

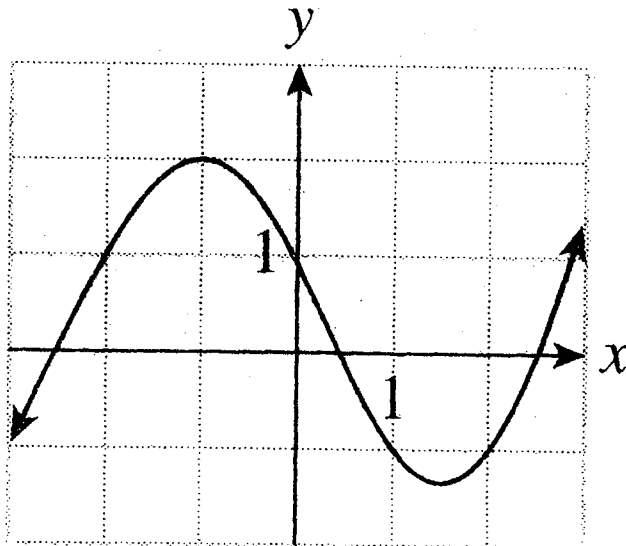
Quiz 5

Name: _____
MTH 241
Tues 9-9:50

Please answer the following questions in the space provided. Be sure to show all work for full credit.

1. Find the rate of change of the function $f(x) = x^2 + 3x - 1$ over the interval $(2, 2+h)$ and make a table for this rate of change for the values $h=1, .1, .01, \text{ and } .001$.

2. Consider the following graph of the function $g(x)$. Label all of the approximate points where the tangent line has the slope (a) 0, (b) 1, and (c) -1.



3. Find $h'(t)$ where $h(t) = t^3 - \frac{2}{t^2} + 4t^{0.2}$.

4. Find the equation of the line tangent to $u(x) = x^2 + 1$ at the point $x=-2$ and graph this line together with $u(x)$.