

4.3 Inverse Trigonometric Properties

1. Answers:

- $\frac{\pi}{6}$
- $\frac{4\pi}{4}$
- $\frac{3\pi}{4}$
- $\frac{2\pi}{3}$
- $-\frac{\pi}{4}$
- $\frac{\pi}{4} <$

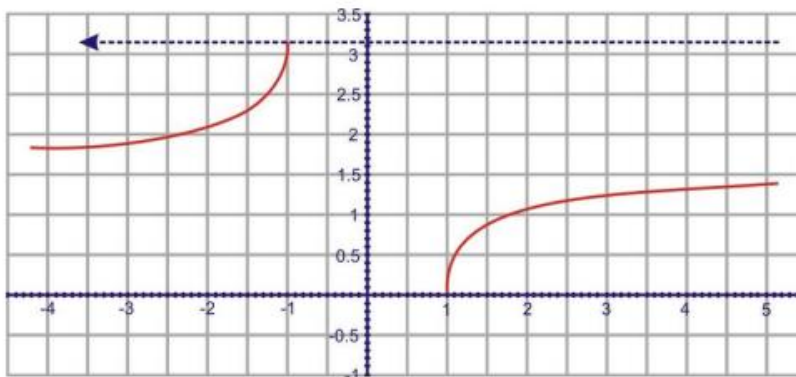
2. Answers:

- 2.747
- 0.377
- 1.397

3. Answers:

- $\csc\left(\cos^{-1}\frac{\sqrt{3}}{2}\right) = \csc\frac{\pi}{6} = 2$
- $\sec^{-1}(\tan(\cot^{-1}1)) = \sec^{-1}\left(\tan\frac{\pi}{4}\right) = \sec^{-1}1 = 0$
- $\tan^{-1}\left(\cos\frac{\pi}{2}\right) = \tan^{-1}0 = 0$
- $\cot\left(\sec^{-1}\frac{2\sqrt{3}}{3}\right) = \cot\left(\cos^{-1}\frac{\sqrt{3}}{2}\right) = \cot\frac{\pi}{6} = \frac{1}{\tan\frac{\pi}{6}} = \frac{1}{\frac{1}{\sqrt{3}}} = \sqrt{3}$

4. $y = \sec^{-1}x$ when plugged into your graphing calculator is $y = \cos^{-1}\frac{1}{x}$.



The domain is all reals, excluding the interval $(-1, 1)$. The range is all reals in the interval $[0, \pi]$, $y \neq \frac{\pi}{2}$. There are no y intercepts and the only x intercept is at 1.