

Welcome to Class

Place cell phones in holder.


Remember early release tomorrow.

Characteristics of Radical Equations

Parent Function:

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

x	y
0	0
1	1
4	2
9	3
16	4

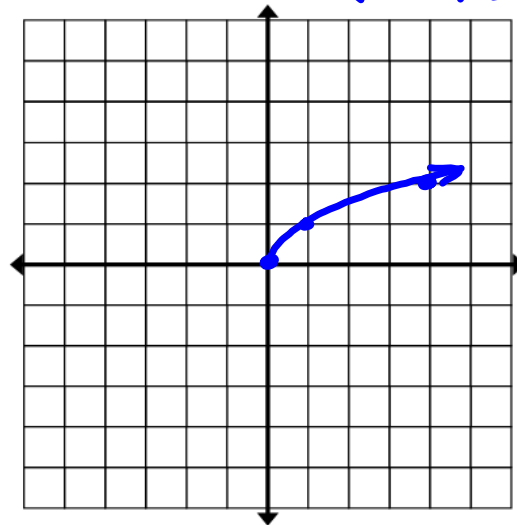
- Generic Shape: 
- DOMAIN: $[0, \infty)$
- RANGE: $[0, \infty)$
- INTERVAL OF INCREASE: $(0, \infty)$
- INTERVAL OF DECREASE: None

$(-\infty, 0]$
Domain

$(-\infty, 2]$ Range

Domain

- X-INTERCEPT: $(0, 0)$
 $(\#, 0)$
- Y-INTERCEPT: $(0, 0)$
 $(0, \#)$
- RELATIVE MAX: None
Absolute None
- RELATIVE MIN: $(0, 0)$
Absolute $(0, 0)$
- END BEHAVIOR:



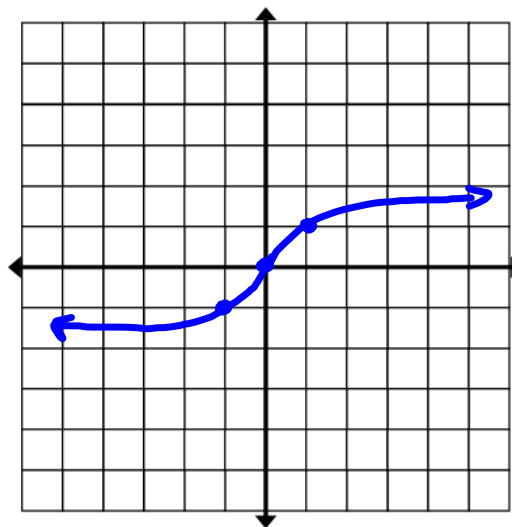
- $as\ x \rightarrow \frac{0}{0}, f(x) \rightarrow \frac{0}{0}$
- $as\ x \rightarrow \frac{\infty}{\infty}, f(x) \rightarrow \frac{\infty}{\infty}$

Parent Function:

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

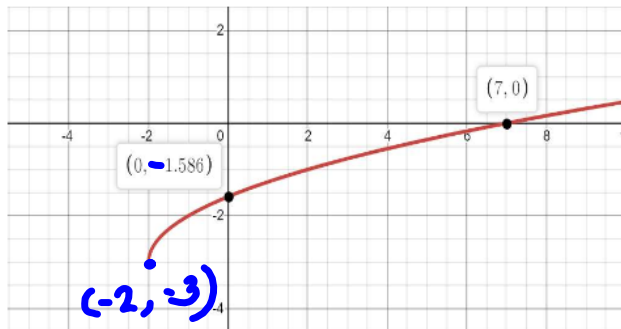
-8	-2
-1	-1
x	y
0	0
1	1
8	2
27	3

- Generic Shape:
- DOMAIN: \mathbb{R}
- RANGE: $(-\infty, \infty)$
- INTERVAL OF INCREASE: $(-\infty, \infty)$
- INTERVAL OF DECREASE: None
- X-INTERCEPT: $(0, 0)$
- Y-INTERCEPT: $(0, 0)$
- RELATIVE MAX: None
- RELATIVE MIN: None
- END BEHAVIOR:
 - as $x \rightarrow \infty$, $f(x) \rightarrow \infty$
 - as $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$



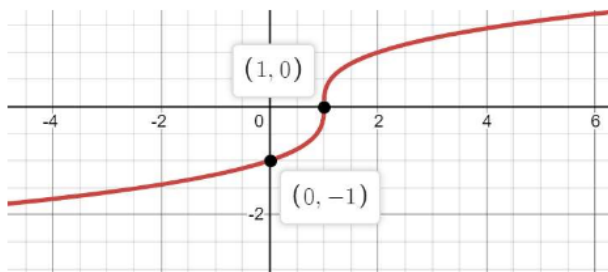
Describe the characteristics for the function

1. $f(x) = \sqrt{x+2} - 3$



Domain: $[-2, \infty)$
 Range: $[-3, \infty)$
 x-intercept: $(7, 0)$
 y-intercept: $(0, -1.586)$
 Intervals of Increase: $(-2, \infty)$
 Intervals of Decrease: None
 Absolute Minimum: $(-2, -3)$
 Absolute Maximum: None
 End Behavior:
 as $x \rightarrow \infty$, $f(x) \rightarrow \infty$
 as $x \rightarrow -2$, $f(x) \rightarrow -3$

2. $f(x) = \sqrt[3]{x-1}$



Domain: $(-\infty, \infty)$
 Range: $(-\infty, \infty)$
 x-intercept: $(1, 0)$
 y-intercept: $(0, -1)$
 Intervals of Increase: $(-\infty, \infty)$
 Intervals of Decrease: None
 Absolute Minimum: None
 Absolute Maximum: None
 End Behavior:
 as $x \rightarrow \infty$, $f(x) \rightarrow \infty$
 as $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$

