

Name: _____

Quiz November 6

1. (2 points) Answer the following True or False questions. Write out the entire word; if I can't read it, I can't grade it.

(a) _____ A reference angle is always acute.

(b) _____ The Pythagorean Theorem $a^2 + b^2 = c^2$ is true for every triangle.

2. (4 points) I am running toward the Eiffel Tower, which I know is 324m tall. When I start running, the angle of inclination between myself and the tower is 5.8° . After running for 10 minutes, the angle of inclination has increased to 10.2° .

(a) Draw a picture that shows me, the Eiffel Tower, and any relevant distances and angles.

(b) Use your answer to part (a) to draw two relevant right triangles, with any known side lengths and angle measures labeled.

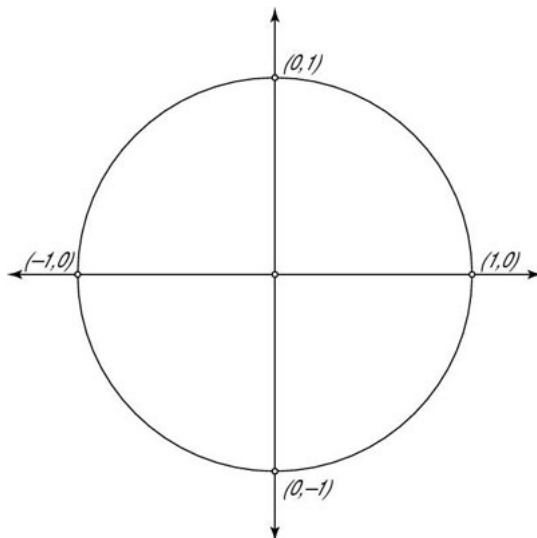
(c) How far did I run? (Hint: How far away was I initially, and how far away was I after running?)

(More on the back)

3. (4 points) There's an angle θ , and I don't know what it is. I know that $\tan(\theta) = -34$ and $\cos(\theta) < 0$.

(a) What quadrant does the terminal side of θ lie in?

(b) Roughly sketch where θ lies (just getting the quadrant right is enough), and clearly label the reference angle θ_R .



(c) Evaluate all trig functions of θ :

$$\sin(\theta) =$$

$$\csc(\theta) =$$

$$\cos(\theta) =$$

$$\sec(\theta) =$$

$$\tan(\theta) =$$

$$\cot(\theta) =$$