Aiden graphed the function $f(x) = \log(3x)$ on a coordinate plane. He then graphed the function q(x) = -f(x) + 3 on the same coordinate plane.

How does the graph of f(x) change to become g(x)?

- A. It is reflected over the B. It is reflected over the *y*-axis and translated 3 units up.
 - v-axis and translated 3 units right.
- x-axis and translated 3 units up.
- It is reflected over the $\,{
 m D}_{\cdot}\,$ It is reflected over the x-axis and translated 3 units right.

2

f(x)+3 by up three

Reflectioner x-axis

Describe the transformations of $f(x) = \sqrt{x}$ that result in the function $g(x) = -\sqrt{x+2}$.

reflectover x-axis

Select ALL that apply.

- The graph f(x) has been reflected across the x-axis.
- The graph f(x) has E. been translated down 2 units.
- The graph f(x) has В. been reflected across the y-axis.
 - The graph f(x) has been translated left 2 units.
- The graph has not been reflected.
- G. The graph f(x) has been translated right 2 units.
- D. The graph f(x) has been translated up 2 units.
- Select the statement that is true for the graphs of all functions g(x).
- The graph of g(x + 1) B. is the graph of g(x)shifted up 1 unit.

not, left

The graph of g(x + 1) C. is the graph of g(x)shifted right 1 unit.

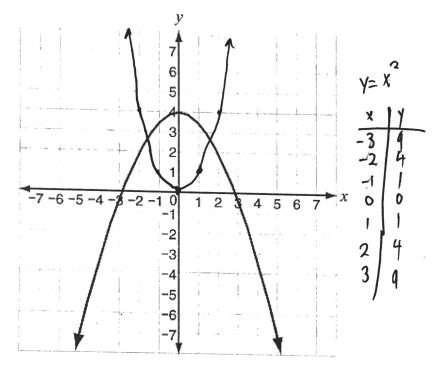
no, left

The graph of g(-x) is, the graph of g(x)reflected over the xaxis.

The graph of g(-x) is the graph of g(x)reflected over the vaxis.

Yes! -g(x) would be over x-axis

The function f(x) is defined by $f(x) = x^2$. The graph of the function g(x), defined by g(x) = kf(x) + h, is shown on this *xy*-coordinate plane.



K must be negative

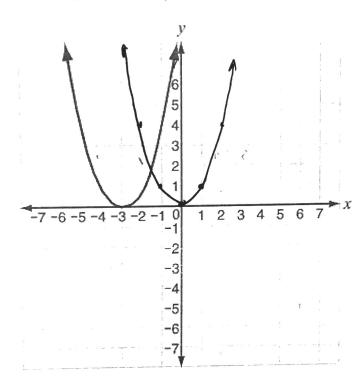
to reflectover x-axis.

Graphis up 4, so hz4

What are the values of k and h?

A.
$$k = 2$$
, $h = 4$ B. $k = \frac{1}{2}$, $h = -4$ C. $k = -2$, $h = -4$ D. $k = -\frac{1}{2}$, $h = 4$

A function is defined by $f(x) = x^2$. The graph of the function y = g(x) is shown on this xy-coordinate plane.



Which equation represents the relationship between the two functions?

A.
$$g(x) = f(x) - 3$$
 B. $g(x) = f(x) + 3$ C. $g(x) = f(x + 3)$ D. $g(x) = f(x - 3)$

Trinity claims that the graph of the function g(x) = f(x - k) is located |k| units to the right of the graph of f(x).

Which statement best describes Trinity's claim?

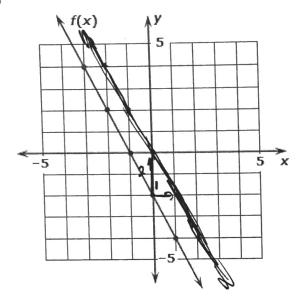
- A. The claim is never true, since the graph of f(x) is shifted up or down by |k| units.
- The claim is always true, since any value of k will shift the graph of f(x) to the right.
- C. The claim is only true for $k \le 0$, since positive values of k will shift the graph of f(x) to the left.
- D. The claim is only true for $k \ge 0$, since negative values of k will shift the graph of f(x) to the left.

If kis positive, f(x) moves night k=2 f(x-2) which ta

Illuminate Itembank™
Generated On October 25, 2017, 6:35 AM PDT

Continue: Turn to the next page.

The graph of linear function f(x) is shown on a coordinate plane.



up 2 is same as right 1!

Jamal claims that the graph of f(x) + 2 is equivalent to the graph of f(x + k). For the case where f(x-1) Jamal's claim is correct, what must be the value of k?

- A. -4

- D. 2
- The graph of a function, f(x), is plotted on the coordinate plane. Select two of the following functions that would move the graph of the function to the right on the coordinate plane.
- B. f(x) + 4
- (x-3)+1
- D. f(x) 3

- 9 Which statement is true for all functions f(x)?
- The graph of -f(x) is the graph of f(x)reflected over the xaxis.
- B. The graph of -f(x) is the graph of f(x)reflected over the y-
- C. The graph of f(kx) is D. The graph of f(x) + kthe graph of f(x)shifted left or right by | k | units. > f(ka) is

a horizontal

scaling

is the graph of f(x)shifted left or right by | k | units. La no, up/down

- What is the value of -3f(x) if f(x) = 7x 2?
- A. -21x-2
- B. -21x+6
- C. 7x 5
- D. -23