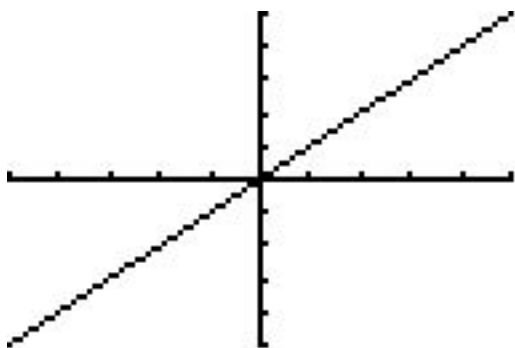


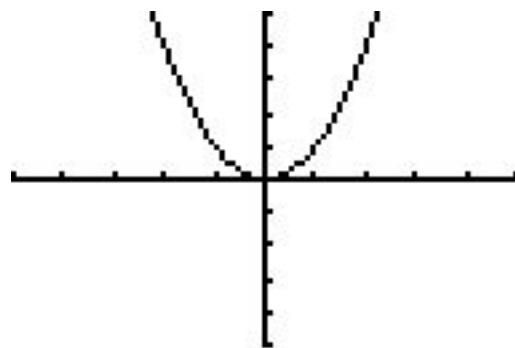
### 3.4 Library of Functions- MEMORIZE THESE !



Identity Function

$$y = x$$

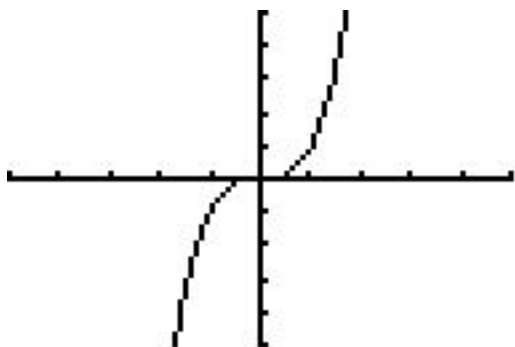
$$D = (-\infty, \infty) \quad R = (-\infty, \infty)$$



Squaring Function

$$f(x) = x^2$$

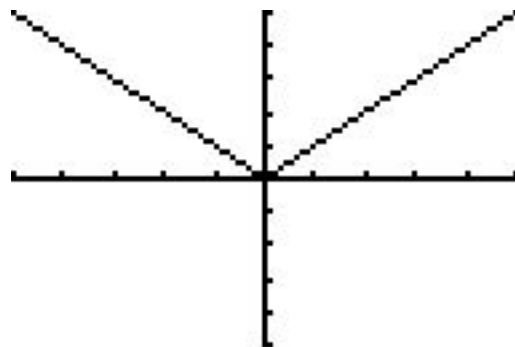
$$D = (-\infty, \infty) \quad R = [0, \infty)$$



Cubing Function

$$f(x) = x^3$$

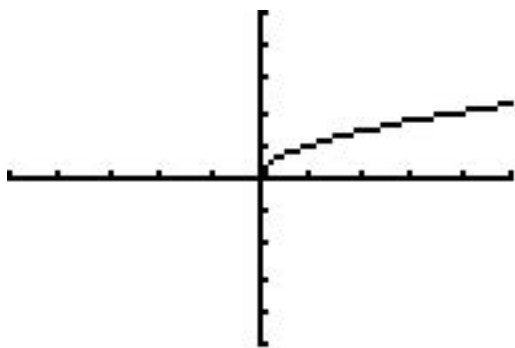
$$D = (-\infty, \infty) \quad R = (-\infty, \infty)$$



Absolute Value Function

$$f(x) = |x|$$

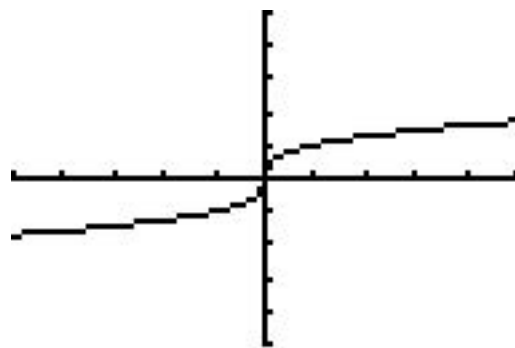
$$D = (-\infty, \infty) \quad R = [0, \infty)$$



Square Root Function

$$f(x) = \sqrt{x}$$

$$D = [0, \infty) \quad R = [0, \infty)$$



Cube Root Function

$$f(x) = \sqrt[3]{x}$$

$$D = (-\infty, \infty) \quad R = (-\infty, \infty)$$