

Name: _____

This quiz covers: 2.2, 2.3 and 2.5.

Directions: Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Evaluate the following limit or state that it does not exist:

$$\lim_{x \rightarrow 5} \frac{x^2 - 6x + 5}{x - 5}$$

2.) Let $f(x)$ be a continuous function and

$$\lim_{x \rightarrow 1^+} f(x) = 2$$

What can, if anything, be said about $f(1)$. Be sure to explain your answer with a sentence.

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3.) Draw a graph of a function that satisfies the following:

$$\lim_{x \rightarrow \infty} f(x) = 1$$

$$\lim_{x \rightarrow -\infty} f(x) = -1$$

$$\lim_{x \rightarrow 2^+} f(x) = \infty$$

$$\lim_{x \rightarrow 2^-} f(x) = -\infty$$