Math 182 Quiz 9 Name: _____

February 28, 2003

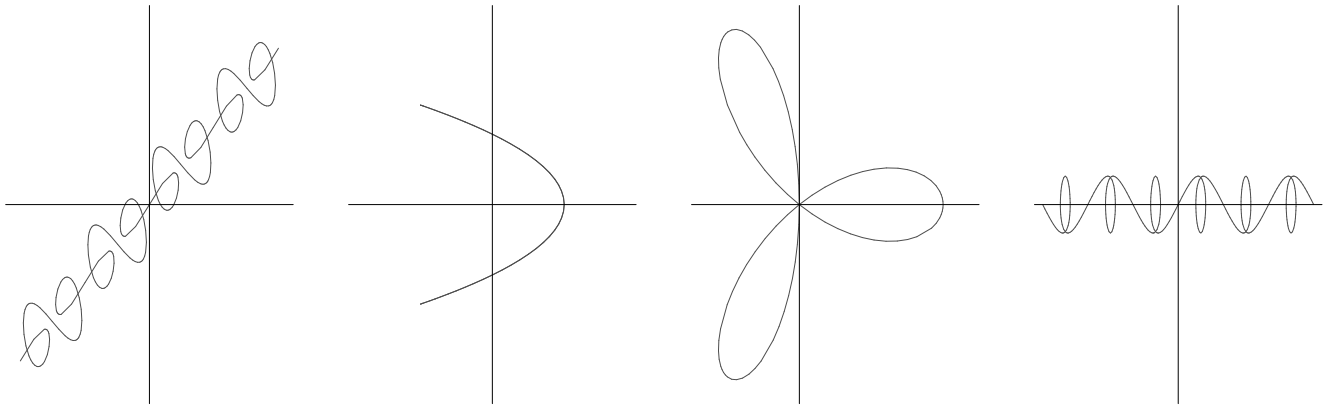
1. Match the following four parametric equations with their corresponding graph.

   (a) $x(t) = t + \sin(4t), \quad y(t) = t + \sin(6t)$

   (b) $x(t) = \cos(t) + \cos(2t), \quad y(t) = \sin(t) - \sin(2t)$

   (c) $x(t) = t + \sin(2t), \quad y(t) = \sin(3t)$

   (d) $x(t) = \cos(2t), \quad y(t) = \sin(t)$



2. Eliminate the parameter to obtain a function $y = f(x)$.

$$x(t) = \sin(t), \quad y(t) = cos^4(t)$$

   (a) $y = \sqrt{1 - \sqrt{x}}$

   (b) $y = x^4 - 2x^2 + 1$

   (c) $y = \cos^4(\sin(t))$

   (d) $y = 1 - x^2$

   (e) None of the above

   Bonus: Sketch a graph of the above curve.