi}{2} < y < \frac{\pi}{2}$ |
|---|--|---|