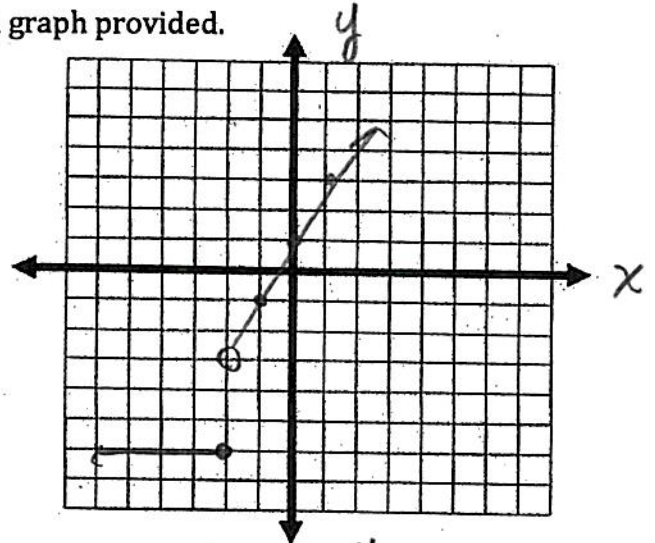


Name: Key  
 PC: Even More Practice with Piecewise Functions

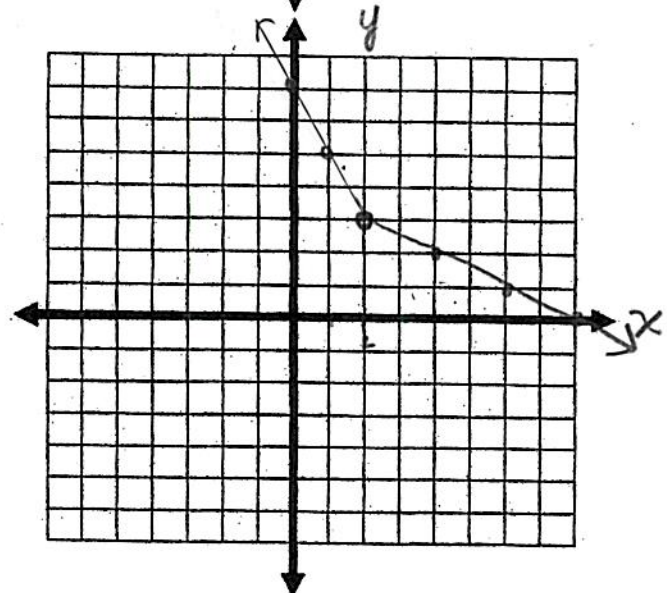
Date: \_\_\_\_\_  
 Ms. Loughran

Graph each of the following piecewise functions on graph provided.

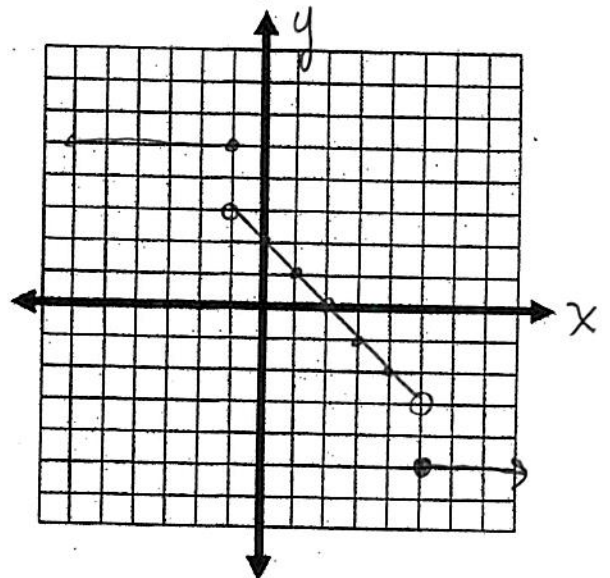
$$1. f(x) = \begin{cases} -6 & \text{if } x \leq -2 \\ 2x+1 & \text{if } x > -2 \end{cases}$$



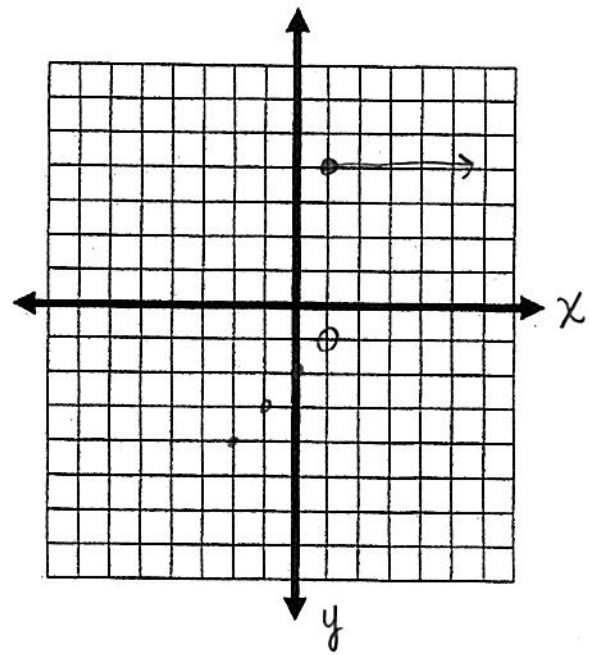
$$2. f(x) = \begin{cases} -\frac{1}{2}x+4 & \text{if } x \leq 2 \\ -2x+7 & \text{if } x > 2 \end{cases}$$



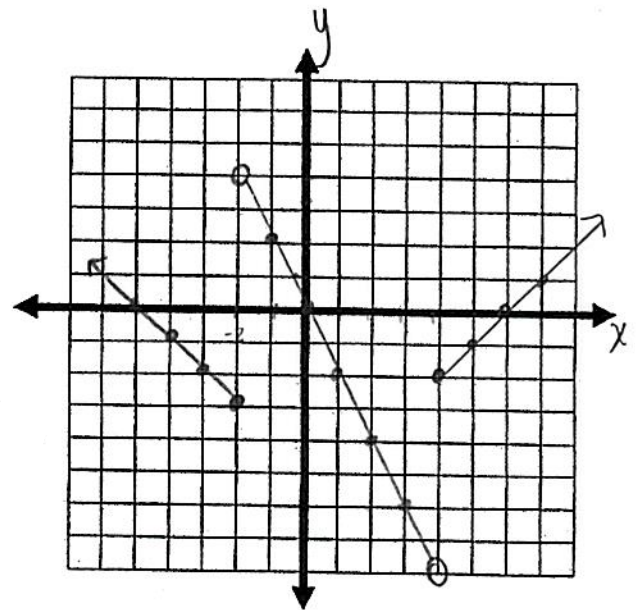
$$3. f(x) = \begin{cases} 5 & \text{if } x \leq -1 \\ -x+2 & \text{if } -1 < x < 5 \\ -5 & \text{if } x \geq 5 \end{cases}$$



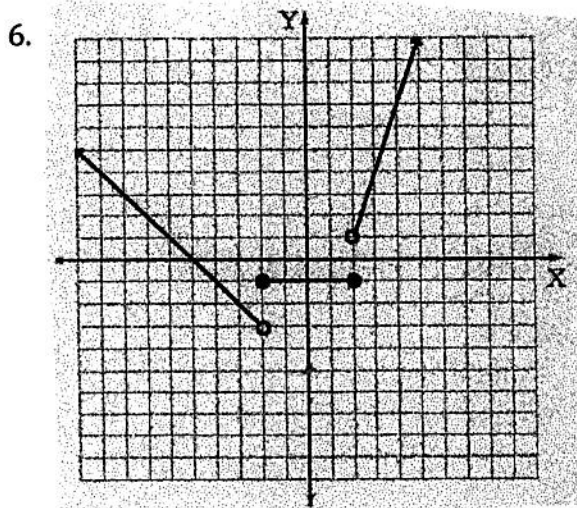
$$4. f(x) = \begin{cases} 4 & \text{if } x \geq 1 \\ x-2 & \text{if } x < 1 \end{cases}$$



$$5. f(x) = \begin{cases} -x-5 & \text{if } x \leq -2 \\ -2x & \text{if } -2 < x < 4 \\ x-6 & \text{if } x \geq 4 \end{cases}$$

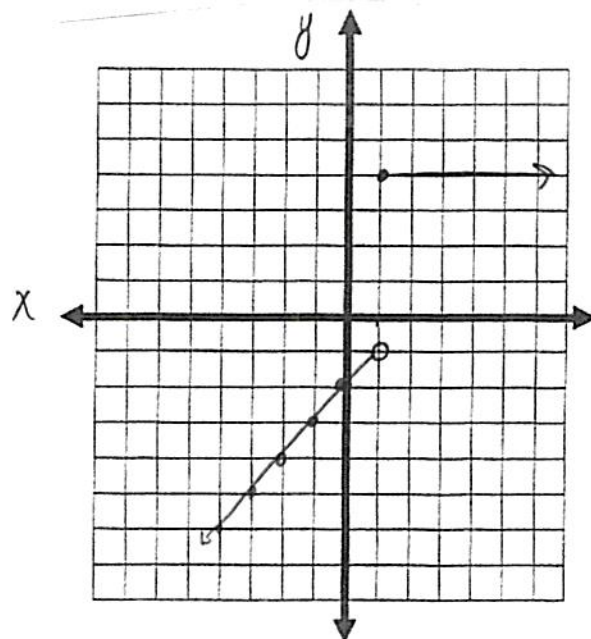


Write the equations for the piecewise functions whose graphs are shown below.

