Assignment #3

Due on Friday, February 8, 2019

Read Section 3.1, on *Parametrized Curves in the Plane,* in the class lecture notes at
`http://pages.pomona.edu/~ajr04747/`

Do the following problems

1. Give a parametrization of the portion of the graph of $y = \sqrt{x}$ from the point $(1, 1)$ the point $(16, 4)$.

   Sketch the curve.

2. Give a parametrization of the portion of the ellipse given by the graph of the

   $$x^2 + 4y^2 = 4$$

   in the first quadrant.

   Sketch the curve.

3. Give a parametrization of a circular arc from the point $P(0, 0)$ to the point $Q(10, 0)$ on a circle of radius 5.

   Sketch the curve.

4. Give a parametrization of the straight line segment from the point $P(2, 5)$ to the point $Q(12, 9)$.

   Sketch the curve.

5. Give a parametrization of the straight line through the point $P(2, 1)$ that is parallel to the line $y = 2x$.

   Sketch the curve.