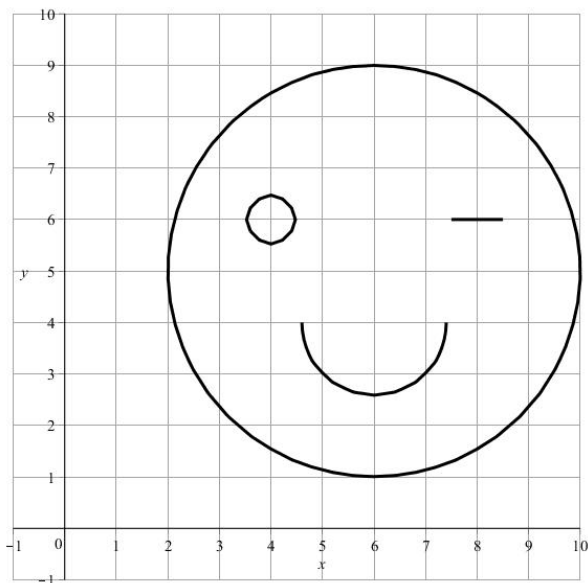


# Math 124, Spring 2016, Quiz 1

April 5, 2016

Name and Section \_\_\_\_\_

Draw this winking face using parametric equations where the parameter  $t$  is time in seconds. You can draw at a speed of  $\pi$  inches per second. You have to figure out at what  $t$  each will end with your speed of  $\pi$  inches per second and the length of the curve you will trace. The face is made up of circles, a half circle and a horizontal line.



1. Head. Start drawing at the rightmost point  $t = 0$ .

$$x(t) = \qquad \qquad \qquad y(t) = \qquad \qquad \qquad 0 \leq t \leq \text{---}$$

2. Mouth: This is not a complete circle! Draw counterclockwise starting at the leftmost point at  $t = 0$ .

$$x(t) = \qquad \qquad \qquad y(t) = \qquad \qquad \qquad 0 \leq t \leq \text{---}$$

3. Eye on the left. Start drawing at the top at  $t = 0$ . You have to approximate the radii of the eye.

$$x(t) = \qquad \qquad \qquad y(t) = \qquad \qquad \qquad 0 \leq t \leq \text{---}$$

4. Eye on the right. Start drawing at the leftmost point at  $t = 0$ .

$$x(t) = \qquad \qquad \qquad y(t) = \qquad \qquad \qquad 0 \leq t \leq \text{---}$$