

Use the coordinates in the x/y-chart below to fill in the x/y-charts for each reflection.

$$f(x) =$$

| x  | y  |
|----|----|
| -5 | -5 |
| -2 | 0  |
| 2  | 1  |
| 6  | -8 |

1)  $-f(x)$

| x  | y  |
|----|----|
| -5 | 5  |
| -2 | 0  |
| 2  | -1 |
| 6  | 8  |

2)  $f(-x)$

| x  | y  |
|----|----|
| 5  | -5 |
| 2  | 0  |
| -2 | 1  |
| -6 | -8 |

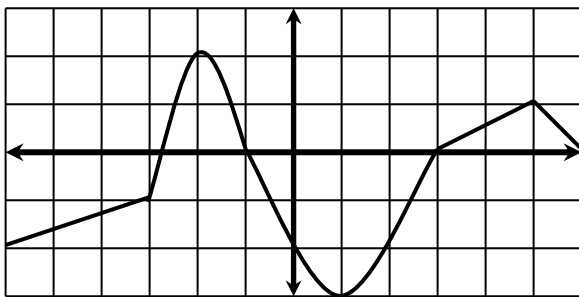
3)  $|f(x)|$

| x  | y |
|----|---|
| -5 | 5 |
| -2 | 0 |
| 2  | 1 |
| 6  | 8 |

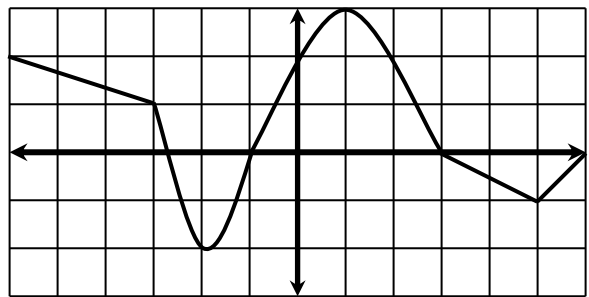
4)  $y = x$

| x  | y  |
|----|----|
| -5 | -5 |
| 0  | -2 |
| 1  | 2  |
| -8 | 6  |

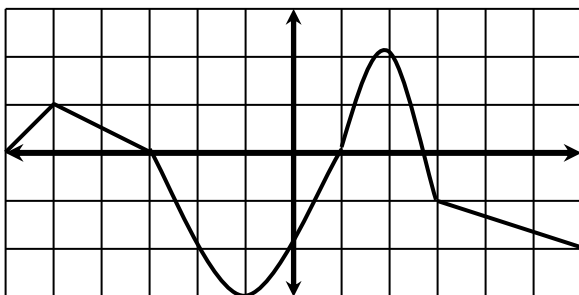
The graph of  $f(x)$  is shown below. Use the coordinate grids to graph  $-f(x)$ ,  $f(-x)$  and  $|f(x)|$



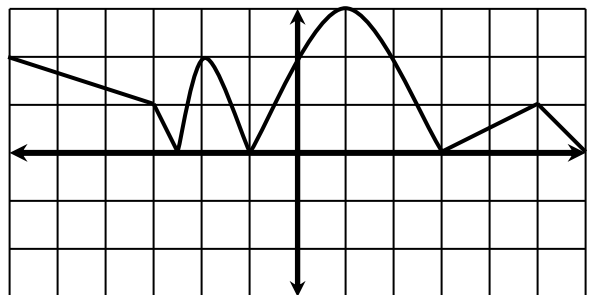
5)  $-f(x)$



6)  $f(-x)$

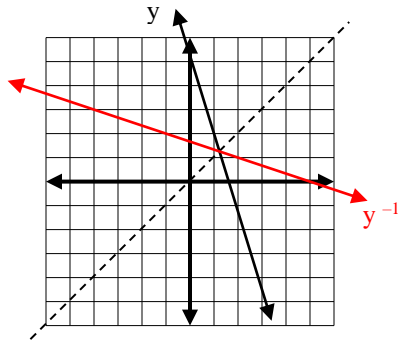


7)  $|f(x)|$



Sketch the graph of each equation, **AND** the reflection of the graph in the line  $y = x$  (inverse) on each graph provided, then give an equation of the reflected graph.

