

## Parent Function Chart

Standards: F-IF.7b

Learning Targets:

What are the 7 parent functions?

## Parent Functions

### Function

**Linear**

$$y = mx + b$$

$$f(x) = x$$

### Table of Values

$x$	$f(x)$
-3	-3
-2	-2
-1	-1
0	0
1	1
2	2
3	3

### Domain:

$\mathbb{R}$

### Range:

$\mathbb{R}$

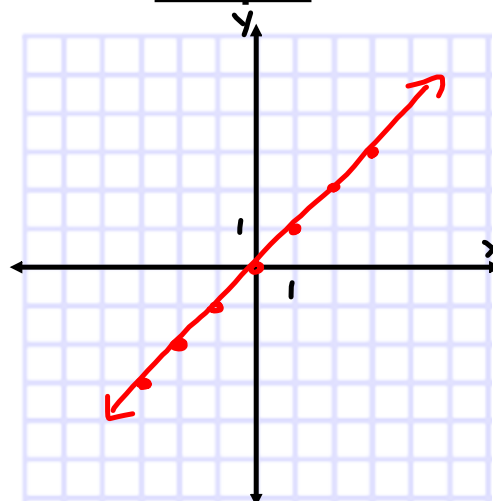
### x-int:

$(0, 0)$

### y-int:

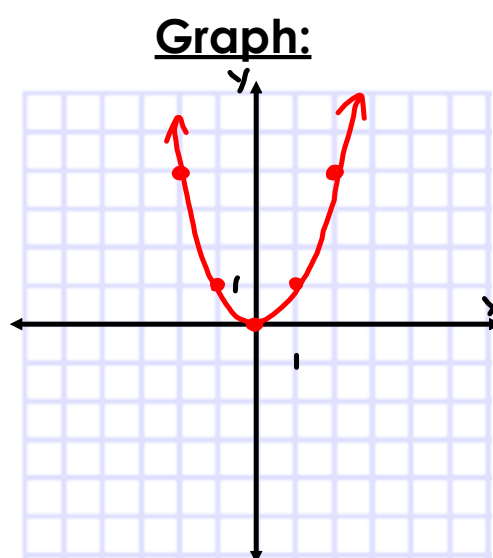
$(0, 0)$

### Graph:

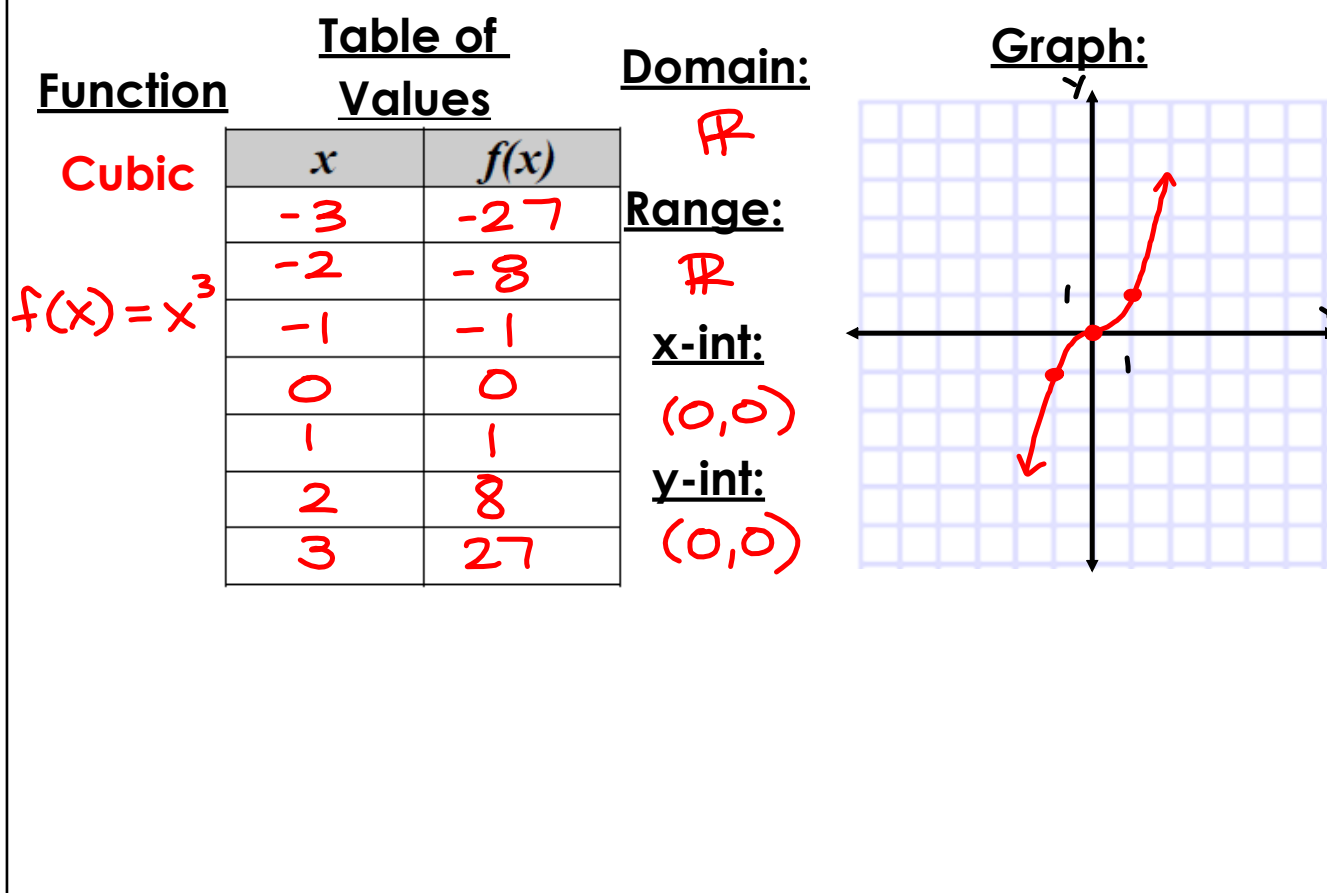


## Parent Functions

<u>Function</u>	<u>Table of Values</u>		<u>Domain:</u>
<b>Quadratic</b>	<i>x</i>	<i>f(x)</i>	$\mathbb{R}$
$y = ax^2 + bx + c$	-3	9	<u>Range:</u>
$f(x) = x^2$	-2	4	$y \geq 0$
	-1	1	<u>x-int:</u>
