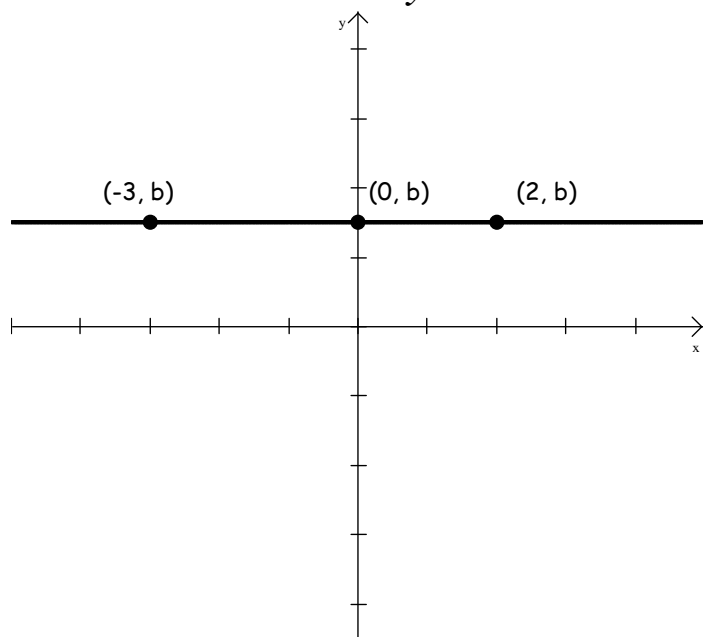


Library of Functions

Constant: $y = b$



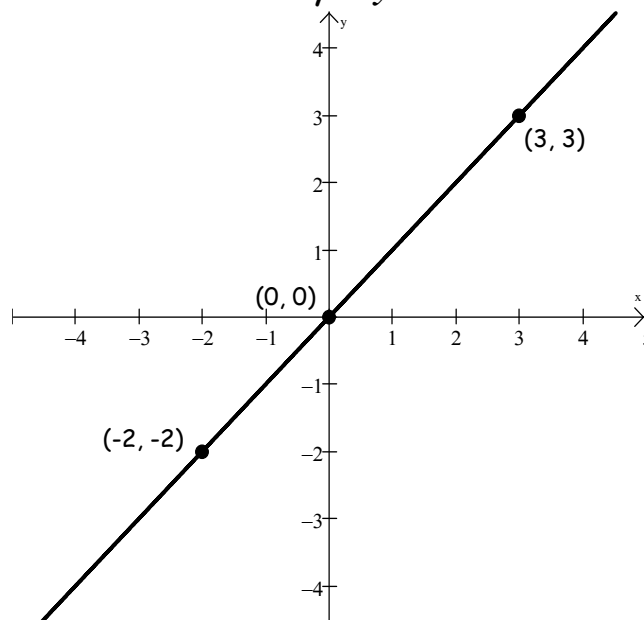
Domain: $(-\infty, \infty)$ Range: $\{b\}$

Constant: $(-\infty, \infty)$

y-axis symmetry, \therefore even function

No max/min

Identity: $y = x$



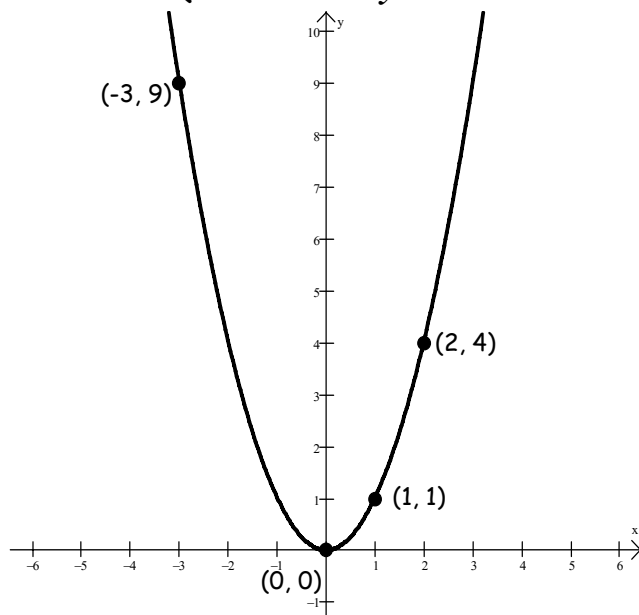
Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

