

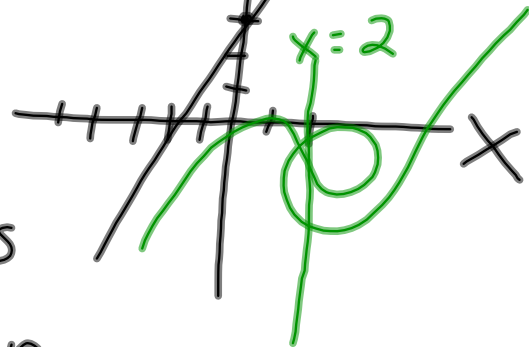
# Functions & Piecewise Functions:

$$f(x) = 2x + 3$$

$$y = 2x + 3$$

Domain  $\rightarrow$  X values

Range  $\rightarrow$  Y values



Each value in the Domain can have only 1 value in the Range

Piecewise Functions have Different Rules/Equations for different values of the domain.

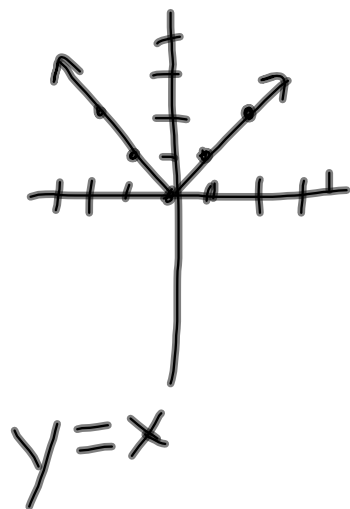


$$\begin{aligned} x=1 & \quad y=0 \\ x=3 & \quad y=0 \end{aligned}$$

Domain:

$$f(x) = \begin{cases} x, & \text{for } x \geq 0 \\ -x, & \text{for } x < 0 \end{cases}$$

x	f(x)
2	2
1	1
0	0
-1	$-(-1) = 1$
-2	$-(-2) = 2$



$$f(x) = \begin{cases} 2x+6 & \text{for } x \leq -2 \\ -2x-2 & \text{for } -2 < x \leq 0 \\ 3x-2 & \text{for } x > 0 \end{cases}$$