	0	0	$(0, 0)$
	1	1	<u>y-int:</u>
	2	4	$(0, 0)$
	3	9	



## Parent Functions



## Parent Functions

### Function

**Rational**

$$f(x) = \frac{1}{x}$$

### Table of Values

$x$	$f(x)$
-3	$-\frac{1}{3} = -0.\overline{33}$
-2	$-\frac{1}{2} = -0.5$
-1	-1
0	undefined
1	1
2	$\frac{1}{2} = 0.5$
3	$\frac{1}{3} = 0.\overline{33}$

Domain:

$$x \neq 0$$

Range:

$$y \neq 0$$

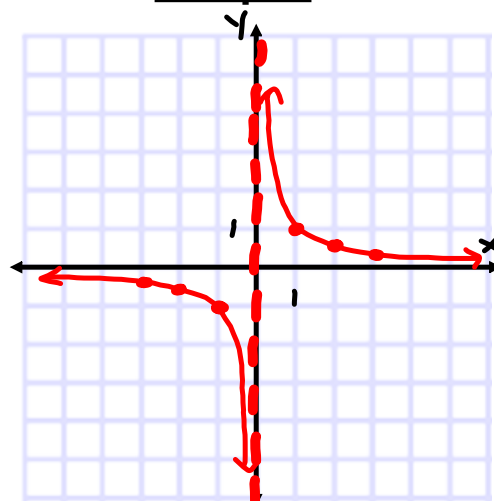
x-int:

none

y-int:

none

### Graph:



## Parent Functions

### Function

**Absolute Value**

$$f(x) = |x|$$

### Table of Values

$x$	$f(x)$
-3	3
-2	2
-1	1
0	0
1	1
2	2
3	3

### Domain:

$\mathbb{R}$

### Range:

$$y \geq 0$$

### x-int:

$(0, 0)$

### y-int:

$(0, 0)$

### Graph:

