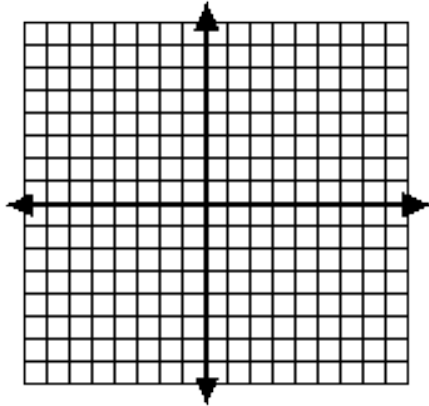


Graph each absolute value function. Then determine the domain and range.

1. $f(x) = |2x - 6| + 1$

x	y



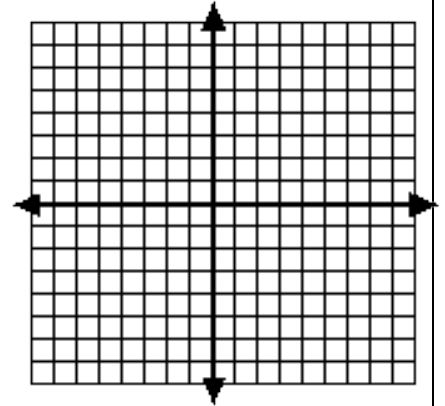
Vertex:

Domain:

Range:

2. $f(x) = |x - 3| + 2$

x	y



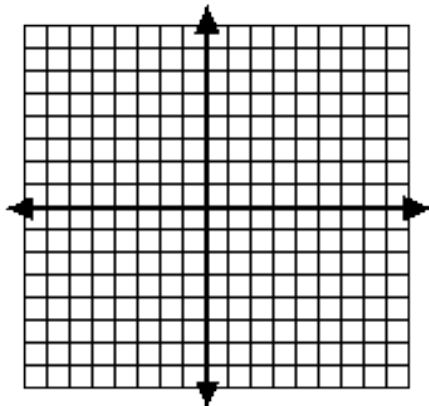
Vertex:

Domain:

Range:

3. $f(x) = |2x| + 3$

x	y



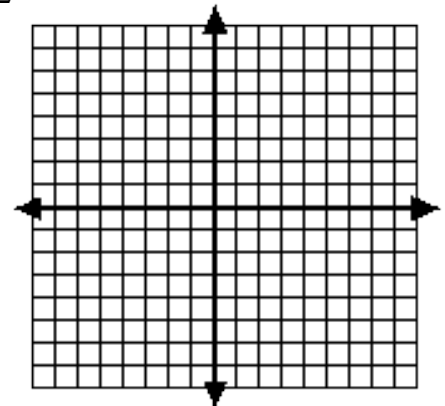
Vertex:

Domain:

Range:

4. $f(x) = 2|x - 1| - 2$

x	y



Vertex:

Domain:

Range:

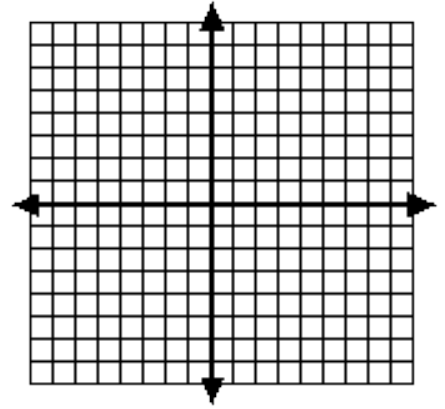
Graph each piece-wise function. Determine the domain and range. Then evaluate the function at the specified values.

5.

$$f(x) = \begin{cases} 3x + 2 & \text{if } x \geq 1 \\ -2x + 6 & \text{if } x < 1 \end{cases}$$

Domain:

Range:



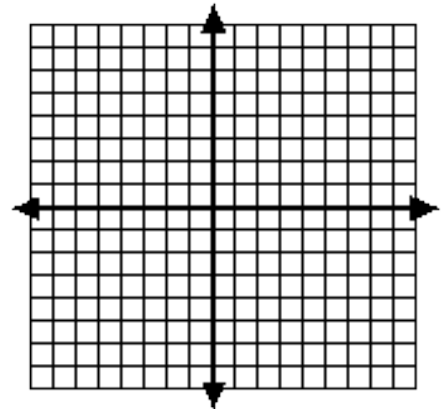
Evaluate:

$f(-5)$	$f(-1)$	$f(3)$
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6. $f(x) = \begin{cases} -2x & \text{if } x \leq -2 \\ \frac{1}{2}x + 3 & \text{if } x > -2 \end{cases}$

Domain:

Range:

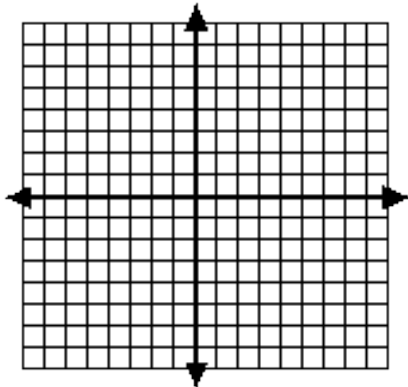


Evaluate:

$f(-5)$	$f(-1)$	$f(3)$
---------	---------	--------

7. Determine the type of parent function (constant, identity, absolute value or quadratic). Then graph the parent function and the given function. Describe the transformation.

