

1.3 Finding Limits from Graphs

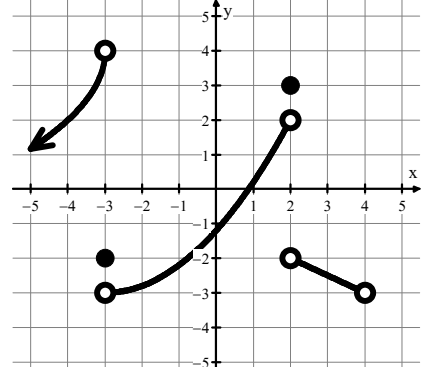
Calculus

Name: _____

For 1-2, give the value of each statement. If the value does not exist, write "does not exist" or "undefined."

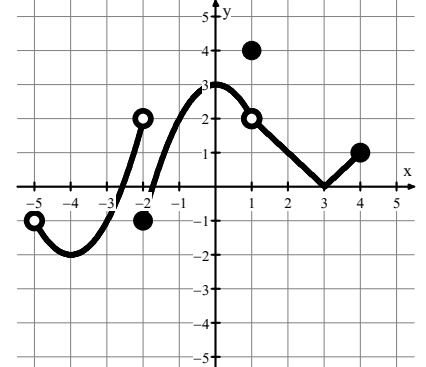
1.

- | | | |
|---------------------------------------|--------------|---------------------------------------|
| 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. $\lim_{x \rightarrow -3} f(x) =$ |



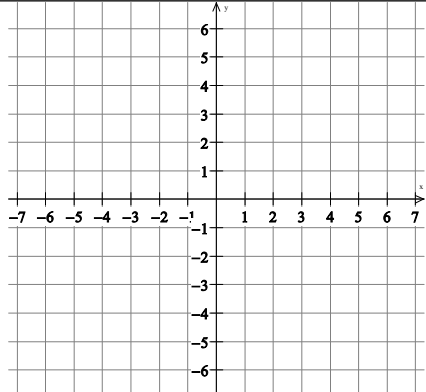
2.

- | | | |
|--------------------------------------|--------------|---------------------------------------|
| 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. 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. $\lim_{x \rightarrow -2^-} f(x) > \lim_{x \rightarrow -2^+} f(x)$



Answers to 1.3 CA #1

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

3. One possible graph:

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

