

For each of the basic functions listed below, summarize all of the basic characteristics.

Name & Equation	Sketch	Special Features	Domain & Range
$f(x) = x^2$		<p>Show 5 key points                      Symmetric</p>	<p><math>D: \{x \in R\}</math>  <math>R: \{y \geq 0, y \in R\}</math></p>
$f(x) = x^3$		<p>Show key points with cubic growth.                      Symmetric about the origin, or reflected in both x and y-axes.</p>	<p><math>D: \{x \in R\}</math>  <math>R: \{y \in R\}</math></p>
$f(x) = \sqrt{x}$		<p>Top half of a sideways parabola.                      Show key points.</p>	<p><math>D: \{x \geq 0, x \in R\}</math>  <math>R: \{y \geq 0, y \in R\}</math></p>
$f(x) = \frac{1}{x}$		<p>Reciprocal behaviour.                      Show 2 key points &amp; asymptotes.</p>	<p><math>D: \{x \neq 0, x \in R\}</math>  <math>R: \{y \neq 0, y \in R\}</math></p>
$f(x) =  x $		<p>Positive case: <math>y = x</math>                      Negative case: <math>y = -x</math>                      Show the slope.</p>	<p><math>D: \{x \in R\}</math>  <math>R: \{y \geq 0, y \in R\}</math></p>