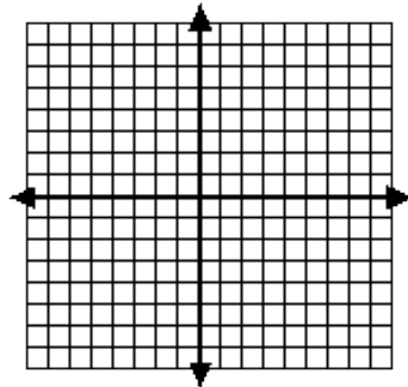
a. $y = \frac{1}{2}|x|$



Type of Function: _____

Description of Transformation: _____

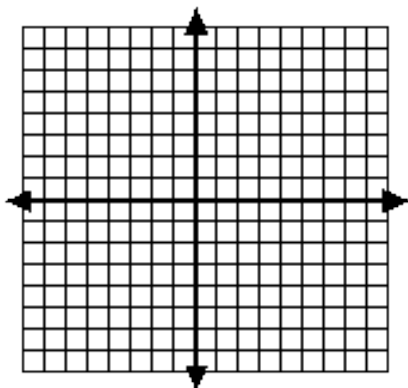
b. $y = -x - 2$



Type of Function: _____

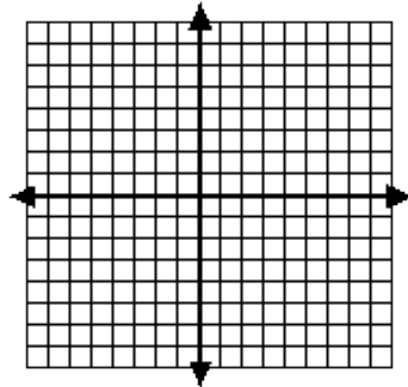
Description of Transformation: _____

c. $y = -5$



Type of Function: _____

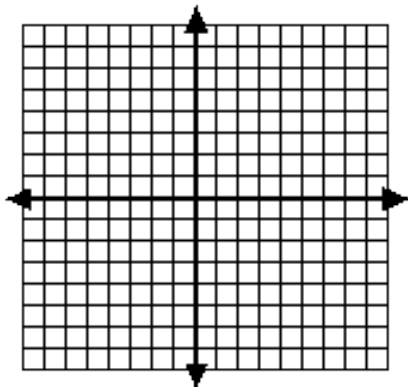
d. $y = (x + 1)^2$



Type of Function: _____

Description of Transformation: _____

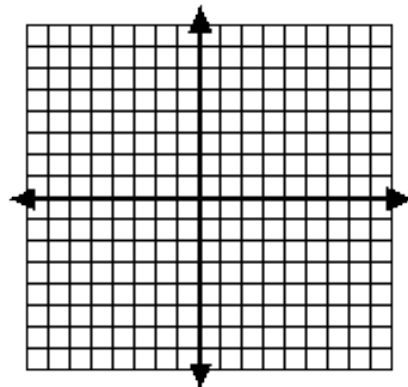
e. $y = x^2 - 5$



Type of Function: _____

Description of Transformation: _____

f. $y = |x - 2| + 3$

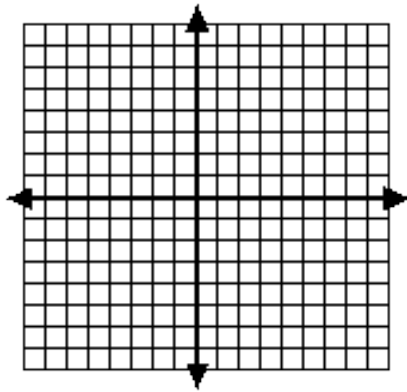


Type of Function: _____

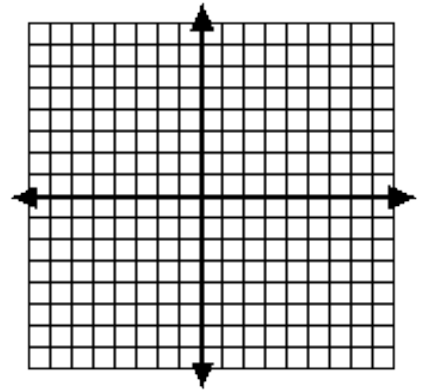
Description of Transformation: _____

8. Graph the following inequalities.

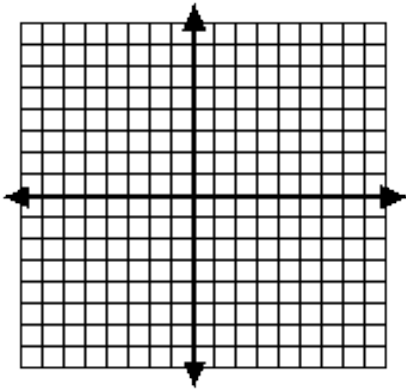
a. $y < \frac{3}{2}x - 1$



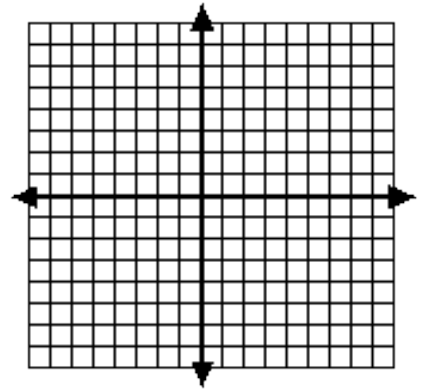
b. $4x + y \leq -1$



c. $y \leq |2x - 1|$



d. $y \geq |x| + 1$



9. You offer to mow your neighbors' lawns for \$20 or to wash their cars for \$10. Your goal is to earn at least \$1500 this summer.

Write and graph an inequality that represents the possible number of lawns you would have to mow x and cars you would have to wash y in order to reach your goal.

