



TOOL-KIT FUNCTIONS

The equation, graph, and domain and range for several useful functions are listed below. They're sure to be useful in algebra, pre-calculus, and beyond!

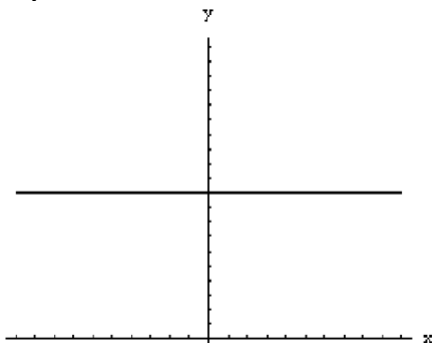
Name: Constant

Equation: $f(x) = c$

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y = c\}$

Graph:



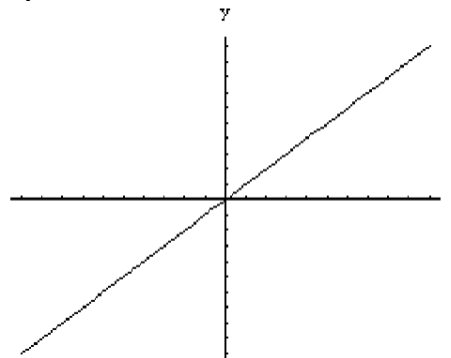
Name: Linear

Equation: $f(x) = x$

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y \in \mathbb{R}\}$

Graph:



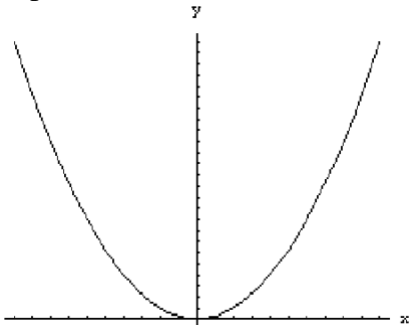
Name: Quadratic

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

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y \geq 0\}$

Graph:



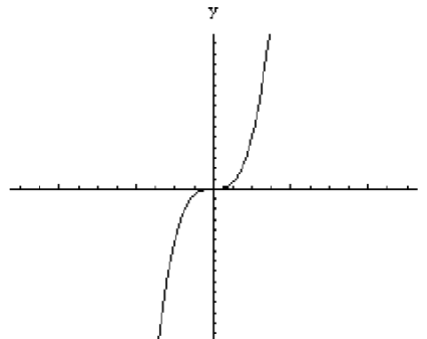
Name: Cubic

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

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y \in \mathbb{R}\}$

Graph:





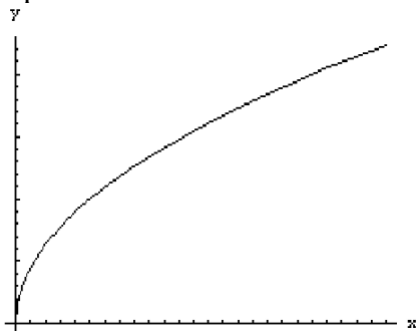
Name: Square Root

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

Domain: $\{x/x \geq 0\}$

Range: $\{y/y \geq 0\}$

Graph:



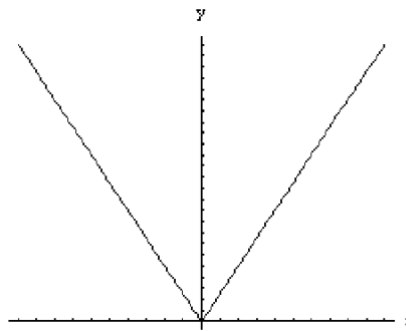
Name: Absolute Value

Equation: $f(x) = |x|$

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y \geq 0\}$

Graph:



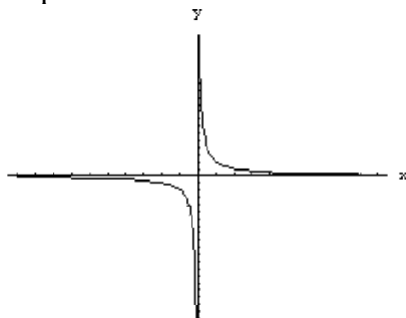
Name: Reciprocal

Equation: $f(x) = 1/x$

Domain: $\{x/x \in \mathbb{R}, x \neq 0\}$

Range: $\{y/y \in \mathbb{R}, y \neq 0\}$

Graph:



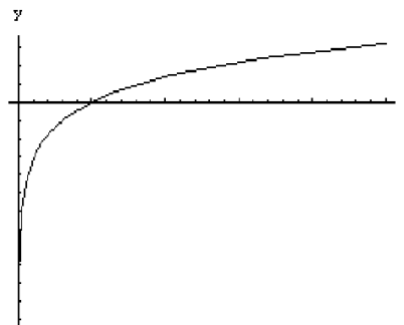
Name: Logarithmic

Equation: $f(x) = \ln x$

Domain: $\{x/x > 0\}$

Range: $\{y/y \in \mathbb{R}\}$

Graph:



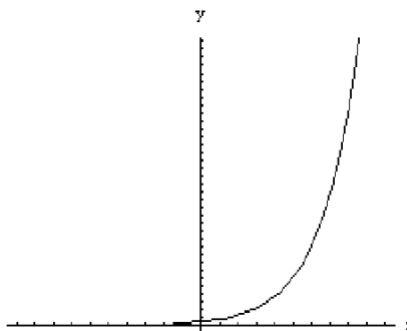
Name: Exponential

Equation: $f(x) = e^x$

Domain: $\{x/x \in \mathbb{R}\}$

Range: $\{y/y > 0\}$

Graph:



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