

Parent Function Name: ***Constant function***

Analysis of the Example:

Parent Function equation:  $y = c$   
(‘c’ is a real number), Example:  $y = 3$

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

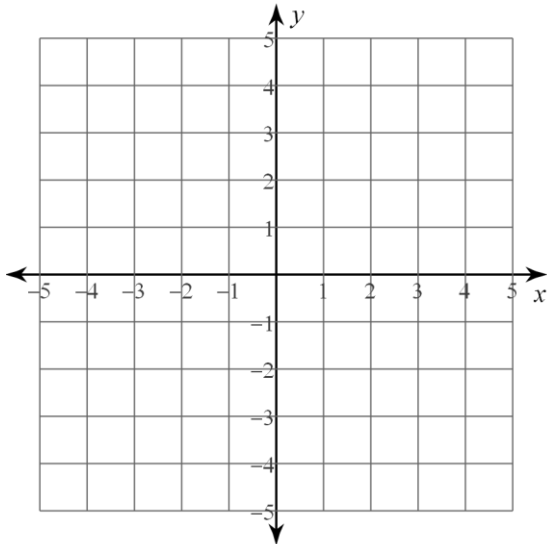
x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of the example:



Parent Function Name: ***Linear function***

Analysis of the Parent Function:

Parent Function equation:  $y = x$

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

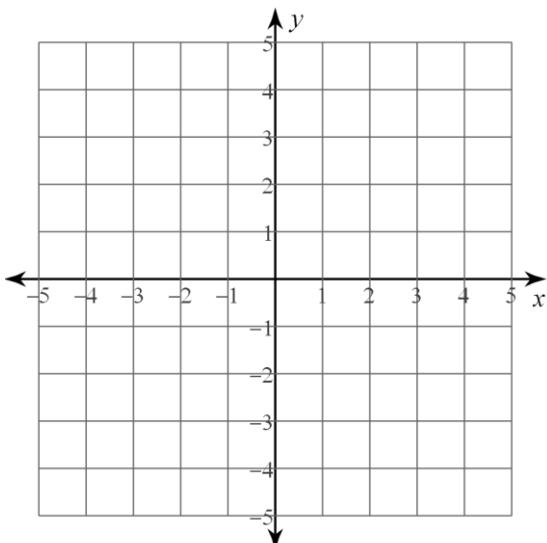
x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function:



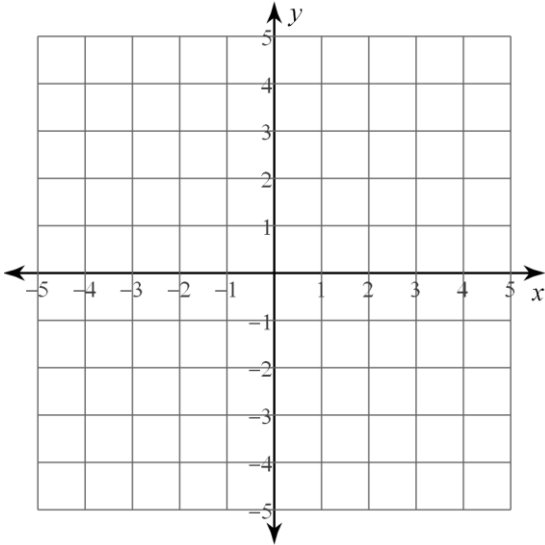
Parent Function Name: ***Square function***

Parent Function equation:  $y = x^2$

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function:



