

MATH 150 Autumn 2005 Pre-Calculus

TA: Oguz KURT
Quiz 4

Name: KEY

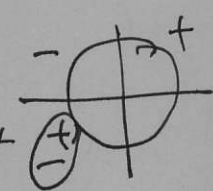
1. Given an angle θ satisfying:

$$\sec \theta = -3, \tan \theta > 0,$$

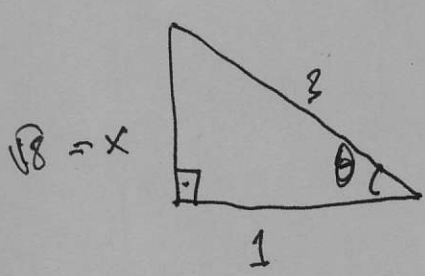
determine which quadrant θ is in and the EXACT values of the remaining five trigonometric functions at θ .

Calculator answers get no credit!

$\sec \theta < 0$ if θ is in 2nd or 3rd Quadrants
 $\tan \theta > 0$ if θ is in 1st or 3rd Quadrant



So, θ is in 3rd Quadrant



$$x^2 + 1^2 = 3^2 \rightarrow x^2 = 8 \rightarrow x = \sqrt{8}$$

$$\sin \theta = -\sqrt{8}/3$$

$$\cos \theta = -1/3$$

$$\tan \theta = +\sqrt{8}/1$$

$$\cot \theta = +1/\sqrt{8}$$

$$\csc \theta = -3/\sqrt{8}$$