

Name: Solution Key

Panther ID: _____

Pop-Quiz 1

Trigonometry

Summer A 2016

1. Find, without a calculator, the exact value of each of the following. Use the unit circle to find a reference angle. Specify if the expression is undefined

$$\sin(7\pi/6) = \underline{-\frac{1}{2}}$$

$$\cos(90^\circ) = \underline{0}$$

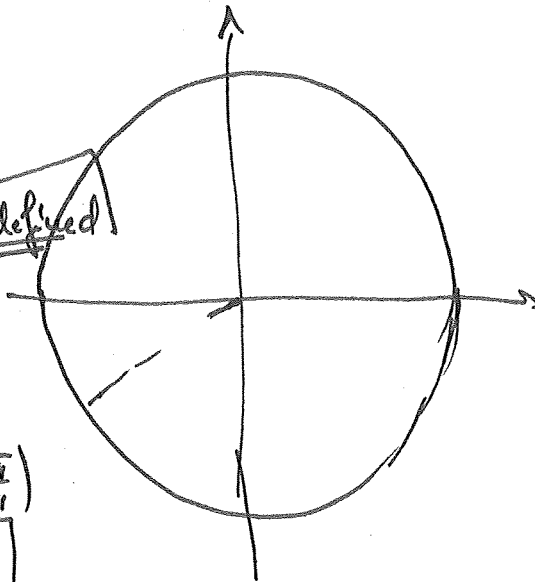
$$\cos(540^\circ) = \cos(180^\circ) = \underline{-1}$$

$$\cot(540^\circ) = \cot(180^\circ) \text{ [undefined]}$$

$$\frac{\cos(180^\circ)}{\sin(180^\circ)} = \frac{-1}{0} \text{ [undefined]}$$

$$\sec(-\pi/3) = \frac{1}{\cos(-\pi/3)} = \frac{1}{\cos(\pi/3)} = \frac{1}{\frac{1}{2}} = \underline{2}$$

$$\tan(11\pi/4) = \tan(2\pi + \frac{3\pi}{4}) = \tan(\frac{3\pi}{4}) = \underline{-1}$$

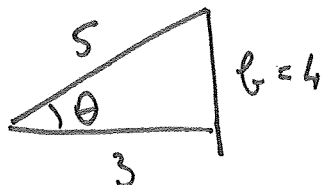


2. (a) Given that θ is an angle in the first quadrant and that $\cos(\theta) = \frac{3}{5}$, find, without calculator, the exact value of each of the following

$$\sin(\theta) = \frac{4}{5}$$

$$\tan(\theta) = \frac{4}{3}$$

$$\sec(\theta) = \frac{5}{3}$$



$$3^2 + b^2 = 5^2 \Rightarrow b = \sqrt{25 - 9} = \sqrt{16} = 4$$

(b) Given that θ is an angle in the fourth quadrant and that $\cos(\theta) = \frac{3}{5}$, find, without calculator, the exact value of each of the following

$$\sin(\theta) = \underline{-\frac{4}{5}}$$

$$\tan(\theta) = \underline{-\frac{4}{3}}$$

$$\csc(\theta) = \frac{1}{\sin \theta} = \underline{-\frac{5}{4}}$$