Bellwork Wednesday, April 16, 2014

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

a) Cot (-75°) $= -.27$

$\frac{1}{\tan(-75°)}$

b) Sec $\frac{3\pi}{7}$ $= 4.49$

$\frac{1}{\cos(3\pi/7)}$

c) Csc 2.5

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

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

a) Csc 600° $= -\frac{2\sqrt{3}}{3}$

-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 $\frac{5\pi}{6}$

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

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

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

3. Given $\sec\theta = \frac{41}{9}$ Find the other five trig ratios. Rationalize all denominators.

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

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

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

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

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

$\sqrt{41^2 - 9^2} = 40$

4. Given $\cot\theta = \frac{2}{5}$ Find the other five trig ratios. Rationalize all denominators.

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

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

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

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

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