

## Piecewise Function

A function defined by **different** equations over **different** parts of the **domain**.

$$f(x) = \begin{cases} 5x + 2 & \text{if } x < -1 \\ x^2 - 4 & \text{if } x \geq -1 \end{cases}$$

Find  $f(-5)$ Find  $f(0)$ Find  $f(4)$ 

## Piecewise Function

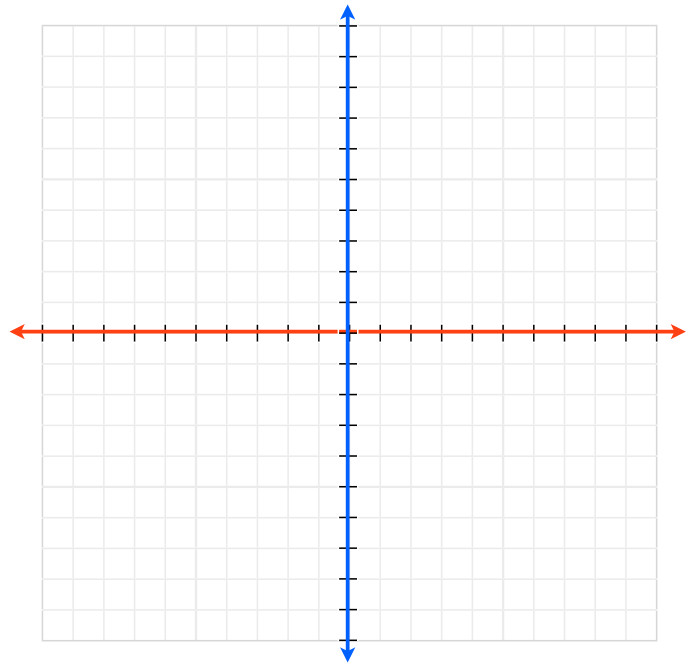
A function defined by **different** equations over **different** parts of the **domain**.

$$f(x) = \begin{cases} x^2 + 4 & \text{if } x < -4 \\ 3x + 1 & \text{if } -4 \leq x \leq 4 \\ -x - 6 & \text{if } x > 4 \end{cases}$$

Find  $f(-6)$ Find  $f(5)$ Find  $f(2)$

Graph the following piecewise function.

$$f(x) = \begin{cases} x + 2 & \text{if } x < -1 \\ x^2 - 4 & \text{if } x \geq -1 \end{cases}$$



Graph the following piecewise function.

$$f(x) = \begin{cases} -x - 8 & \text{if } x < -5 \\ 6 & \text{if } -5 \leq x \leq 5 \\ 2x - 10 & \text{if } x > 5 \end{cases}$$

