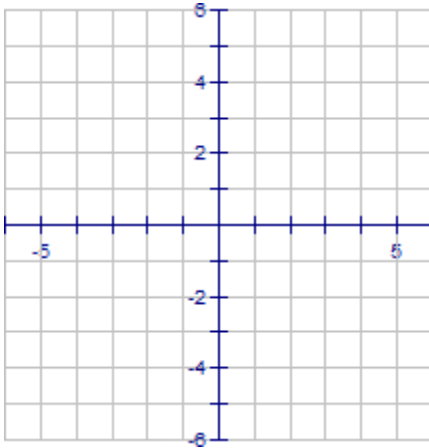


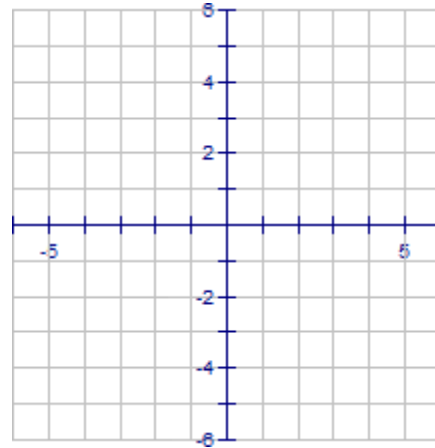
PIECEWISE FUNCTIONS

Directions: Graph each of the following piecewise functions.

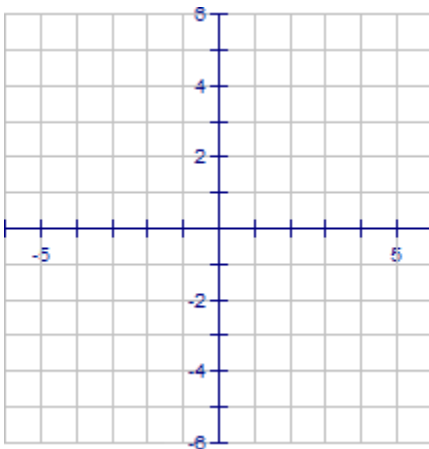
$$1.) f(x) = \begin{cases} (x-1)^2 & \text{if } x \leq 2 \\ -\frac{1}{2}x + 3 & \text{if } x > 2 \end{cases}$$



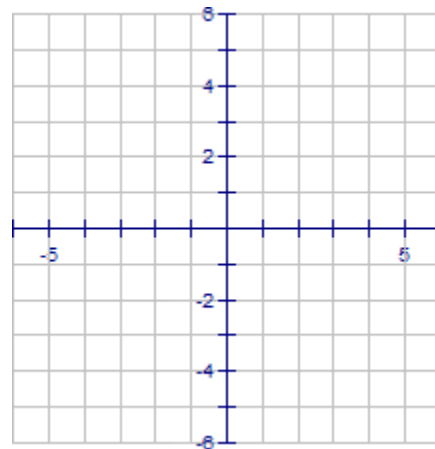
$$2.) f(x) = \begin{cases} |x+1| + 2 & \text{if } x \leq -1 \\ \sqrt{x+1} & \text{if } x > -1 \end{cases}$$



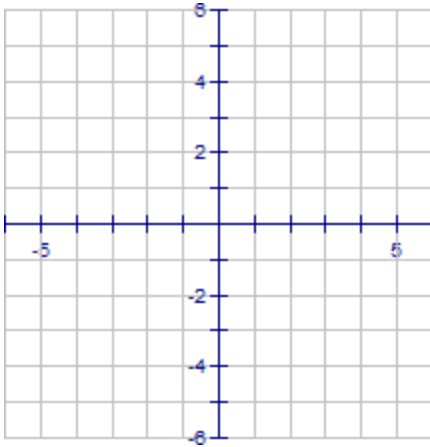
$$3.) f(x) = \begin{cases} x^2 & \text{if } x < 1 \\ |x-2| + 2 & \text{if } x \geq 1 \end{cases}$$



