

1. Find the value of each to the nearest hundredth.

a) $\cot(-75^\circ) = -0.27$
 $\frac{1}{\tan(-75^\circ)}$

b) $\sec \frac{3\pi}{7} = 4.49$
 $\frac{1}{\cos(3\pi/7)}$

c) $\csc 2.5 = 1.67$
 $\frac{1}{\sin(2.5)}$

2. Use the Unit Circle to find the exact value of each.
 Rationalize all denominators.

a) $\csc 600^\circ = -\frac{2\sqrt{3}}{3}$
 -360
 $\csc 240 = -\frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

b) $\cot \frac{9\pi}{4} = \cot \frac{\pi}{4} = 1$
 $\frac{x}{y}$

c) $\sec \frac{5\pi}{6} = -\frac{2}{\sqrt{3}} = -\frac{2\sqrt{3}}{3}$
 $\frac{1}{\cos(5\pi/6)}$

$\frac{9\pi}{4} - 2\pi$
 $\frac{9\pi}{4} - \frac{8\pi}{4}$

3. Given $\sec \theta = \frac{41}{9}$

Find the other five trig ratios.
 Rationalize all denominators.

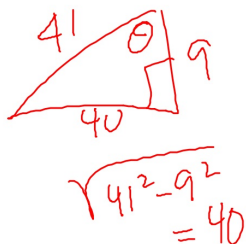
$\sin \theta = \frac{40}{41}$

$\cos \theta = \frac{9}{41}$

$\tan \theta = \frac{40}{9}$

$\cot \theta = \frac{9}{40}$

$\csc \theta = \frac{41}{40}$



4. Given $\cot \theta = \frac{2}{5}$

Find the other five trig ratios.
 Rationalize all denominators.

$\sin \theta = \frac{5}{\sqrt{29}} = \frac{5\sqrt{29}}{29}$

$\cos \theta = \frac{2}{\sqrt{29}} = \frac{2\sqrt{29}}{29}$

$\tan \theta = \frac{5}{2}$

$\sec \theta = \frac{\sqrt{29}}{2}$

$\csc \theta = \frac{\sqrt{29}}{5}$

