

Quiz 3 – Wednesday, July 14

Name: _____

1. (2 points) Let $f(x)$ be a function. Write down a formula which defines its derivative at the number a .

$$f'(a) =$$

2. (2 points) Let $f(x) = 2x$. Use the definition in the previous problem to compute $f'(1)$ (the derivative of $f(x)$ at the number 1). Show your calculations.

3. (2 points) Find the equation of the tangent line to $f(x)$ at the point $(1, 2)$. What is the slope of this line?

4. (4 points) For the function $f(x) = x^2$, compute $f'(x)$ and $f''(x)$.