

Part I. Evaluate and then graph each of the following.

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

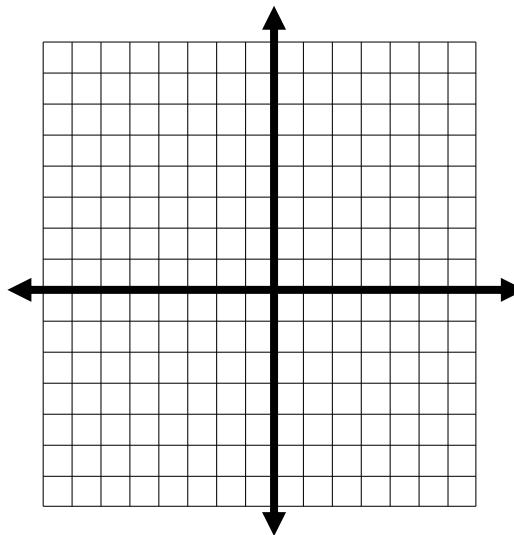
$f(3) =$

$f(-4) =$

$f(-2) =$

Domain: _____ Range: _____

Inc: _____ Dec: _____



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

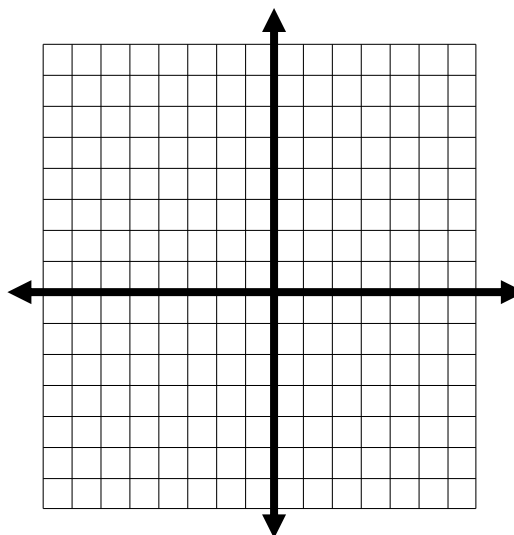
$f(-2) =$

$f(6) =$

$f(1) =$

Domain: _____ Range: _____

Inc: _____ Dec: _____



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

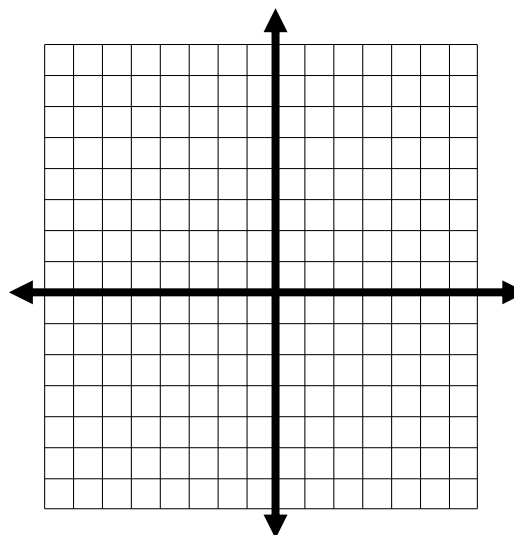
$f(-4) =$

$f(8) =$

$f(2) =$

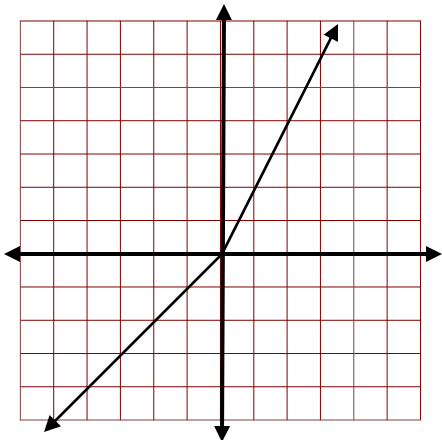
Domain: _____ Range: _____

Inc: _____ Dec: _____



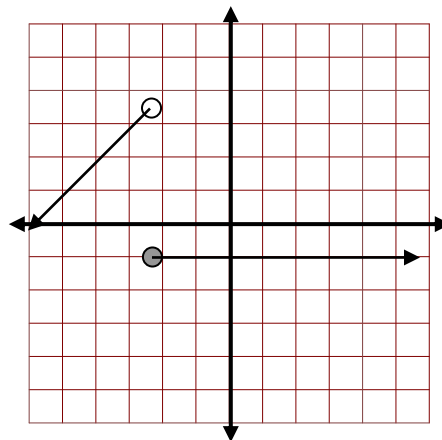
Part II. Write equations for the piecewise functions whose graphs are shown below. Assume that the units are 1 for every square.

7.



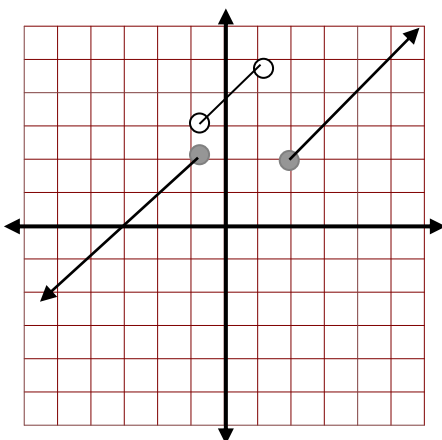
$$f(x) = \left\{ \begin{array}{l} \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \end{array} \right\}$$

8.



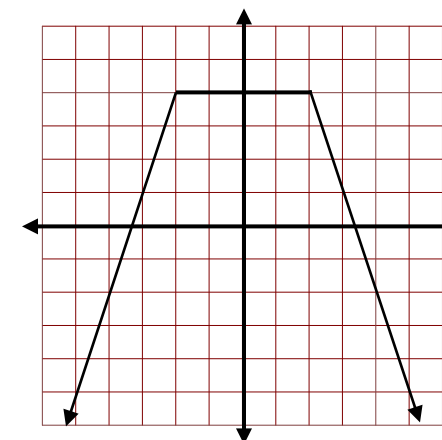
$$f(x) = \left\{ \begin{array}{l} \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \end{array} \right\}$$

9.



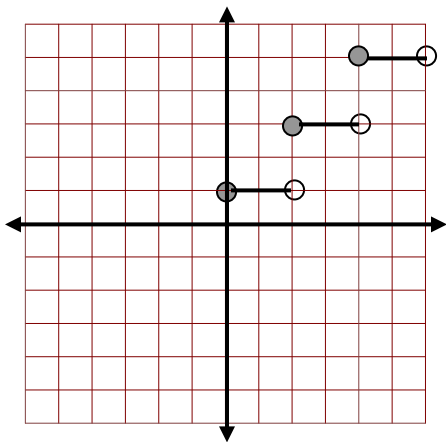
$$f(x) = \left\{ \begin{array}{l} \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \end{array} \right\}$$

10.



$$f(x) = \left\{ \begin{array}{l} \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \end{array} \right\}$$

11.



$$f(x) = \left\{ \begin{array}{l} \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \\ \rule{10cm}{0.4pt} \end{array} \right\}$$