Calculus Quiz A Week 1 (2.1) Name_____

Determine the limit by substitution.

1) $\lim_{x \to 0} (x^2 - 4)$

A) 4 B) -4 C) -5 D) Does not exist

Determine the limit algebraically, if it exists.

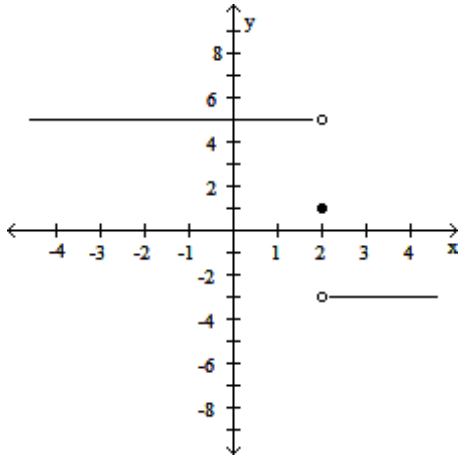
2) $\lim_{x \to -3} \frac{x^2 + 11x + 24}{x + 3}$

A) 11 B) 66 C) Does not exist D) 5

3) $\lim_{x \to 0} \frac{\frac{1}{x + 8} - \frac{1}{8}}{x}$

Determine the limit graphically, if it exists.

4) Find a) $\lim_{x \to 2^-} f(x) =$ b) $\lim_{x \to 2^+} f(x) =$ c) $\lim_{x \to 2} f(x) =$



Evaluate or determine that the limit does not exist for each of the limits

(a) $\lim_{x \to 2^-} f(x) =$ (b) $\lim_{x \to 2^+} f(x) =$ (c) $\lim_{x \to 2} f(x) =$

5)

$$f(x) = \begin{cases} -2x - 2, & \text{for } x < 2, \\ 1, & \text{for } x = 2, \\ -4x + 8, & \text{for } x > 2 \end{cases}$$