

1.1 Limits Graphically

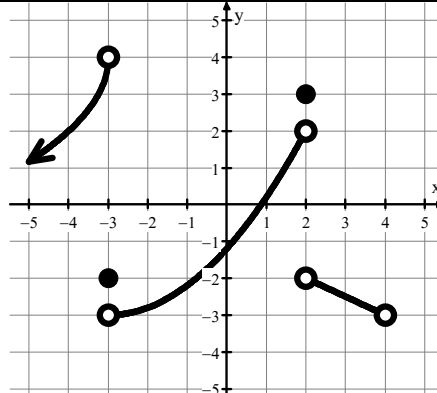
Calculus Name: _____

Corrective Assignment #1

Give the value of each statement. If the value does not exist, write "does not exist" or "undefined."

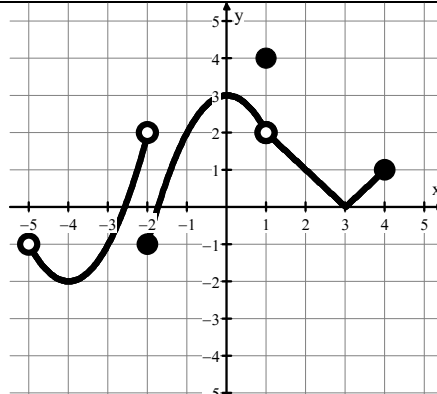
1.

- a. $\lim_{x \rightarrow 2} f(x) =$ b. $f(-3) =$ c. $\lim_{x \rightarrow -3^-} f(x) =$
 d. $\lim_{x \rightarrow 2^+} f(x) =$ e. $f(2) =$ f. $\lim_{x \rightarrow 2^-} f(x) =$
 g. $\lim_{x \rightarrow -3^+} f(x) =$ h. $f(4) =$ i. $\lim_{x \rightarrow -3} f(x) =$



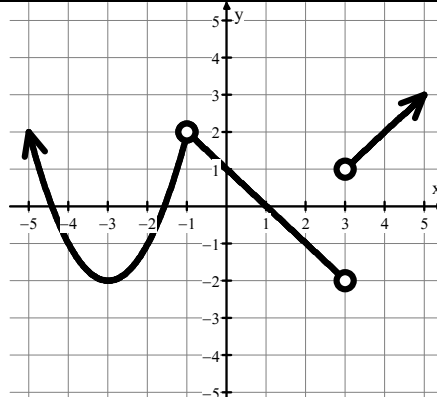
2.

- a. $\lim_{x \rightarrow 1} f(x) =$ b. $f(-2) =$ c. $\lim_{x \rightarrow -2^+} f(x) =$
 d. $\lim_{x \rightarrow 2} f(x) =$ e. $f(-4) =$ f. $\lim_{x \rightarrow 1^-} f(x) =$
 g. $\lim_{x \rightarrow 1^+} f(x) =$ h. $f(-5) =$ i. $f(1) =$



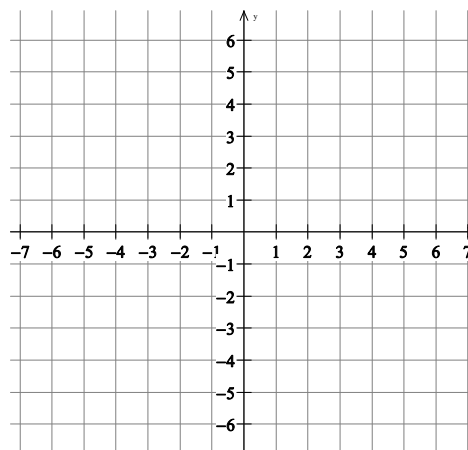
3.

- a. $\lim_{x \rightarrow 3^-} f(x) =$ b. $f(-1) =$ c. $\lim_{x \rightarrow -1} f(x) =$
 d. $\lim_{x \rightarrow 3} f(x) =$ e. $f(0) =$ f. $\lim_{x \rightarrow 3^+} f(x) =$
 g. $\lim_{x \rightarrow -1^+} f(x) =$ h. $f(3) =$ i. $\lim_{x \rightarrow -1^-} f(x) =$



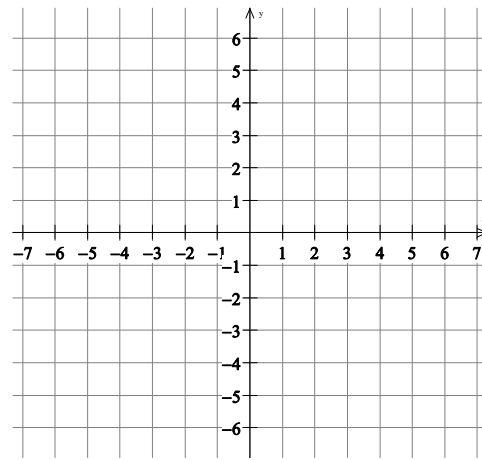
4. Sketch a graph of a function f that satisfies all of the following conditions.

- a. $f(3) = 4$
 b. $\lim_{x \rightarrow 3^-} f(x) = 2$
 c. $\lim_{x \rightarrow 3^+} f(x) = -4$
 d. $f(-2)$ is undefined.
 e. $\lim_{x \rightarrow -2^-} f(x) > \lim_{x \rightarrow -2^+} f(x)$



5. Sketch a graph of a function g that satisfies all of the following conditions.

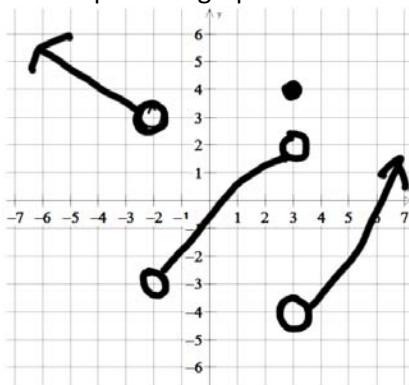
- a. $g(-5) = -2$
- b. $\lim_{x \rightarrow -5^+} g(x) = 4$
- c. $\lim_{x \rightarrow -5^-} g(x) < g(-5)$
- d. g is decreasing on $x < -5$
- e. $\lim_{x \rightarrow 2} g(x) = g(-5)$



Answers:

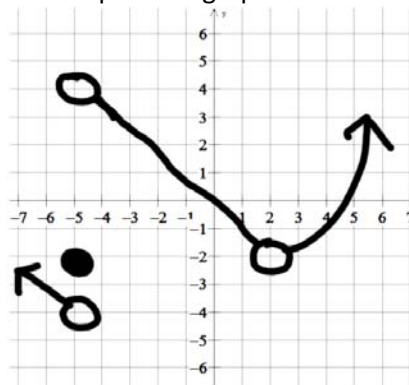
1a. DNE	b. -2	c. 4	d. -2	e. 3	f. 2	g. -3	h. DNE	i. DNE
2a. 2	b. -1	c. -1	d. 1	e. -2	f. 2	g. 2	h. DNE	i. 4
3a. -2	b. DNE	c. 2	d. DNE	e. 1	f. 1	g. 2	h. DNE	i. 2

4. One possible graph:



Double check that each condition is satisfied with your graph and it passes the vertical line test.

5. One possible graph:



Double check that each condition is satisfied with your graph and it passes the vertical line test.