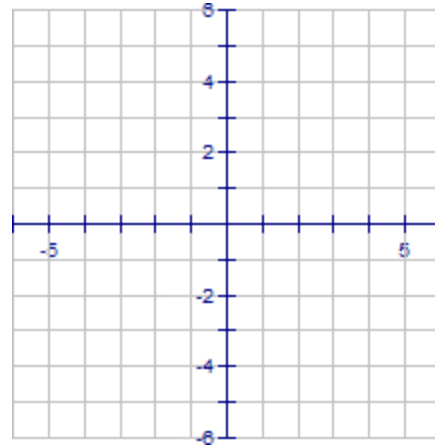
$$4.) f(x) = \begin{cases} \sqrt[3]{x} & \text{if } x \leq 1 \\ (x-2)^2 & \text{if } x > 1 \end{cases}$$



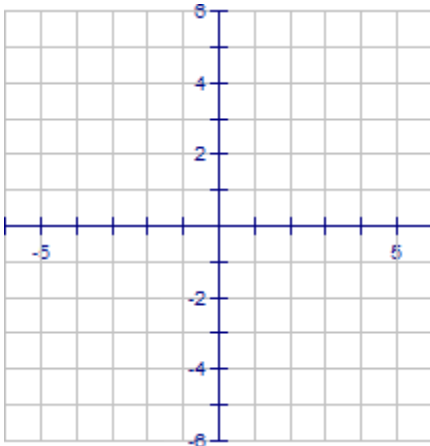
$$5.) f(x) = \begin{cases} -(x+1)^2 + 2 & \text{if } x < -1 \\ -\sqrt{x+1} & \text{if } x > -1 \end{cases}$$



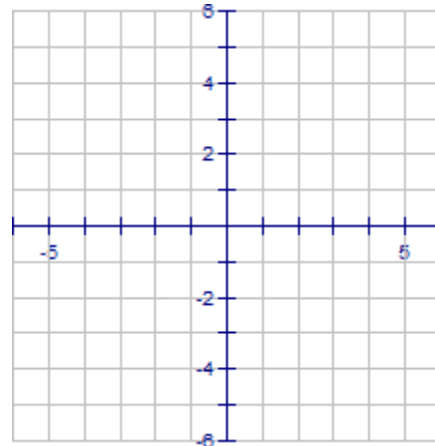
$$6.) f(x) = \begin{cases} -|x| & \text{if } x < 0 \\ (x-1)^2 + 1 & \text{if } 0 \leq x < 2 \\ 2 & \text{if } x \geq 2 \end{cases}$$



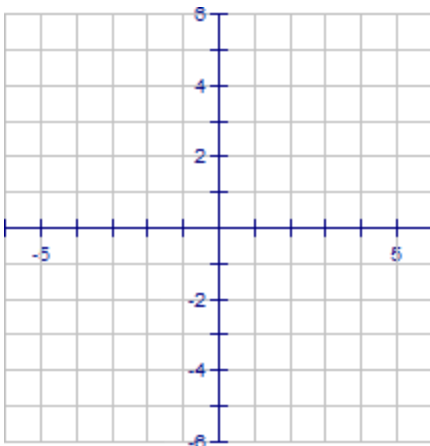
$$7.) f(x) = \begin{cases} |x| + 1 & \text{if } x \leq -1 \\ -x^2 + 3 & \text{if } -1 < x \leq 1 \\ \frac{1}{x} + 1 & \text{if } x > 1 \end{cases}$$



$$8.) f(x) = \begin{cases} |x+3| & \text{if } x < -2 \\ -1 & \text{if } -2 \leq x < 1 \\ \sqrt{x-1} & \text{if } x > 1 \end{cases}$$



$$9.) f(x) = \begin{cases} -\sqrt{x+3} & \text{if } x \leq -3 \\ -|x| + 5 & \text{if } -3 < x < 2 \\ x - 2 & \text{if } x \geq 2 \end{cases}$$



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

