Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Function Families

Multiple Choice

Identify the choice that best completes the statement or answers the question.

____ 1. 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	8.3
0.5	9.6
1	10
1.5	9.6
2	8.3

a. A linear function will model this scenario the best. After 1.75 seconds the truck is about 9 feet in the air.
b. A linear function will model this scenario the best. After 1.75 seconds the truck is about 8.6 feet in the air.
c. An absolute value function would model this scenario the best. After 1.75 seconds the truck is about 8.6 feet in the air.
d. A quadratic function will model this scenario the best. After 1.75 seconds the truck is about 9 feet in the air.

Short Answer

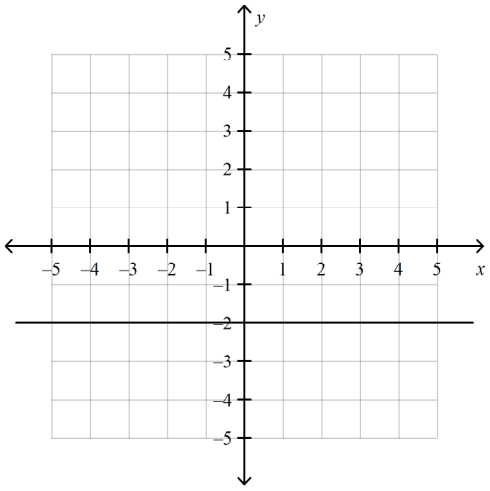
Graph the function and its parent function. Then describe the transformation.

1. $g(x) = x + 3$

2. $g(x) = |x - 3|$

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

4. Identify the function family to which $f(x) = -2$ belongs. Compare the graph of f to the graph of its parent function.

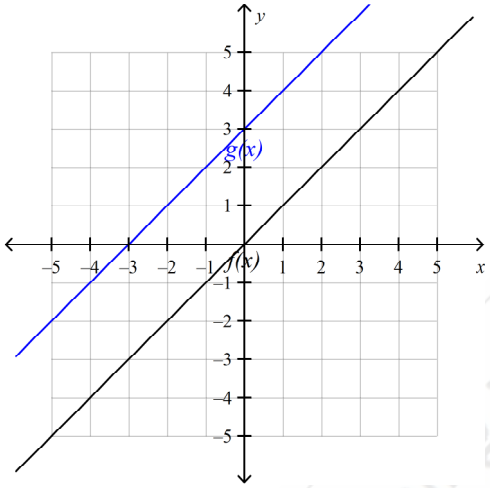


Function Families
Answer Section

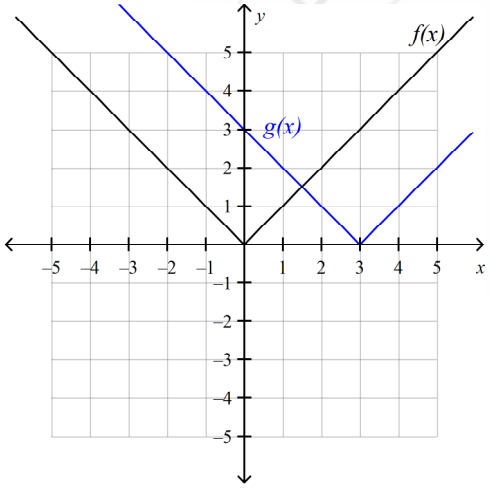
MULTIPLE CHOICE

1. D

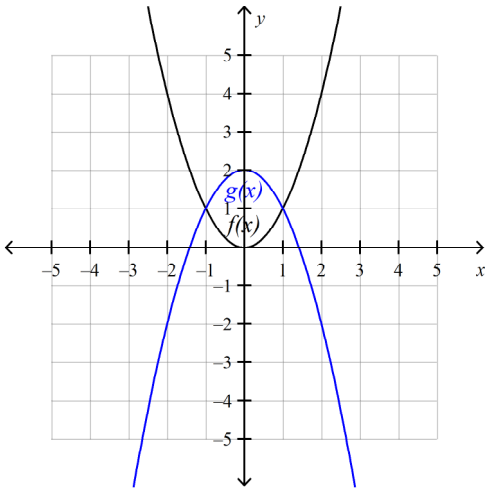
SHORT ANSWER

1. 

The function g is a linear function with a slope of 1 and a y-intercept at 3. This graph is a vertical translation 3 units up of the graph of the parent linear function.

2. 

The function g is an absolute value function that has been horizontally translated 3 units right of the parent absolute value function.

3. 

The function g is a quadratic function that has been reflected in the x-axis with a vertical translation 2 units up of the parent quadratic function.

4. constant; The graph is a translation of 3 units down. The domain is all real numbers and the range of f is $y = -2$, and the range of the parent function is $y = 1$.