

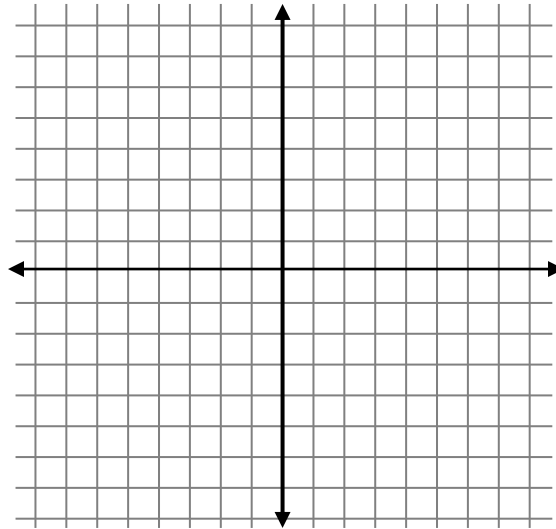
Piecewise Functions Worksheet

1. Graph the piecewise function and find the domain and range:

$$f(x) = \begin{cases} \frac{1}{2}x, & \text{for } x < 0 \\ x + 1, & \text{for } x \geq 0 \end{cases}$$

Domain: _____

Range: _____

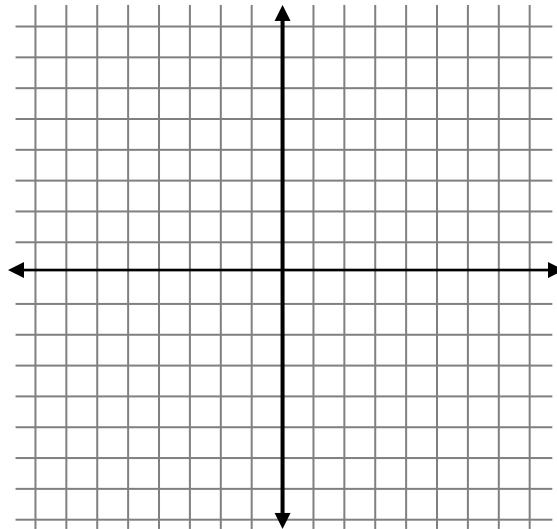


2. Graph the piecewise function and find the domain and range:

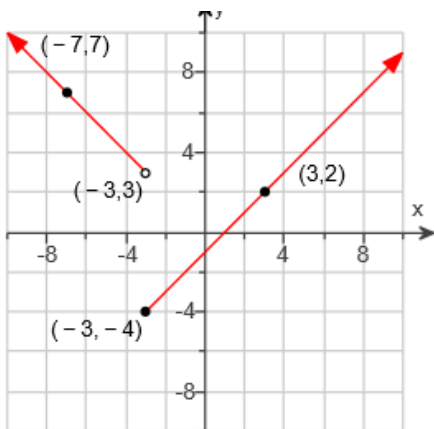
$$f(x) = \begin{cases} x + 2, & \text{for } x \leq -5, \\ -2, & \text{for } -5 < x < 6, \\ \frac{1}{2}x, & \text{for } x \geq 6 \end{cases}$$

Domain: _____

Range: _____

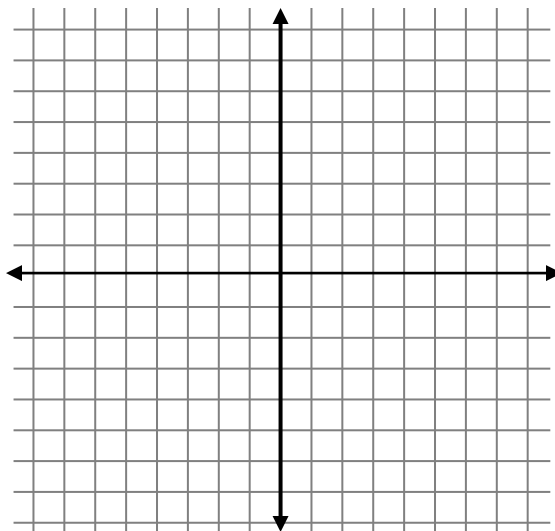


3. Write the piecewise function for the following graph.



4. Graph the function.

$$f(x) = \begin{cases} 5 & \text{if } x \leq 2 \\ -5 & \text{if } x > 2 \end{cases}$$



5. Write each absolute value function as a piecewise function: (Hint: Graph first)

a) $f(x) = 2|x| - 1$

b) $f(x) = |x + 3|$