8)  $y = -3x + 5$



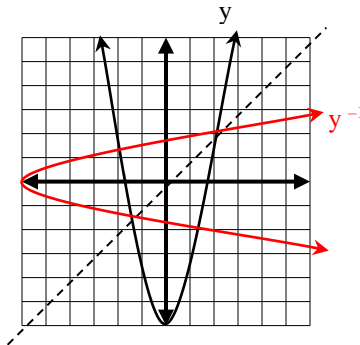
| x | y  | x  | y |
|---|----|----|---|
| 0 | 5  | 5  | 0 |
| 1 | 2  | 2  | 1 |
| 2 | -1 | -1 | 2 |

$$x = -3y + 5$$

$$x - 5 = -3y$$

$$y^{-1} = \frac{x - 5}{-3}$$

9)  $y = 2x^2 - 6$



| x | y  | x  | y |
|---|----|----|---|
| 0 | -6 | -6 | 0 |
| 1 | -4 | -4 | 1 |
| 2 | 2  | 2  | 2 |

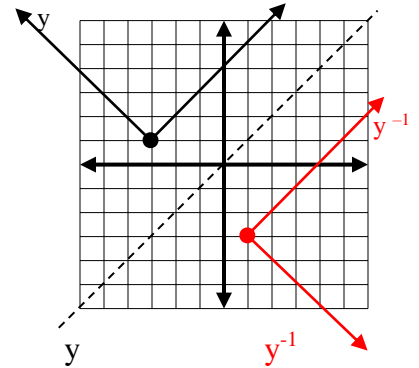
$$x = 2y^2 - 6$$

$$x + 6 = 2y^2$$

$$\frac{x + 6}{2} = y^2$$

$$y^{-1} = \pm \sqrt{\frac{x + 6}{2}}, x \geq -6$$

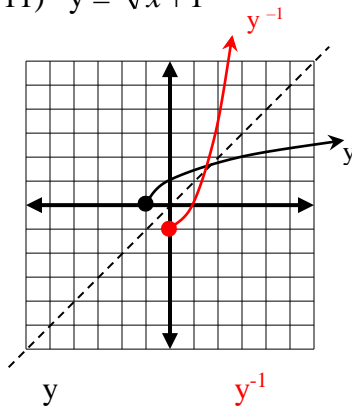
10)  $y = |x + 3| + 1$



| x  | y | x | y  |
|----|---|---|----|
| -3 | 1 | 1 | -3 |
| -2 | 2 | 2 | -2 |
| -1 | 3 | 3 | -1 |

$$x = |y + 3| + 1$$

11)  $y = \sqrt{x + 1}$



| x  | y | x | y  |
|----|---|---|----|
| -1 | 0 | 0 | -1 |
| 0  | 1 | 1 | 0  |
| 3  | 2 | 2 | 3  |

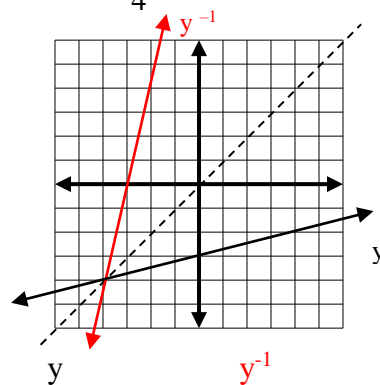
$$x = \sqrt{y + 1}$$

$$x^2 = y + 1$$

$$x^2 - 1 = y$$

$$y^{-1} = x^2 - 1, x \geq 0$$

12)  $y = \frac{1}{4}x - 3$



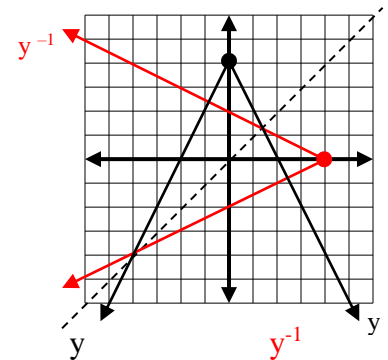
| x  | y  | x  | y  |
|----|----|----|----|
| 0  | -3 | -3 | 0  |
| 4  | -2 | -2 | 4  |
| -4 | -4 | -4 | -4 |

$$x = \frac{1}{4}y - 3$$

$$x + 3 = \frac{1}{4}y$$

$$y^{-1} = 4x + 12$$

13)  $y = -2|x| + 4$



| x | y | x | y |
|---|---|---|---|
| 0 | 4 | 4 | 0 |
| 1 | 2 | 2 | 1 |
| 2 | 0 | 0 | 2 |

$$x = -2|y| + 4$$