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

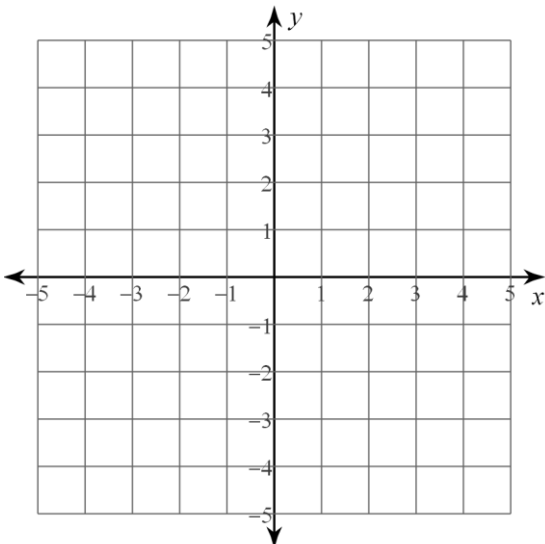
Parent Function Name: ***Square Root***

Parent Function equation:  $y = \sqrt{x}$

Table of values for parent function:

x	-4	-1	0	1	4
y					

Graph of Parent function



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

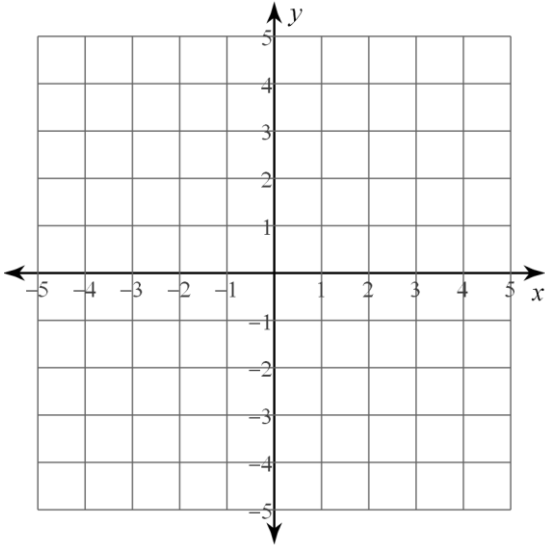
Parent Function Name: ***Cube function***

Parent Function equation:  $y = x^3$

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function:



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

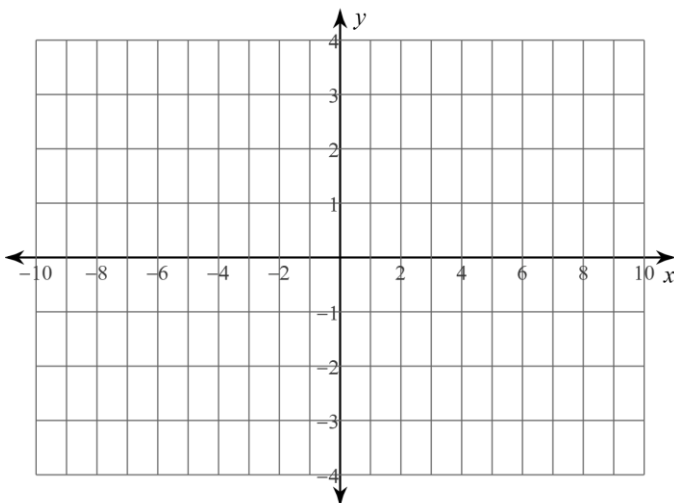
Parent Function Name: ***Cube Root***

Parent Function equation:  $y = \sqrt[3]{x}$

Table of values for parent function:

x	-4	-1	0	1	4
y					

Graph of Parent function



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

Parent Function Name: **Step function**

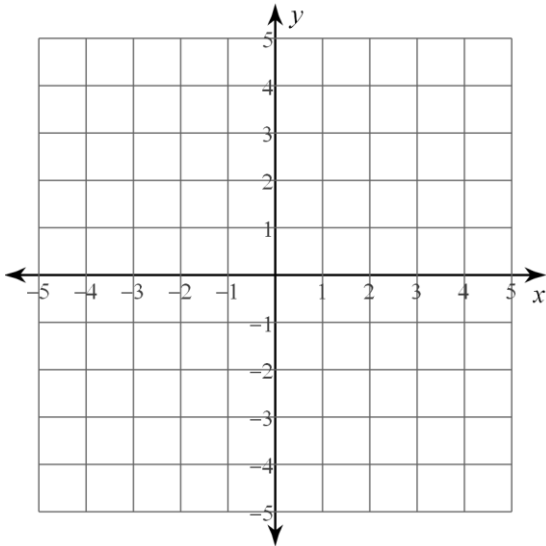
Parent Function equation:  $y = \text{int}(x)$

f(x) equals the greatest integer less than 'x'

