Math 001A Assignment 10.1　　　　　　　　Name:_____

DIRECTIONS write complete legible solutions to the following problems in the space provided. No Attached papers. Transfer all your answers to the space provided.

1. Consider the parametric equations below.
   $x = \sqrt{t}, \ y = 9 - t$
   a. Find the domain and range of both x
   b. Find the domain and range of both y
   c. Sketch the curve by using the parametric equations to plot points. Indicate with an arrow the direction in which the curve is traced as t increases.
   d. Eliminate the parameter to find a Cartesian equation of the curve.
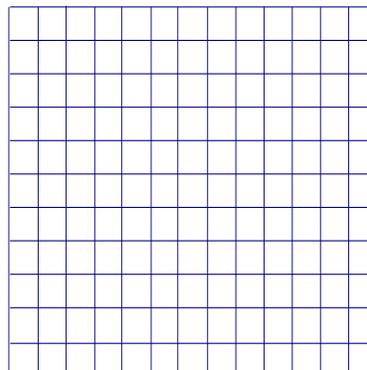
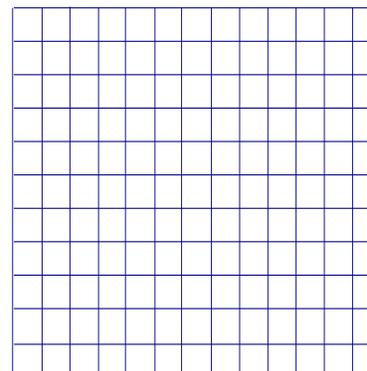Ans. Part a.　　　　　　　　Ans: Part b

Ans: Part c.　　　　　　　　Ans: Part d

2. Consider the parametric equations below.
   $x = 3\sin(2t), \ y = 2\cos(2t), \ t \in [0, \pi]$
   a. Find the domain and range of x
   b. Find the domain and range of y
   c, Sketch the curve by using the parametric equations to plot points. Indicate with an arrow the direction in which the curve is traced as t increases.
   d. Eliminate the parameter to find a Cartesian equation of the curve.
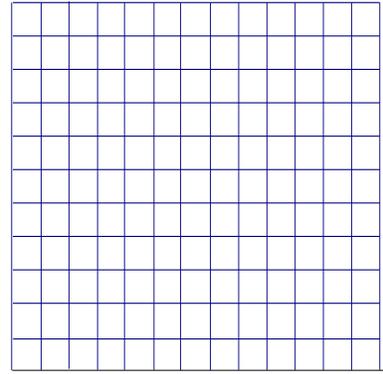
Ans: Part a.　　　　　　　　Ans: Part b

Ans: Part c.　　　　　　　　Ans: Part d

3.   Consider the parametric equations below.
     $x = \sin(t), \; y = t^2, \; -\pi \le t \le \pi$

a.   Find the domain and range of x
b.   Find the domain and range of y
c,   Sketch the curve by using the parametric
     equations to plot points. Indicate with an
     arrow the direction in which the curve is
     traced as t increases.
d.   Eliminate the parameter to find a Cartesian
     equation of the curve.

Ans: Part a.   Ans: Part b

Ans: Part c.   Ans: Part d

4.   Use the graphs of x = g(t) and y = f(t) to sketch
     he graph of te curve defined by , x = g(t) and y =
     f(t) on the grid below.