rk: HW 1.2

1 2 3 4 5 6 7 8 9 10

x. Score: 1 of 1 pt

Classify the statement as either true or false.

If f is continuous at x = 9, then f(9) does not exist.

Find the given limit.

$$\lim_{x \to -2} \frac{x^2 - 8}{2 - x} = \frac{\lim_{x \to -2} (x^2 - 8)}{\lim_{x \to -2} (2 - x)} = \frac{4 - 8}{2 + 2} = \frac{-4}{4} = -1$$

Use algebra and the properties of limits as needed to find the given limit. If the limit does not exist, say so.

$$\lim_{x \to 17} \frac{x^2 + 3x - 340}{x^2 - 289}$$

Find the given limit.

$\frac{0}{0}$ $\lim_{x \to -9} \left[\frac{x^3 + 729}{x + 9} \right] \equiv \frac{(x+9)(x^2 - 9x + 81)}{x + 9}$

$= x^2 - 9x + 81 \Big]$

$= (-9)^2 - 9(-9) + 81$

$= 81 + 81 + 81 = \boxed{243}$

Use algebra and the properties of limits as needed to find the given limit. If the limit does not exist, say so.

$\frac{0}{0}$ $\lim_{x \to 196} \left[\frac{\sqrt{x} - 14}{x - 196} \cdot \frac{\sqrt{x} + 14}{\sqrt{x} + 14} \right] \equiv$

$\frac{x \neq 196}{(x-196)(\sqrt{x} + 14)} = \frac{1}{\sqrt{x} + 14} \Big] =$

$\frac{1}{\sqrt{196} + 14} = \frac{1}{14 + 14}$

$= \boxed{\frac{1}{28}}$

k: HW 1.2

11 12 13 14 15 16 17 18 19 20

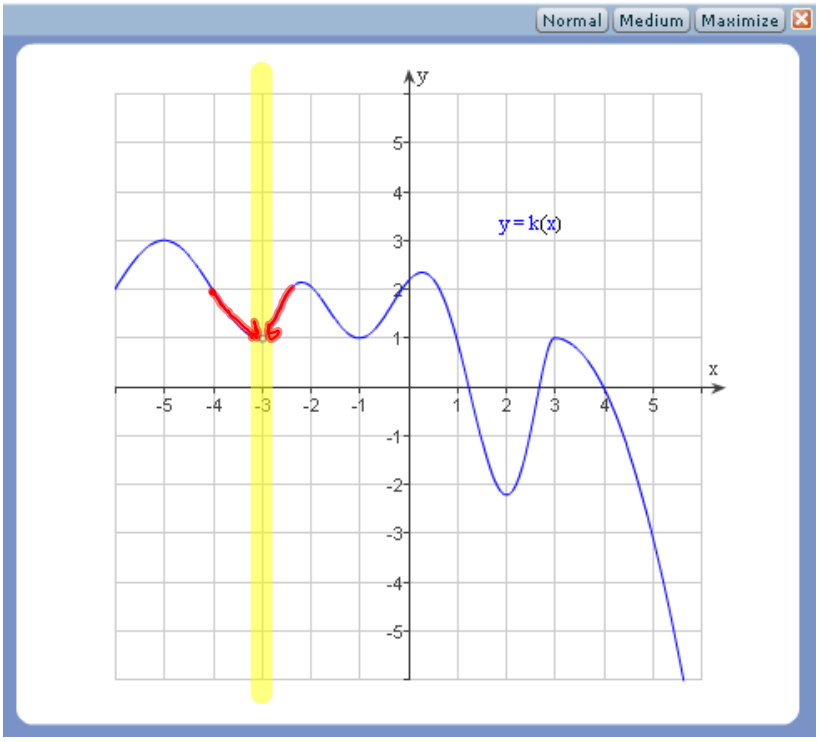
. Score: 0 of 1 pt

Use the graph and the function to find the following.

a) Find $\lim_{x \to -3} k(x)$. = 1

b) Find $k(-3)$.

c) Is k continuous at $x = -3$?



a) 1

b) dne

c) -3 is a pt of discontinuity

k: HW 1.2

11 12 13 14 15 16 17 18 19 20

Score: 0 of 1 pt

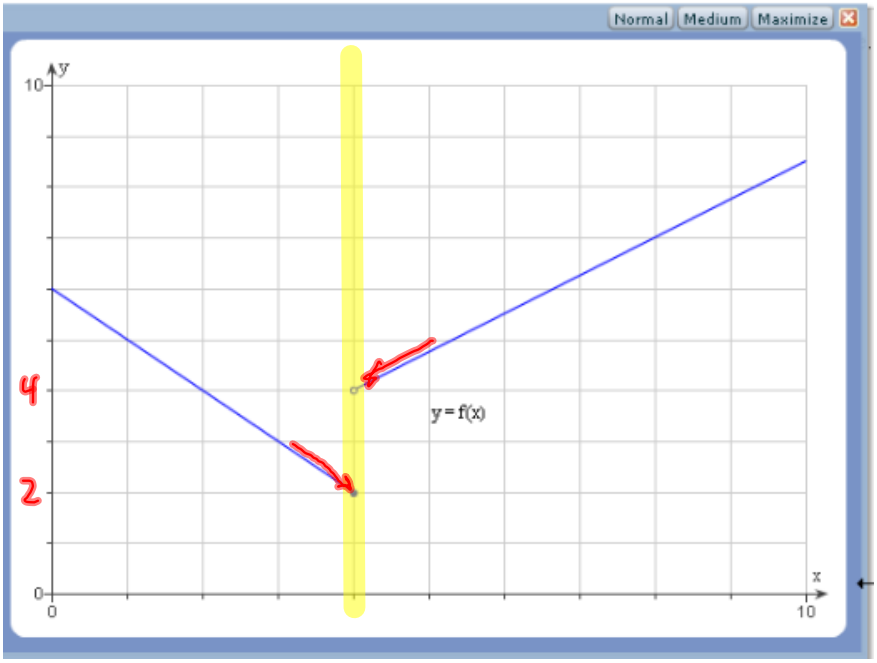
Use the graph to answer these questions.

a. Find $\lim_{x\to 4^+} f(x)$ and $\lim_{x\to 4^-} f(x)$.

b. Find $\lim_{x\to 4} f(x)$.

c. Find $f(4)$.

d. Is $f(x)$ continuous at $x=4$? Why or why not?



a) $\lim_{x\to 4^+} f(x) = 4$

$\lim_{x\to 4^-} f(x) = 2$

b) dne

c) $f(4) = 2$

d) 4 is a pt of discontinuity.

{ Limit dne at 4