

Determine the limit by substitution.

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

A) 4

B) -4

C) -5

D) Does not exist

Determine the limit algebraically, if it exists.

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

A) 11

B) 66

C) Does not exist

D) 5

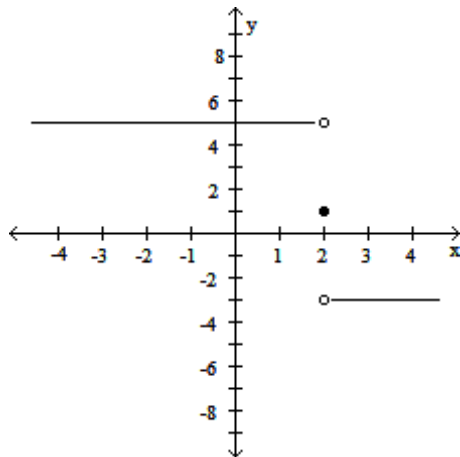
3) $\lim_{x \rightarrow 0} \frac{\frac{1}{x+8} - \frac{1}{8}}{x}$

Determine the limit graphically, if it exists.

4) Find a) $\lim_{x \rightarrow 2^-} f(x) =$

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

c) $\lim_{x \rightarrow 2} f(x) =$



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

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

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

(c) $\lim_{x \rightarrow 2} f(x) =$

5)

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