Quiz 3

MATH 11A - Discussion Section F
February 16, 2017

Name & ID # : _____

Directions: Leave your final answer in exact form and box it in. You are more than welcome to write on the back if you find it necessary.
Definition: The derivative of a continuous function is defined as:

$$\frac{df}{dx} = f'(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h}$$

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(1) If $f(x) = 3x^2 - 1$, find:
   (a) $f'(x)$ using the formal definition of a derivative.
   (b) An equation of the tangent line to the curve given by $f(x)$ at the point $(1, 2)$.

(2) The graph of f is given. State, with reasons, the values of x at which f is not differentiable: