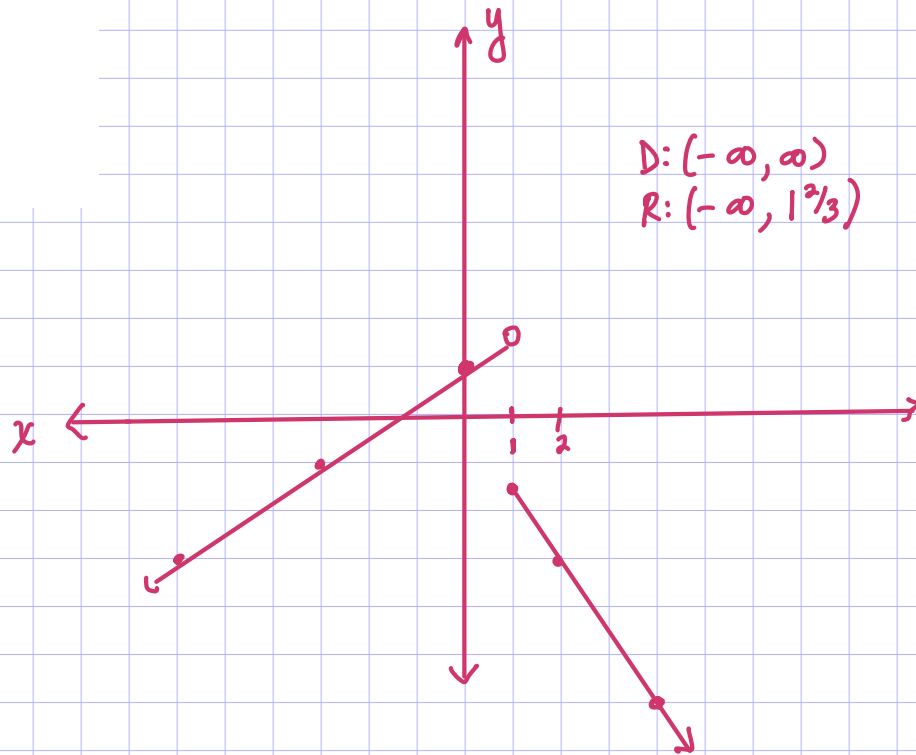


Classwork/Homework 10-16

1.

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

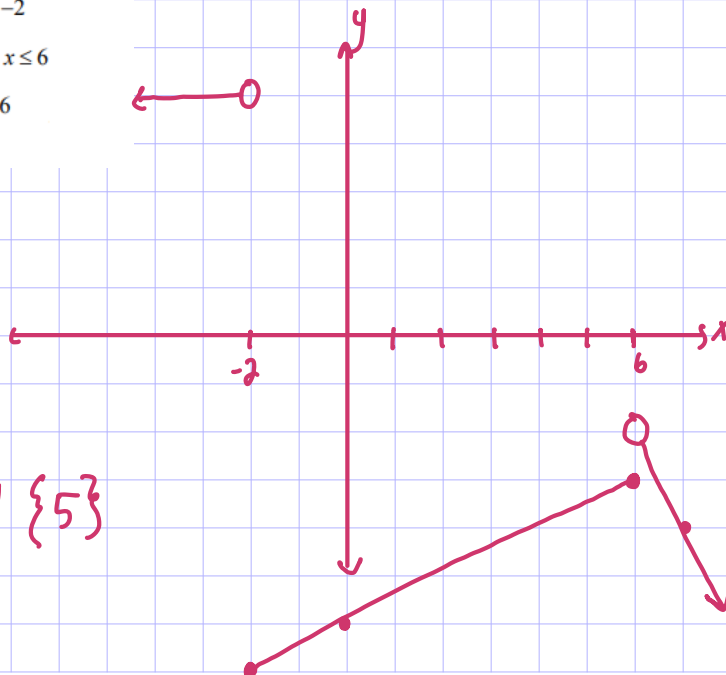


$$D: (-\infty, \infty)$$

$$R: (-\infty, 1\frac{2}{3})$$

2.

$$f(x) = \begin{cases} 5 & \text{if } x < -2 \\ \frac{1}{2}x - 6 & \text{if } -2 \leq x \leq 6 \\ -2x + 10 & \text{if } x > 6 \end{cases}$$

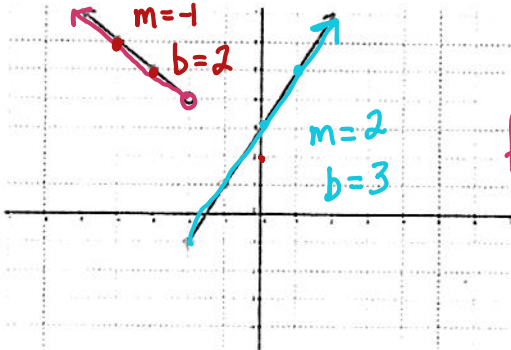


$$D: \mathbb{R}$$

$$R: (-\infty, -2) \cup \{5\}$$

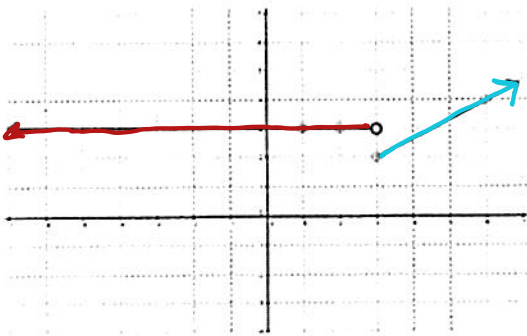
Write the piecewise equation of each of the functions graphed below.

1.



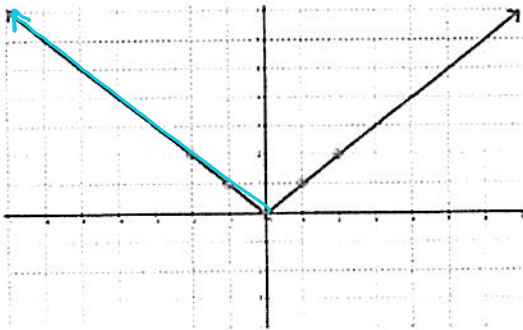
$$f(x) = \begin{cases} -x+2 & x < -2 \\ 2x+3 & x \geq -2 \end{cases}$$

2.



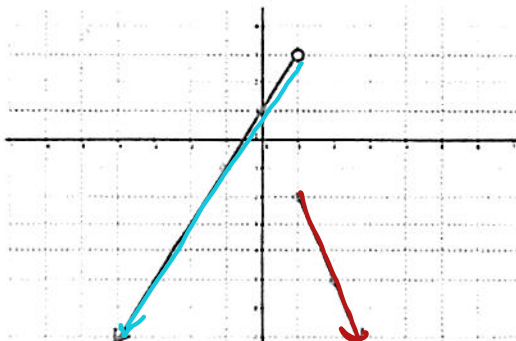
$$f(x) = \begin{cases} 3 & x < 3 \\ \frac{2}{3}x & x \geq 3 \end{cases}$$

3.



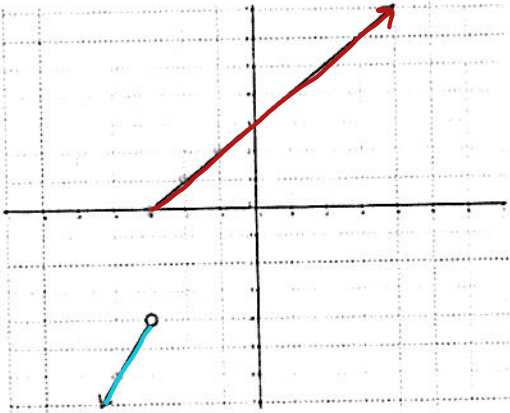
$$f(x) = \begin{cases} x & x \geq 0 \\ -x & x < 0 \end{cases}$$

4.



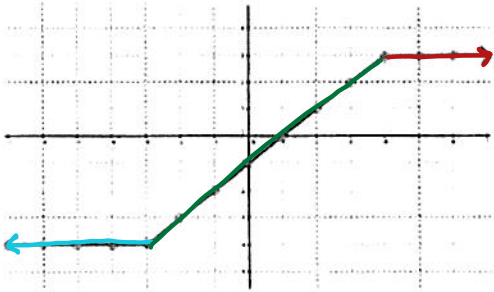
$$f(x) = \begin{cases} 2x+1 & x < 1 \\ -3x+1 & x \geq 1 \end{cases}$$

5.



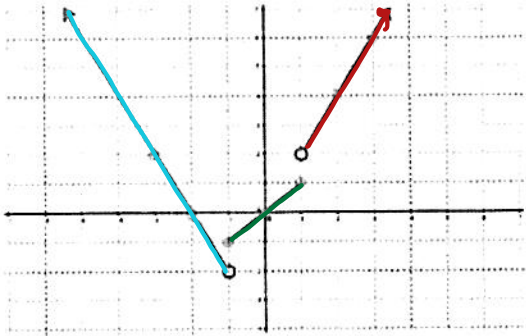
$$f(x) = \begin{cases} 2x+2 & x < -3 \\ x+3 & x \geq -3 \end{cases}$$

6.



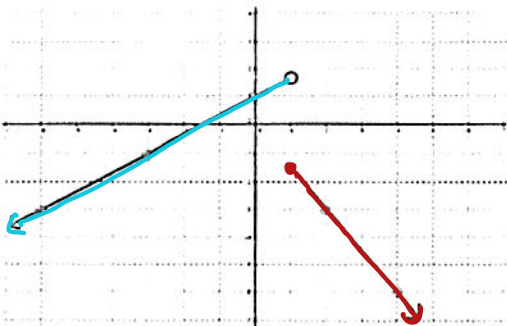
$$f(x) = \begin{cases} 4 & x \leq -3 \\ x-1 & -3 < x < 4 \\ 3 & x \geq 4 \end{cases}$$

7.



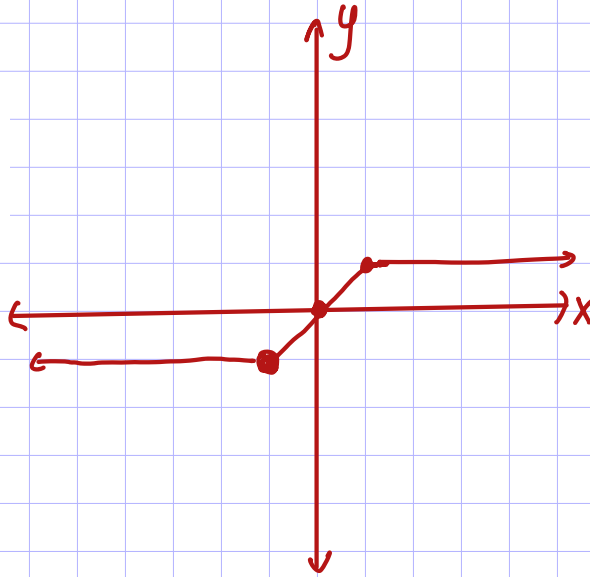
$$f(x) = \begin{cases} -2x-4 & x < -1 \\ x & -1 \leq x \leq 1 \\ 2x & x > 1 \end{cases}$$

8.

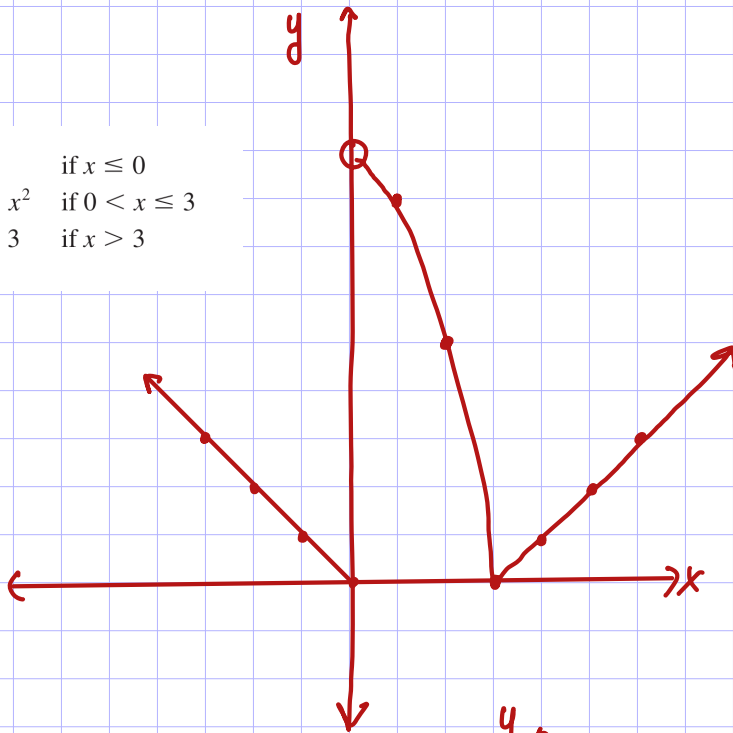


$$f(x) = \begin{cases} \frac{2}{3}x + 1 & x < 1 \\ -\frac{3}{2}x & x \geq 1 \end{cases}$$

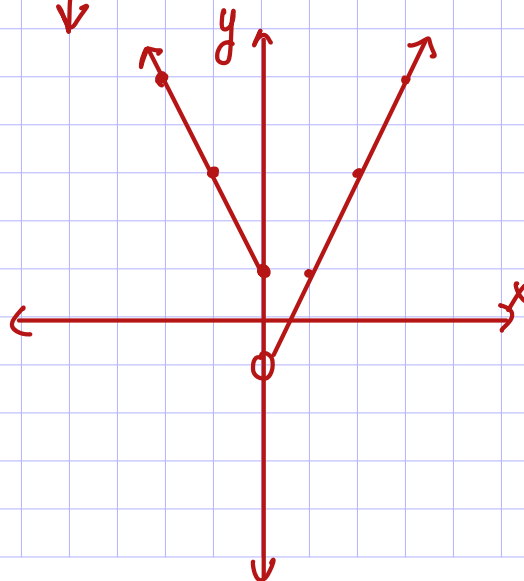
$$44. f(x) = \begin{cases} -1 & \text{if } x < -1 \\ x & \text{if } -1 \leq x \leq 1 \\ 1 & \text{if } x > 1 \end{cases}$$



$$50. f(x) = \begin{cases} -x & \text{if } x \leq 0 \\ 9 - x^2 & \text{if } 0 < x \leq 3 \\ x - 3 & \text{if } x > 3 \end{cases}$$



$$30. f(x) = \begin{cases} 1 - 2x & \text{if } x \leq 0 \\ 2x - 1 & \text{if } x > 0 \end{cases}$$



32. $f(x) = \begin{cases} -x & \text{if } x < 0 \\ x^2 & \text{if } 0 \leq x < 2 \\ 1 & \text{if } x \geq 2 \end{cases}$