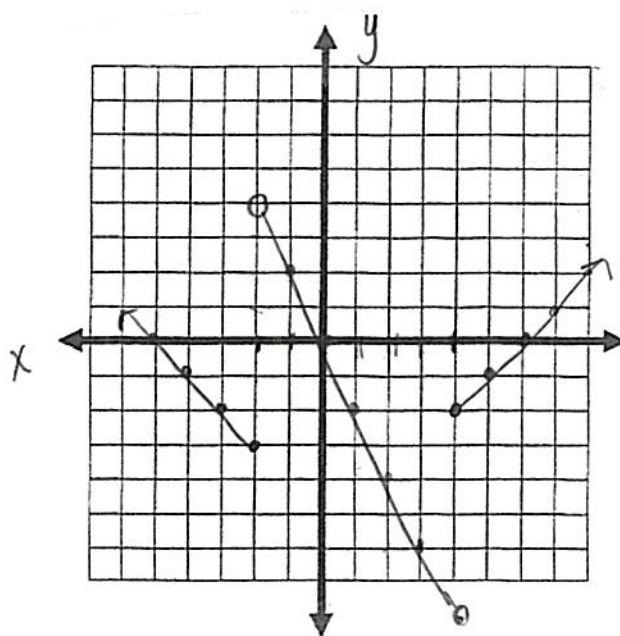


$$f(x) = \begin{cases} -x-5 & x < -2 \\ -1 & -2 \leq x \leq 2 \\ 3x-5 & x \geq 2 \end{cases}$$

$$4. f(x) = \begin{cases} 4 & \text{if } x \geq 1 \\ x-2 & \text{if } x < 1 \end{cases}$$

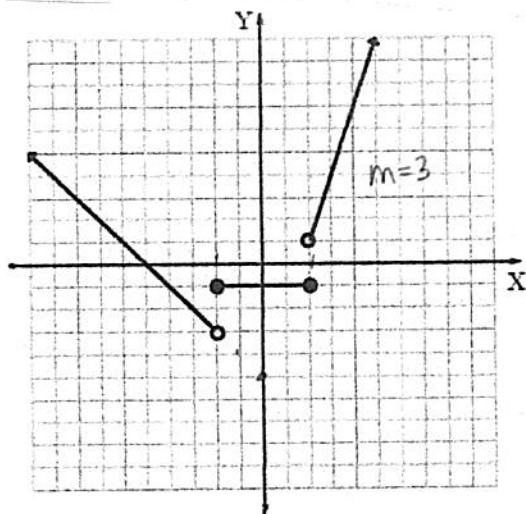


$$5. f(x) = \begin{cases} -x-5 & \text{if } x \leq -2 \\ -2x & \text{if } -2 < x < 4 \\ x-6 & \text{if } x \geq 4 \end{cases}$$



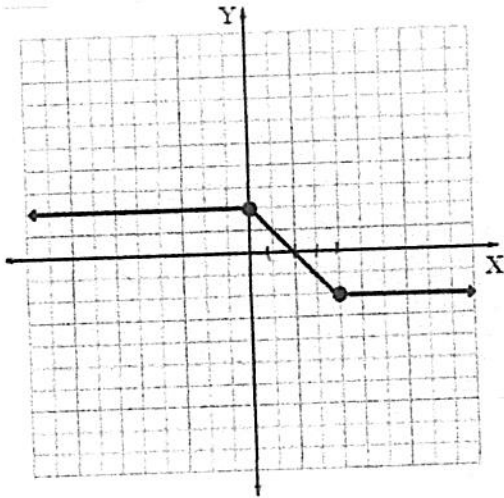
Write the equations for the piecewise functions whose graphs are shown below.

6.



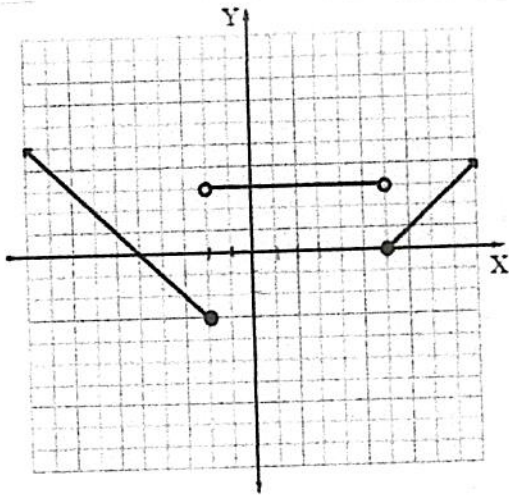
$$f(x) = \begin{cases} 3x-5 & x > 2 \\ -1 & -2 \leq x \leq 2 \\ -x-5 & x < -2 \end{cases}$$

7.



