

NAME:

MATH 133 - Michigan State University
November 28th, 2017.

Quiz 11

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**
If you have a question raise your hand and I will come to you.

1. A particular curve is represented parametrically by

$$x = -5 \cos(5t); \quad y = 6 \sin(5t); \quad t \in \left[0, \frac{\pi}{5}\right].$$

a). Find the Cartesian equation of the curve.

b). Draw and describe the curve.

c). As t increases from 0 to $\pi/5$, is the movement along the curve clockwise or counter-clockwise?

2. Find the equation (in x and y) to the line tangent to the curve

$$x(t) = 3e^{5t}, \quad y(t) = (t - 8)^2$$

at the point $(x, y) = (3, 64)$.