Math 131 - Quiz 2 (IC)

September 1, 2021

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1 point) Evaluate the limit analytically: $\lim\limits_{x \to 3} \dfrac{x^2 - 9}{x + 3}$

2. (1 point) Explain why direct substitution cannot be used to evaluate the following limit.
$$\lim\limits_{x \to 1} \dfrac{5x - 5}{2 \ln x}$$

3. (2 points) Evaluate the limit analytically: $\lim\limits_{x \to 4} \dfrac{x(x - 2) - 8}{2x - 8}$

Math 131 - Quiz 2 (TH)

September 1, 2021

Name _____

Score _____

Evaluate each limit analytically. Show all work to receive full credit. Supply explanations when necessary. Each problem is worth 2 points. This quiz is due September 8.

1. $\displaystyle \lim_{x \to 10} \frac{x - 10}{\sqrt{x - 1} - 3}$

2. $\displaystyle \lim_{x \to 5} \left(\frac{1}{x - 5} - \frac{7}{x^2 - 3x - 10} \right)$

3. $\displaystyle \lim_{x \to 1^-} f(x)$ where $f(x) = \begin{cases} \cos \pi x, & x < 1 \\ x^2 - 1, & x > 1 \end{cases}$