

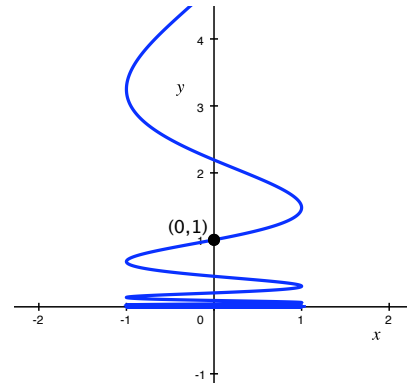
**Math 151 Quiz #9**  
**November 25, 2008**

Name: \_\_\_\_\_

Show all work.

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

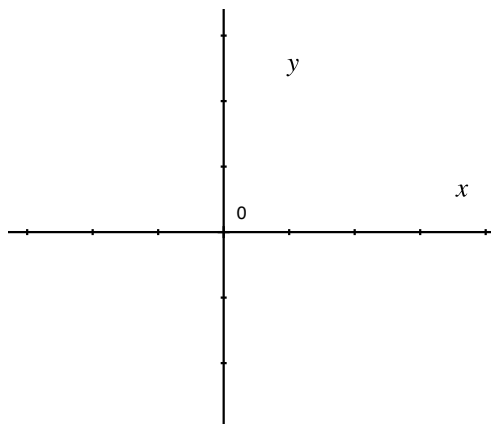
(a) ( pts.) Find  $\frac{dy}{dx}$  at the point (0,1).



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

2. ( pts.) Sketch a graph of the following function  $f(x)$  below and determine the absolute and local maximum and minimum **values** of  $f$ . Put "None" if there is no value.

$$f(x) = 3 - x^2 \quad \text{for } -1 \leq x < 2$$



Absolute Max. Value: \_\_\_\_\_

Absolute Min. Value: \_\_\_\_\_

Local Max. Value: \_\_\_\_\_

Local Min. Value: \_\_\_\_\_