

Math 151 Quiz #9
November 24, 2008

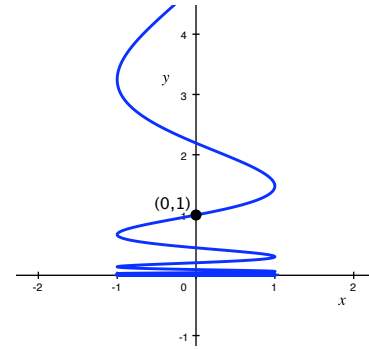
Name: _____

Simplify your answers. Show all work on a separate paper stapled to this sheet. No calculators permitted.

1. Consider the curve described by the parametric equations $x(t) = \sin(4t)$ and $y(t) = e^t$.

(a) (3 pts.) Find $\frac{dy}{dx}$ at the point $(0,1)$.

(b) (4 pts.) Find **all** of the values of t for which the curve has a vertical tangent.



2. (3 pts.) Sketch a graph of $f(x) = 3 - x^2$ for $-1 \leq x < 2$ on the given axes.
(Be sure to put a scale on your axes.)

Find the following, if they exist:

- (a) x -values where f has a local maximum
- (b) x -values where f has a local minimum
- (c) x -values where f have a global maximum
- (d) x -values where f have a global minimum
- (e) Absolute maximum and minimum values

