A parent function

Other functions in the same family

Transformations are

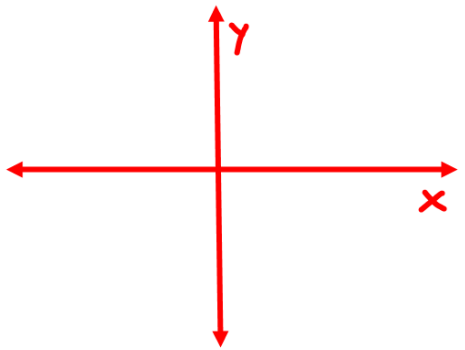
Translation is

A reflection

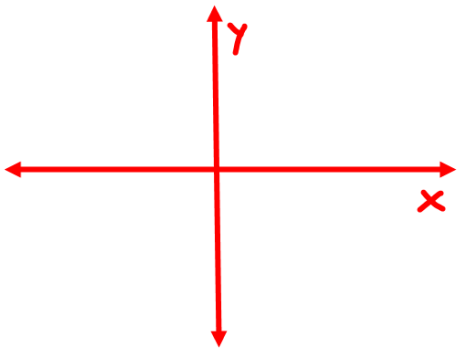
A vertical

A vertical shrink

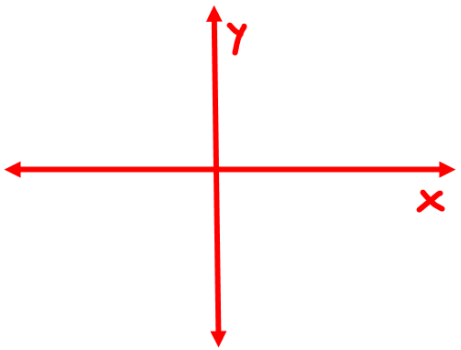
Constant Parent Function



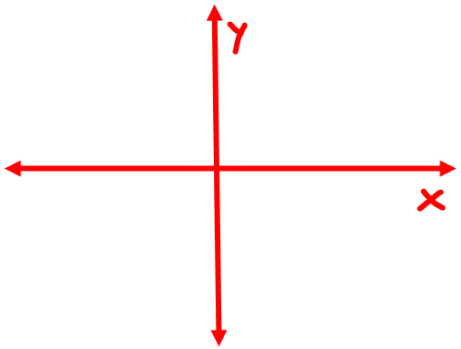
Linear Parent Function



Absolute Value Parent Function



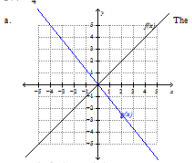
Quadratic Parent Function



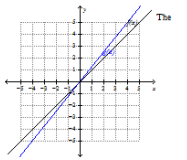
Graph the function and its parent function. Then describe the transformation.

$g(x) = \frac{5}{4}x$

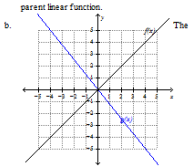
a. The graph of g is a vertical shrink and a reflection in the x-axis of the parent linear function.



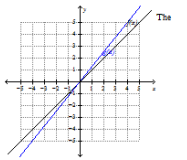
c. The graph of g is a vertical stretch of the parent linear function.



b. The graph of g is a vertical stretch and a reflection in the x-axis of the parent linear function.

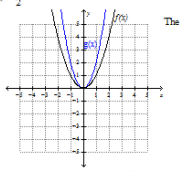


d. The graph of g is a vertical shrink of the parent linear function.



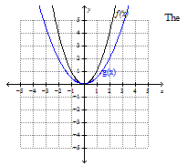
Graph the function and its parent function. Then describe the transformation.

$g(x) = \frac{1}{2}x^2$

a. 

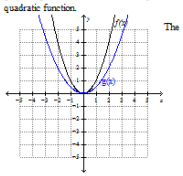
graph of g is a vertical shrink of the parent quadratic function.

The

c. 

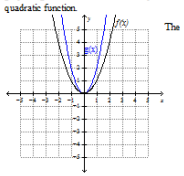
graph of g is a vertical shrink of the parent quadratic function.

The

b. 

graph of g is a vertical stretch of the parent quadratic function.

The

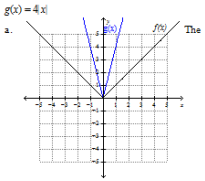
d. 

graph of g is a vertical stretch of the parent quadratic function.

The

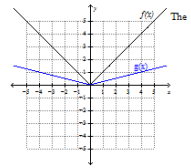
Graph the function and its parent function. Then describe the transformation.

$g(x) = 4|x|$

a. 

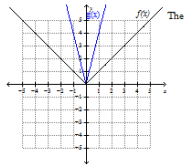
graph of g is a vertical shrink of the parent absolute value function.

The

c. 

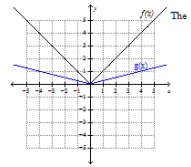
graph of g is a vertical stretch of the parent absolute value function.

The

b. 

graph of g is a vertical stretch of the parent absolute value function.

The

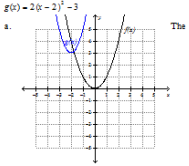
d. 

graph of g is a vertical shrink of the parent absolute value function.

The

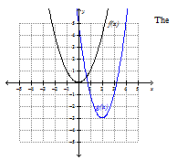
Graph the function and its parent function. Then describe the transformation.

$g(x) = 2(x-2)^2 - 3$

a. 

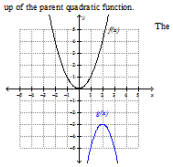
graph of g is a translation 2 units left, a vertical stretch, and a translation 3 units up of the parent quadratic function.

The

c. 

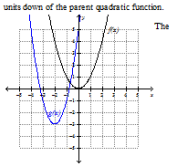
graph of g is a translation 2 units right, a vertical stretch, and a translation 3 units down of the parent quadratic function.

The

b. 

graph of g is a translation 2 units right, a vertical stretch, a reflection in the x-axis, and a translation 3 units down of the parent quadratic function.

The

d. 

graph of g is a translation 2 units left, a vertical stretch, and a translation 3 units down of the parent quadratic function.

The

The table shows the height y of a monster truck x seconds after jumping off a ramp. What type of function models the situation the best? Estimate the height of the truck after 1.75 seconds.

Time (seconds), x	Height (feet), y
0	8.1
0.5	9.5
1	10
1.5	9.5
2	8.1

a. An absolute value function would model this scenario the best. After 1.75 seconds the truck is about 8.5 feet in the air.
b. A quadratic function will model this scenario the best. After 1.75 seconds the truck is about 8.9 feet in the air.
c. A linear function will model this scenario the best. After 1.75 seconds the truck is about 8.5 feet in the air.
d. A linear function will model this scenario the best. After 1.75 seconds the truck is about 8.9 feet in the air.