

Computing limits**Worksheet**

Name: _____

Date: _____ Period: _____

1. Compute the following limit using the properties of limits.

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

2. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow 6} (-2x - 7)$$

3. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow -4} (7x - 2)$$

4. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow -7} \frac{x^2 + 16x + 63}{x + 7}$$

5. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow -4} \frac{x^2 - 6x - 40}{x + 4}$$

6. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow -5} \frac{x^2 - 5x - 50}{x + 5}$$

7. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow 1} \frac{1 - x}{\sqrt{x} - 1}$$

8. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow 4} \frac{4 - x}{\sqrt{x} - 2}$$

9. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow -9} \frac{|x+9|}{x+9}$$

10. Compute the following limit using the properties of limits.

$$\lim_{x \rightarrow 5} \frac{|x-5|}{x-5}$$

Computing limits of piecewise functions**Worksheet**

Name: _____

Date: _____ Period: _____

1. Evaluate the following limits.

$$f(x) = \begin{cases} \sqrt{x+3} - 3, & x > -2 \\ 6x + 13, & x \leq -2 \end{cases}$$

2. Evaluate the following limits.

$$f(x) = \begin{cases} 3x + 4, & x < 0 \\ -x^2 + 6, & x \geq 0 \end{cases}$$

3. Evaluate the following limits.

$$f(x) = \begin{cases} 2x^2 - 205, & x < 10 \\ \sqrt{x-1} - 8, & x \geq 10 \end{cases}$$

4. Evaluate the following limits.

$$f(x) = \begin{cases} \sqrt{x-1} + 1, & x < 2 \\ \sqrt{x-1} + 2, & x \geq 2 \end{cases}$$

5. Evaluate the following limits.

$$f(x) = \begin{cases} 6x + 19, & x < -2 \\ 5x + 17, & x \geq -2 \end{cases}$$

Find limits using a graph

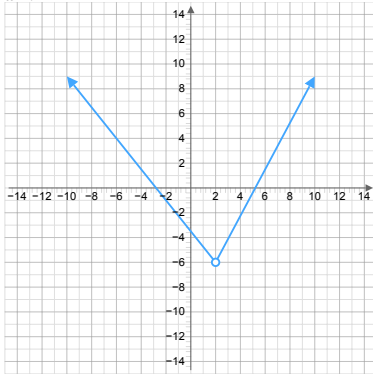
Worksheet

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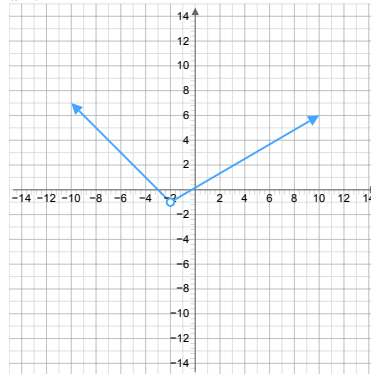
1. Find the following limit.

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



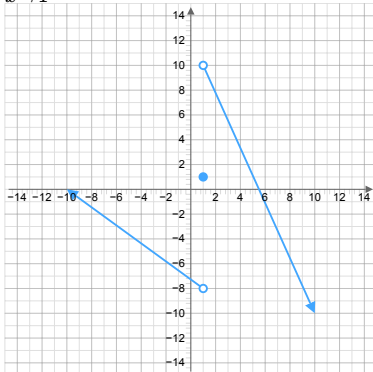
2. Find the following limit.

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



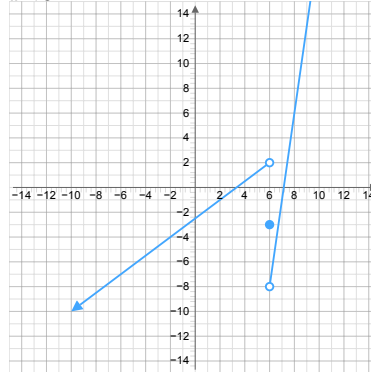
3. Find the following limit.

$$\lim_{x \rightarrow 1^-} f(x)$$



4. Find the following limit.

$$\lim_{x \rightarrow 8} f(x)$$



5. Find the value of the function at the given point.

$f(5)$

