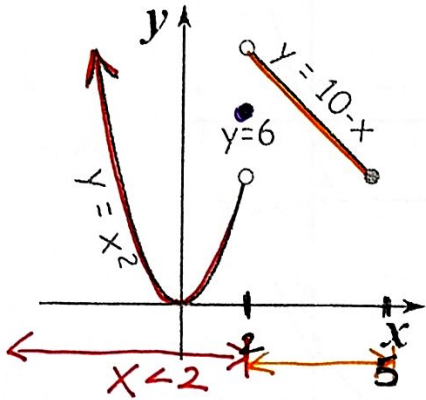


Graphing Piecewise Functions Notes

Piecewise Function:

- function made up of 2 or more functions ("hybrid")



This is how a piecewise function is written:

$$f(x) = \begin{cases} x^2 & x < 2 \\ 6 & x = 2 \\ 10 - x & 2 < x \leq 5 \end{cases}$$

Example: Graph each of the following piecewise functions.

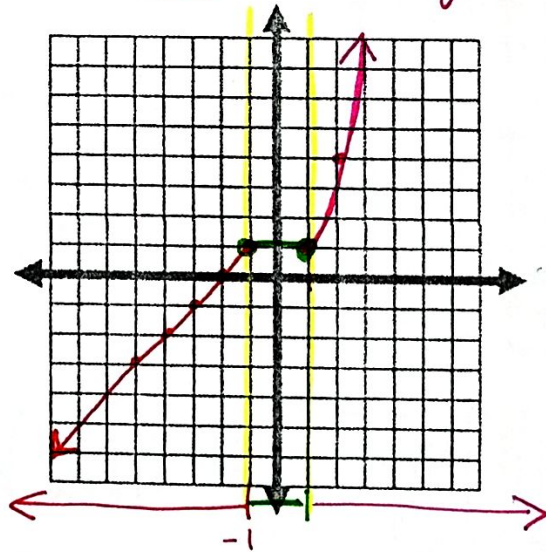
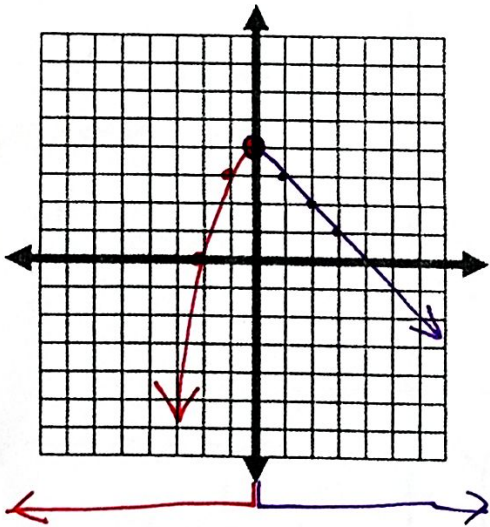
$$f(x) = \begin{cases} -x^2 + 4 & x \leq 0 \\ -x + 4 & x > 0 \end{cases}$$

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

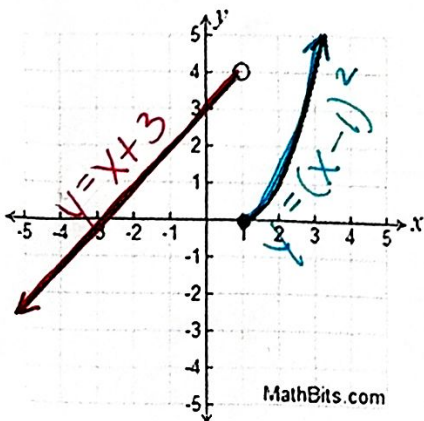
$$f(-1) = -1 + 2 = 1$$

$$f(1) = 1^2 = 1$$

continuous



Write a rule for the function below.



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