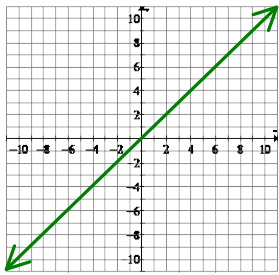
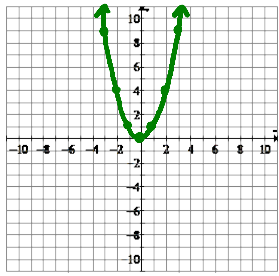
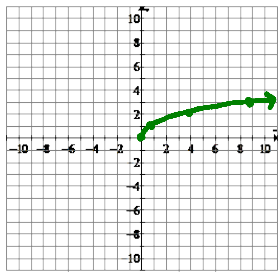
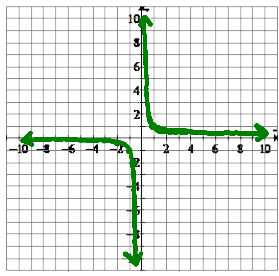
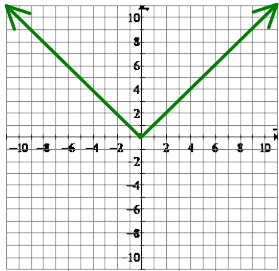


Parent Functions

There are five functions which you should be familiar with. You have seen some of them before; others are new. The simplest, most basic of each is called the **parent function**.

Name of Function	Equation of Parent Function	Sketch of Graph	Domain	Range
linear function	$f(x) = x$		$\{x \in \mathbb{R}\}$	$\{y \in \mathbb{R}\}$
quadratic function	$f(x) = x^2$		$\{x \in \mathbb{R}\}$	$\{y \in \mathbb{R} \mid y \geq 0\}$
square root function	$f(x) = \sqrt{x}$		$\{x \in \mathbb{R} \mid x \geq 0\}$	$\{y \in \mathbb{R} \mid y \geq 0\}$
reciprocal function	$f(x) = \frac{1}{x}$		$\{x \in \mathbb{R} \mid x \neq 0\}$	$\{y \in \mathbb{R} \mid y \neq 0\}$
absolute value function	$f(x) = x $ (represents the distance from 0)		$\{x \in \mathbb{R}\}$	$\{y \in \mathbb{R} \mid y \geq 0\}$