Increasing: $(-\infty, \infty)$

origin symmetry, \therefore odd function

No max/min

Quadratic: $y = x^2$



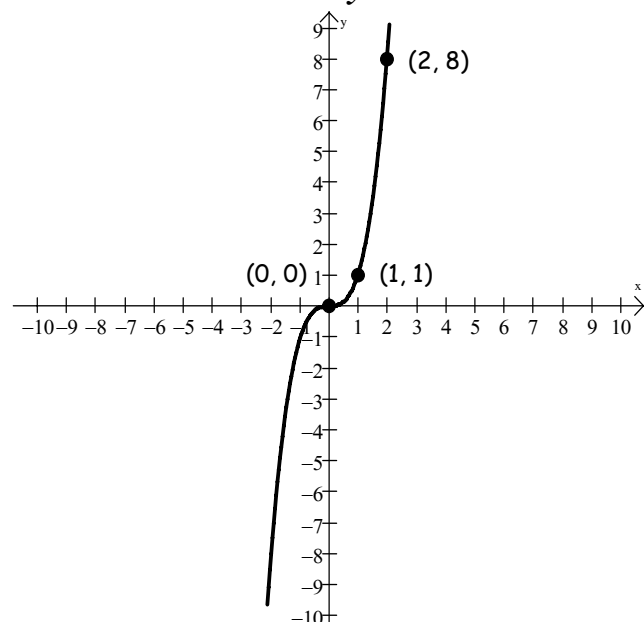
Domain: $(-\infty, \infty)$ Range: $[0, \infty)$

Decreasing: $(-\infty, 0)$; Increasing $(0, \infty)$

y-axis symmetry, \therefore even function

Minimum value is 0 at $x = 0$

Cubic: $y = x^3$



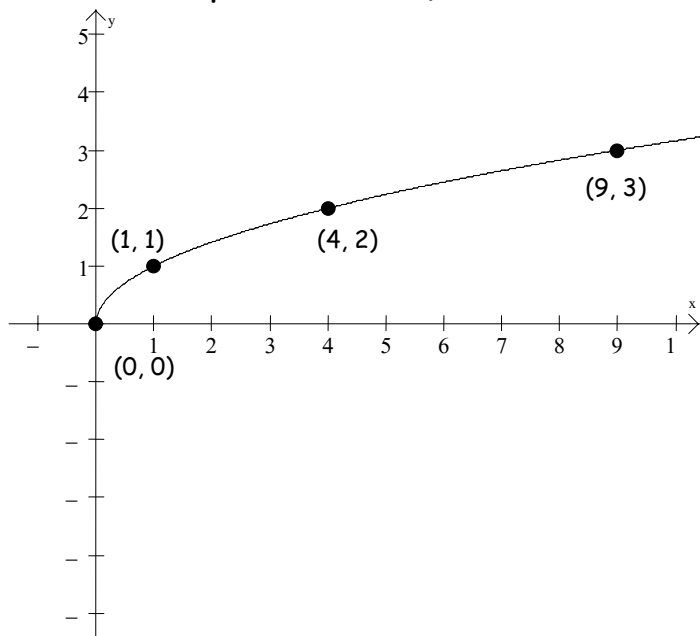
Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