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function:



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

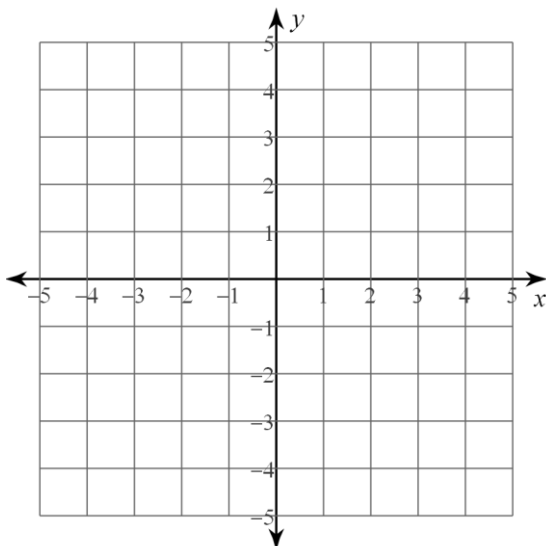
Parent Function Name: **Absolute Value**

Parent Function equation:  $y = |x|$

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

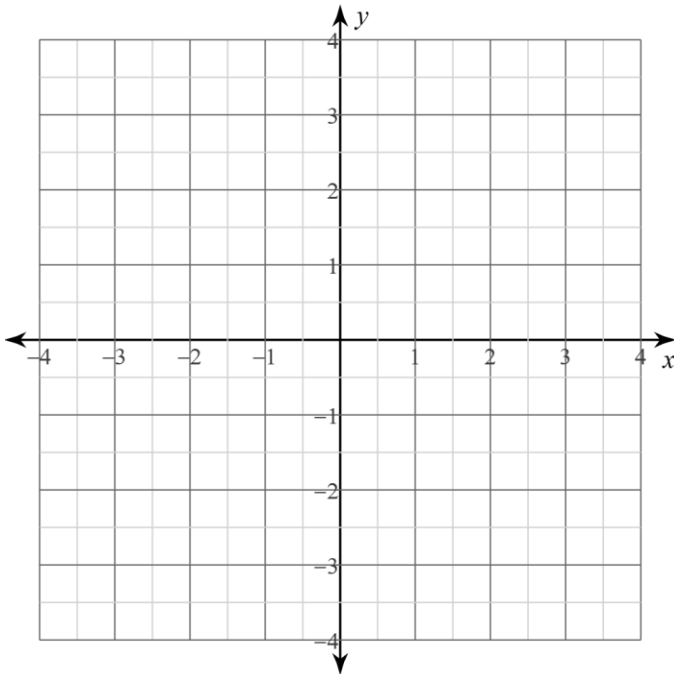
Parent Function Name: ***Reciprocal***

Parent Function equation:  $y = \frac{1}{x}$

Table of values for parent function:

x	-2	-1	0	1	2
y					

Graph of Parent function:



Analysis of the Parent Function:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

Parent Function Name: **Piece-Defined**

Parent Function equation:

$$y = \begin{cases} f(x) & \text{if } x < a \\ g(x) & \text{if } x \geq b \end{cases}$$

Table of values for parent function:

x	1	2	3	4	5
y					

Example:

$$y = \begin{cases} x - 2 & \text{if } x < 3 \\ x - 1 & \text{if } x \geq 3 \end{cases}$$

Analysis of the Example:

Domain:

Range:

Where Increasing:

Where Decreasing:

Where Positive:

Where Negative:

Absolute Min/Max Location:

y-intercept:

x-intercept:

Average Rate of change from  $x = 1$  to  $x = 2$ :

