

Name : \_\_\_\_\_

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Essential Discontinuities

Evaluate each limit. Round to two decimals if necessary.

1) 
$$\lim_{x \rightarrow 5} \frac{x^2 - 6x + 9}{x^3 - 5x^2 - x + 5}$$

2) 
$$\lim_{x \rightarrow 4} \frac{-5}{x - 4}$$

3) 
$$\lim_{x \rightarrow -3\pi} \frac{1}{2} \tan\left(\frac{1}{2}x\right)$$

4) 
$$\lim_{x \rightarrow 5} \frac{x^2 - 2x - 15}{x^3 + 2x^2 - 23x - 60}$$

5) 
$$\lim_{x \rightarrow 2} \frac{-4}{x - 2}$$

6) 
$$\lim_{x \rightarrow 0} 6\cot\left(\frac{x}{4}\right)$$

7) 
$$\lim_{x \rightarrow 3} \frac{x^2 + 5x}{x^3 + 3x^2 - 10x - 24}$$

8) 
$$\lim_{x \rightarrow 2\pi} \frac{3}{2} \cot\left(\frac{1}{2}x + \pi\right)$$

9) 
$$\lim_{x \rightarrow \frac{1}{3}} \sec\left(\frac{3}{2}x\right)$$

10) 
$$\lim_{x \rightarrow 0} \frac{4}{x}$$



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Does not exist

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