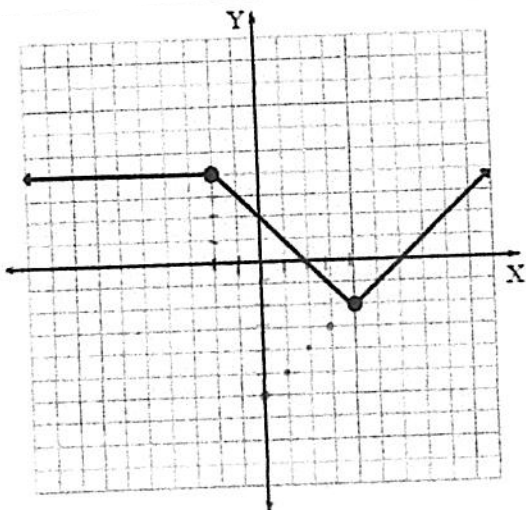
$$f(x) = \begin{cases} 2 & x < 0 \\ -x + 2 & 0 \leq x \leq 2 \\ -2 & x > 2 \end{cases}$$

8.



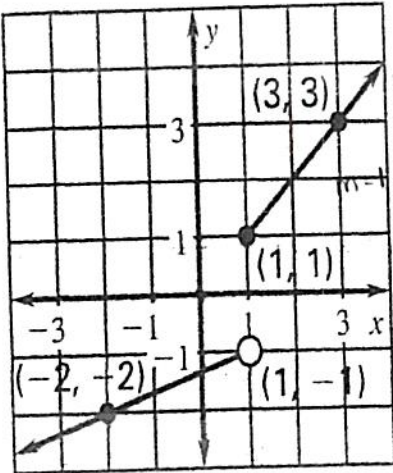
$$f(x) = \begin{cases} -x - 5 & x \leq -2 \\ 3 & -2 < x < 6 \\ x - 6 & x > 6 \end{cases}$$

9.



$$f(x) = \begin{cases} 4 & x < -2 \\ -x + 2 & -2 \leq x \leq 4 \\ x - 6 & x > 4 \end{cases}$$

10.



$$m = \frac{1}{3} \quad (1, -1)$$

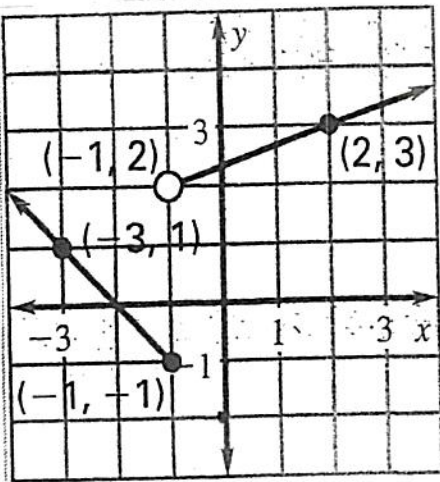
$$y + 1 = \frac{1}{3}(x - 1)$$

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

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

$$f(x) = \begin{cases} x & x \geq 1 \\ \frac{1}{3}x - \frac{4}{3} & x < 1 \end{cases}$$

11.



$$m = \frac{1}{3}$$

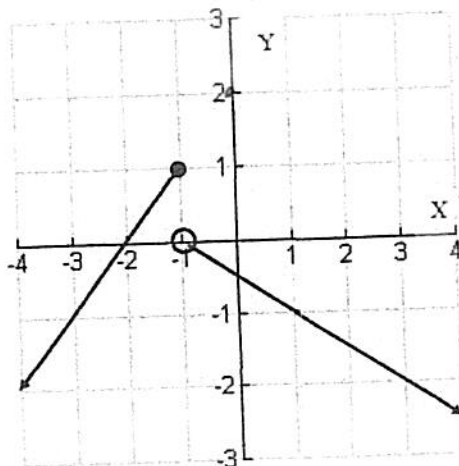
$$y - 3 = \frac{1}{3}(x - 2)$$

$$y - 3 = \frac{1}{3}x - \frac{2}{3}$$

$$y = \frac{1}{3}x - \frac{2}{3} + 3$$

$$f(x) = \begin{cases} -x - 2 & x \leq -1 \\ \frac{1}{3}x + \frac{7}{3} & x > -1 \end{cases}$$

12.



$$f(x) = \begin{cases} x + 2 & x \leq -1 \\ -\frac{1}{2}x - \frac{1}{2} & x > -1 \end{cases}$$

$$m = -\frac{1}{2}$$

$$(-1, 0)$$

$$y = -\frac{1}{2}(x + 1)$$