

Quiz 3

Fundamentals of Calculus I

Name: _____

Explain and justify your thought process.

1. Find $\lim_{x \rightarrow 1} ex^6 + 4x^2 + 2.2$

No justification necessary.

2. What is the average rate of change of x^2 from $x = 2$ to $x = 3$?

3. Find $\lim_{x \rightarrow 4} \frac{x^2 - 16}{x - 4}$

4. What is the limit definition of a derivative?

True or False. No justification necessary.

5. _____ $f(x)$ is continuous at $x = a$ if $\lim_{x \rightarrow a} f(x) = f(a)$

6. _____ The function $x^3 + 5x$ is discontinuous at $x = 0$

7. _____ The average rate of change of $2x$ is always 2