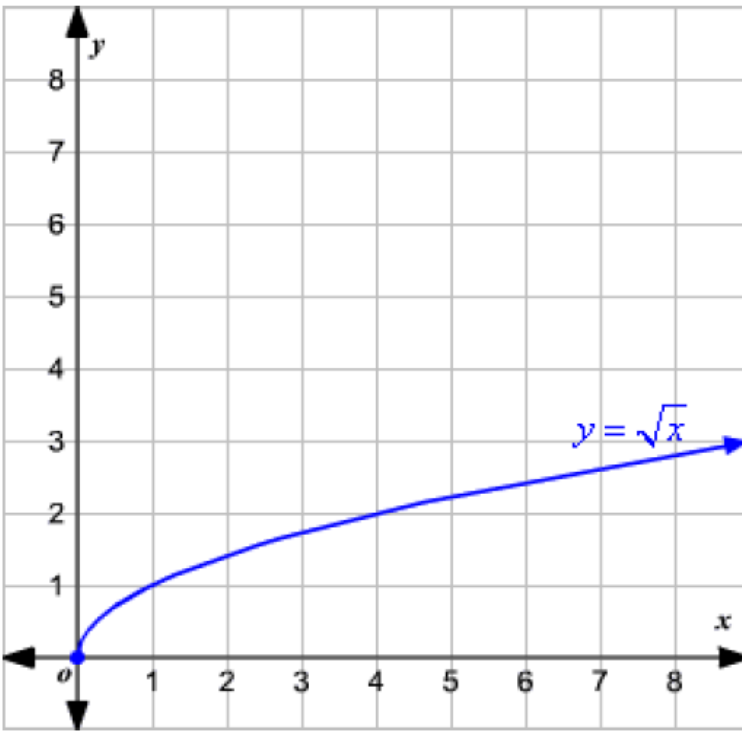


Root (... radical) Functions

Square Root Function: $f(x) = \sqrt{x}$

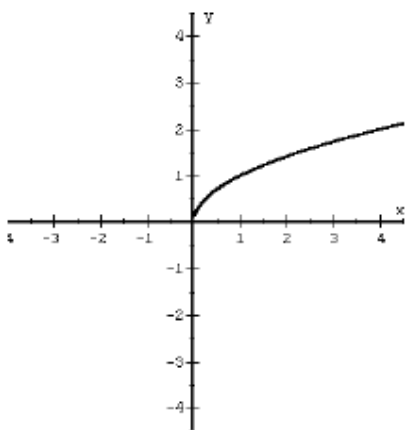


Domain: $x \geq 0$

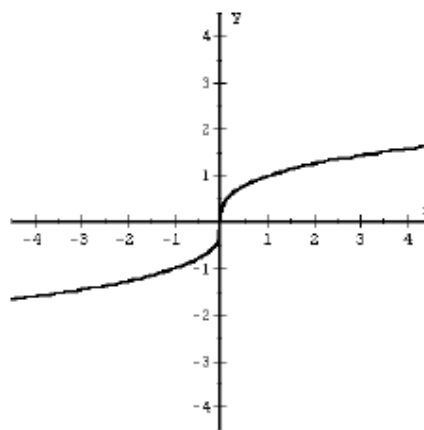
Range: $y \geq 0$

X – Intercept: $(0, 0)$

Y – Intercept: $(0, 0)$

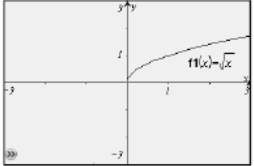


$f(x) = \sqrt{x}$
Square Root

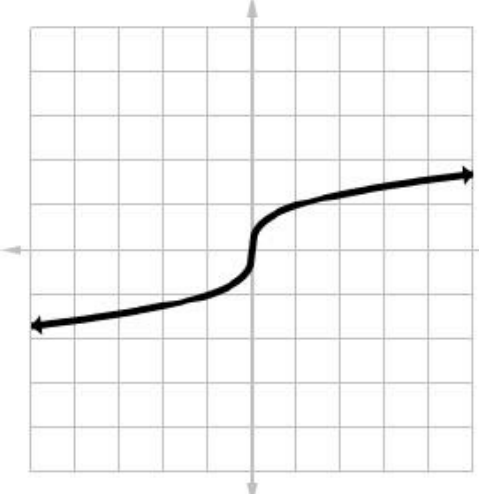
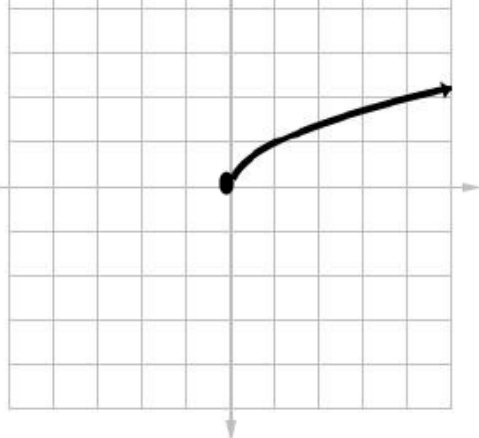


$f(x) = \sqrt[3]{x}$
Cube Root

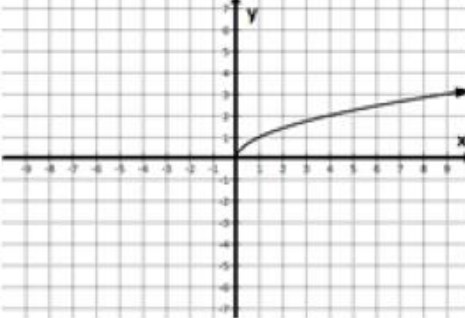
Root (... radical) Functions

Name of Parent Function	Graph of Function	Table of Values	Equation of Parent Function	Special Features or Characteristics														
Square Root Function		<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td>err</td> </tr> <tr> <td>-1</td> <td>err</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> </tr> <tr> <td>2</td> <td>1.414</td> </tr> <tr> <td>3</td> <td>1.732</td> </tr> </tbody> </table>	x	y	-2	err	-1	err	0	0	1	1	2	1.414	3	1.732	$f(x) = \sqrt{x}$	<ul style="list-style-type: none"> • Line intersects the y-axis at (0,0) • Domain is all Real Numbers ≥ 0 • Range is all Real Numbers ≥ 0
x	y																	
-2	err																	
