

Name: _____

Quiz 3

Math 112

You have 20 minutes to complete **both sides** of this quiz and upload your work to Canvas. Write your answers on a separate sheet of paper and scan them with a scanning app. When you're finished, first check your work if there is time remaining, then turn it in. You may use a scientific calculator, but not a graphing one — and you may not consult other people or the internet. **Show all your work.**

1. (8 points) Let (x, y) be a point on the unit circle with angle θ counter-clockwise from the positive x -axis. Write x and y as functions of θ .

$\mathbf{x} =$

$\mathbf{y} =$

2. (8 points)

- a) What do the three angles of any triangle add up to?
- b) State the Pythagorean theorem. You must define any variables you use and state the circumstances the theorem applies in.

3. (8 points) Find $\cos(\theta)$, given the following diagram. **Explain your reasoning.**