Increasing: $(-\infty, \infty)$

origin symmetry, \therefore odd function

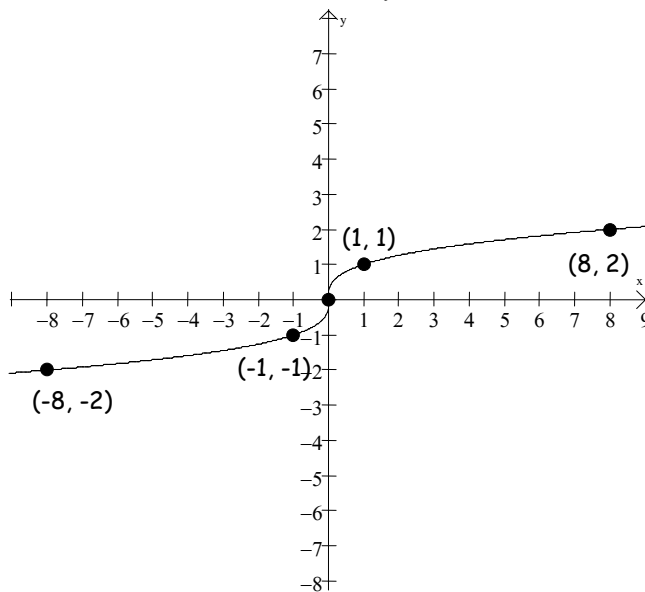
No max/min

Square Root: $y = \sqrt{x}$



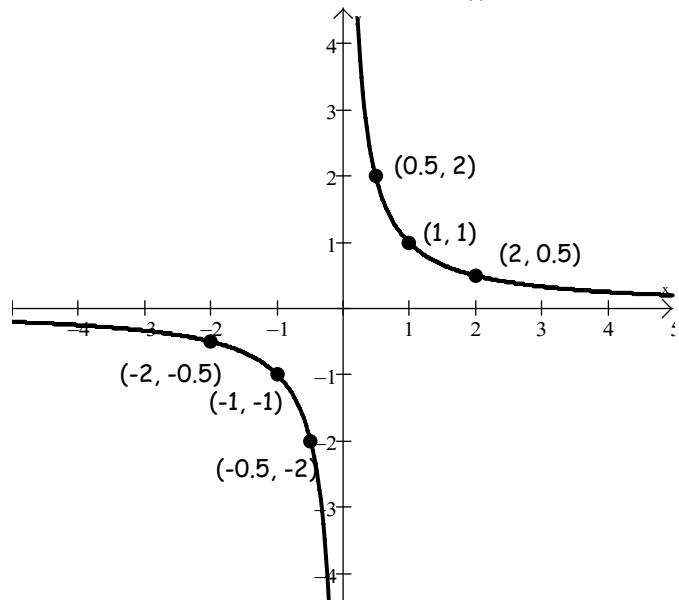
Domain: $[0, \infty)$ Range: $[0, \infty)$
 Increasing $(0, \infty)$
 No symmetry Minimum value is 0 at $x = 0$

Cube Root: $y = \sqrt[3]{x}$



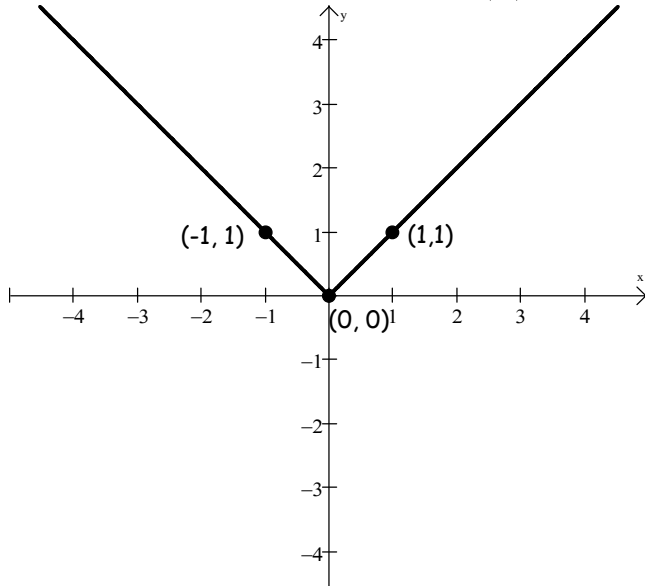
Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$
 Increasing $(-\infty, \infty)$
 origin symmetry, \therefore odd function
 No max/min

Reciprocal: $y = \frac{1}{x}$



Domain: $(-\infty, 0) \cup (0, \infty)$ Range: $(-\infty, 0) \cup (0, \infty)$
 Decreasing $(-\infty, 0) \cup (0, \infty)$
 Origin symmetry, \therefore odd function
 No Max/Min Asymptotes: $y = 0$ and $x = 0$

Absolute Value: $y = |x|$



Domain: $(-\infty, \infty)$ Range: $[0, \infty)$
 Decreasing: $(-\infty, 0)$; Increasing $(0, \infty)$
 y-axis symmetry, \therefore even function
 Minimum value is 0 at $x = 0$