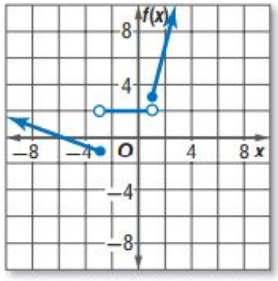
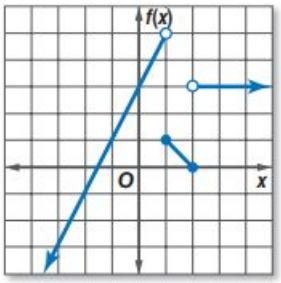
Piecewise-defined Functions:

1. Write a piecewise-defined function for the given graph and determine the domain and range of the function.

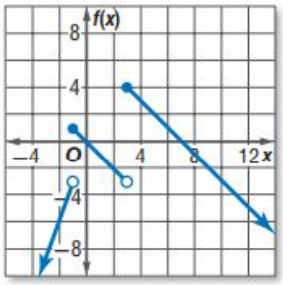
a.



b.



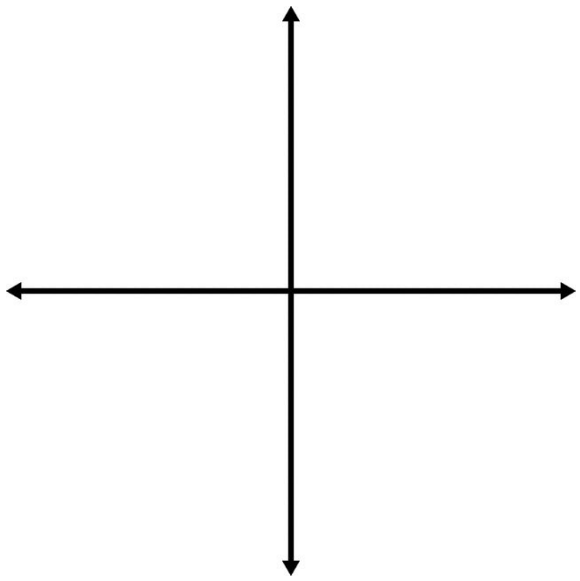
c.



2. Graph the following functions:

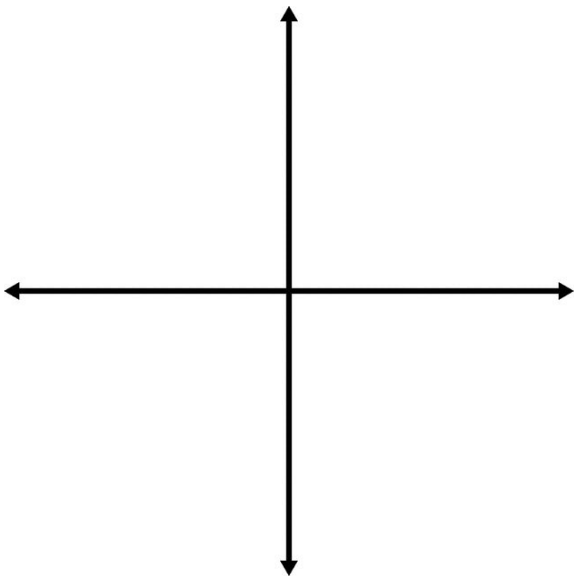
a.

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



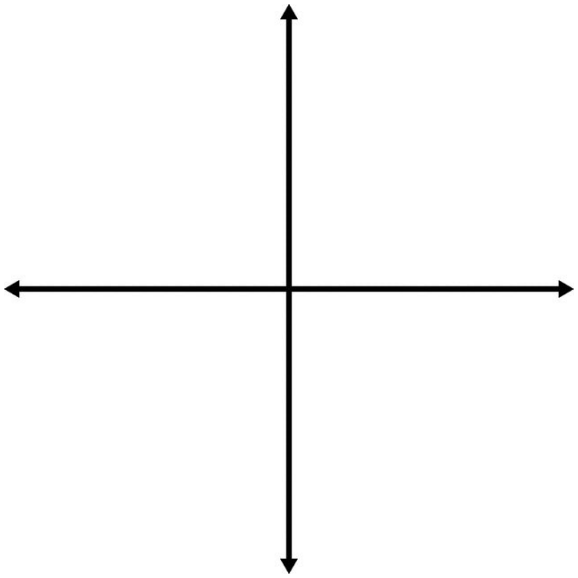
b.

$$g(x) = \begin{cases} -3 \text{ if } x \le -4 \\ x \text{ if } -4 < x < 2 \\ -x + 6 \text{ if } x \ge 2 \end{cases}$$



c.

$$f(x) = \begin{cases} 8 \text{ if } x \le -1 \\ 2x \text{ if } -1 < x < 4 \\ -4 - x \text{ if } x \ge 4 \end{cases}$$



Greatest Integer Function