Name: _____

MATH 200 – Quiz 6 ☽

Instructions: Show work and put a box around your final answer.

February 21, 2013

1. Suppose $f(x) = \sqrt[3]{x}^2$.

   (a) $f'(x) =$

   (b) Find the equation of the tangent line to the graph of $f(x)$ at the point $(8, f(8))$.

2. Suppose $g(t) = \dfrac{t^2}{t+1}$.

   (a) $g'(t) =$

   (b) An object moving on a straight line is $g(t)$ feet from its starting position at time t seconds. Find its velocity at time $t = 2$ seconds. (Include units in your final answer.)

Name: _____

MATH 200 – Quiz 6 ☼

Instructions: Show work and put a box around your final answer.

February 21, 2013

1. Suppose $f(x) = (3x + 4)e^x$.

   (a) $f'(x) =$

   (b) Find the equation of the tangent line to the graph of $f(x)$ at the point $(0, f(0))$.

2. Suppose $g(t) = t^2 + \sqrt{t}$.

   (a) $g'(t) =$

   (b) An object moving on a straight line is $g(t)$ feet from its starting point at time t seconds. Find its velocity at time $t = 9$ seconds. (Include units in your final answer.)

Name: _____

MATH 200 – Quiz 6 ☆

Instructions: Show work and put a box around your final answer.

February 21, 2013

1. Suppose $f(x) = \dfrac{e^x}{x-1}$.

   (a) $f'(x) =$

   (b) Find the equation of the tangent line to the graph of $f(x)$ at the point $(0, f(0))$.

2. Suppose $g(t) = \sqrt{t} + t^2 + 3$.

   (a) $g'(t) =$

   (b) An object moving on a straight line is $g(t)$ feet from its starting point at time t seconds. Find its velocity at time $t = 4$ seconds. (Include units in your final answer.)

Name: _____

MATH 200 – Quiz 6 ✐

Instructions: Show work and put a box around your final answer.

February 21, 2013

1. Suppose $f(x) = 5xe^x + 2$.

   (a) $f'(x) =$

   (b) Find the equation of the tangent line to the graph of $f(x)$ at the point $(0, f(0))$.

2. Suppose $g(t) = t + \sqrt[3]{t} + 1$.

   (a) $g'(t) =$

   (b) An object moving on a straight line is $g(t)$ feet from its starting point at time t seconds. Find its velocity at time $t = 8$ seconds. (Include units in your final answer.)