

6.2 Inverse Trig Functions (continued)

Ex. 1 Find exact value of $\sin^{-1}(\sin 5\pi/4)$. Where is $5\pi/4$ located on the unit circle?

Ex. 2 Find exact value of $\sin(\tan^{-1} 1/2)$

Ex. 3 Find exact value of $\cos[\sin^{-1}(-1/3)]$

Ex. 4 Find exact value of $\tan [\cos^{-1}(-1/3)]$

Remaining Inverse Trig Functions

$y = \sec^{-1}x$ means $x = \sec y$ where $|x| \geq 1$ and $0 \leq y \leq \pi, y \neq \pi/2$

$y = \csc^{-1}x$ means $x = \csc y$ where $|x| \geq 1$ and $-\pi/2 \leq y \leq \pi/2, y \neq 0$

$y = \cot^{-1}x$ means $x = \cot y$ where $-\infty < x < \infty$ and $0 < y < \pi$

Ex. 5 Find exact value of $\csc^{-1} 2$

Ex. 6 Use calculator to approximate each expression in radians rounded to 2 decimal places.

a) $\sec^{-1} 3$

b) $\csc^{-1}(-4)$

c) $\cot^{-1}(\frac{1}{2})$

d) $\cot^{-1}(-2)$