

“Try to be a rainbow in someone’s cloud.” - Maya Angelou

Block: _____

Tuesday

Evaluate the function for the given value of x.

$$f(x) = \begin{cases} 3, & \text{if } x \leq 0 \\ 2, & \text{if } x > 0 \end{cases}$$

$$g(x) = \begin{cases} x + 5, & \text{if } x \leq 3 \\ 2x - 1, & \text{if } x > 3 \end{cases}$$

$$h(x) = \begin{cases} \frac{1}{2}x - 4, & \text{if } x \leq -2 \\ 3 - 2x, & \text{if } x > -2 \end{cases}$$

1. $f(2)$

2. $f(-4)$

3. $f(0)$

4. $f\left(\frac{1}{2}\right)$

5. $g(7)$

6. $g(0)$

7. $g(-1)$

8. $g(3)$

9. $h(-4)$

10. $h(-2)$

11. $h(-1)$

12. $h(6)$

Evaluate each composite value

1. If $f(x) = 3x - 5$ and $g(x) = x^2$, find $(f(g(3)))$

2. If $f(x) = -9x - 9$ and $g(x) = \sqrt{x-9}$, find $(f(g(10)))$

3. If $f(x) = -4x + 2$ and $g(x) = \sqrt{x-8}$, find $(f(g(12)))$

4. If $f(x) = -3x + 4$ and $g(x) = x^2$, find $(g(f(-2)))$

5. If $f(x) = -2x + 1$ and $g(x) = \sqrt{x^2 - 5}$, find $(g(f(2)))$

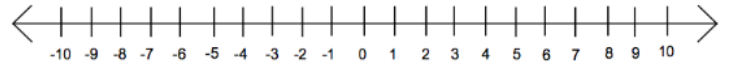
Find each composite.

6. Given $f(x) = -9x + 3$ and $g(x) = x^4$, find $(f(g(x)))$

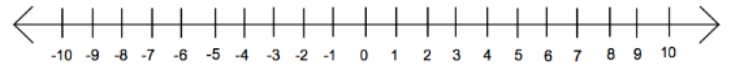
7. Given $f(x) = 2x - 5$ and $g(x) = x + 2$, find $(f(g(x)))$

8. Given $f(x) = x^2 + 7$ and $g(x) = x - 3$, find $(f(g(x)))$

1. $|x - 4| + 6 > 12$



2. $5|x - 1| - 3 \leq 42$



3. $|2x - 6| > 12$



4. $5 - |x - 6| = -10$

5. $2|x - 5| - 5 = -21$

6. $-2|7 - 3x| - 6 = -14$