

Show your work.

Math 151
Jan. 17, 2018
Quiz #2A

Name _____
(please print)

1. Define $f'(x) =$
(the definition)

(2)

2. $C(b)$ is the cost (dollars) to make b bicycles. Explain the meaning (using complete sentences) of
 $C(210) = 17,500$ and $C'(210) = 52$.

(3)

3. The graph of $y=f(x)$ is shown. ----->
On the lower axes graph $y = \{\text{slope of } f(x)\}$

(3)

4. Is $f(x) = \cos(x)$ continuous? yes no

Is $g(x) = 1/x$ continuous? yes no

- (3) Is $h(x) = 2 + |x|$ continuous? yes no

5. (a) $f(x) = x^2 + 3x + 2$. Evaluate and simplify (no limit)

$$\frac{f(2+a) - f(2)}{a} = \underline{\hspace{2cm}}$$

(3)

6. What is the equation of the line tangent to the graph of

$$f(x) = 2x^2 - 3x + 1 \text{ at the point } (2, 3) \quad y = \underline{\hspace{2cm}}$$

(3)

7. $f(x) = Ax^2 + Bx + C$. At what value of x is $f'(x) = 0$. $x = \underline{\hspace{2cm}}$

$$g(x) = 2x + \sin(x). \text{ At what value of } x \text{ is } g'(x) = 0. \quad x = \underline{\hspace{2cm}}$$

(4)