-1	err																	
0	0																	
1	1																	
2	1.414																	
3	1.732																	

Root (... radical) Functions

	Graph
<p> $y = \sqrt[3]{x}$ Cube Root, Odd Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$ End Behavior: $x \rightarrow -\infty, y \rightarrow -\infty$ $x \rightarrow \infty, y \rightarrow \infty$ Critical points: $(-1, -1), (0, 0), (1, 1)$ </p>	
<p> Radical, Neither (Square Root) Domain: $[0, \infty)$ Range: $[0, \infty)$ End Behavior: $x \rightarrow 0, y \rightarrow 0$ $x \rightarrow \infty, y \rightarrow \infty$ Critical points: $(0, 0), (1, 1), (4, 2)$ </p>	

Root (... radical) Functions

Parent Function	Graph
<p data-bbox="276 346 511 441">$y = \sqrt{x}$ Radical, Neither</p> <p data-bbox="276 472 511 556">Domain: $[0, \infty)$ Range: $[0, \infty)$</p> <p data-bbox="276 588 511 661">End Behavior: $x \rightarrow \infty, y \rightarrow \infty$</p>	
<p data-bbox="276 703 511 787">$y = \sqrt[3]{x}$ Cube Root, Odd</p> <p data-bbox="276 819 511 892">Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$</p> <p data-bbox="276 924 511 1018">End Behavior: $x \rightarrow -\infty, y \rightarrow -\infty$ $x \rightarrow \infty, y \rightarrow \infty$</p>	