

Choose the correct response for each of the following questions.

Use the general form equation: $f(x) = a[b(x-h)]+k$, to answer #'s 1-6.

1) The value "b" determines what part of the transformed graph?

2) The value "k" determines what part of the transformed graph?

3) The value "a" determines what part of the trig graph below?

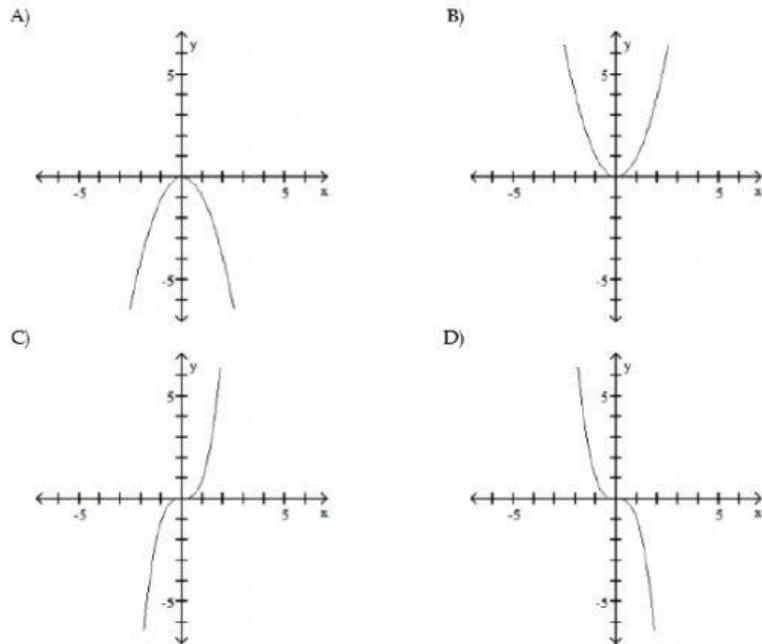
4) The value "h" determines what part of the trig graph below?

5) What affect does "b" have on the graph if it is negative?

6) What affect does "a" have on the graph if it is negative?

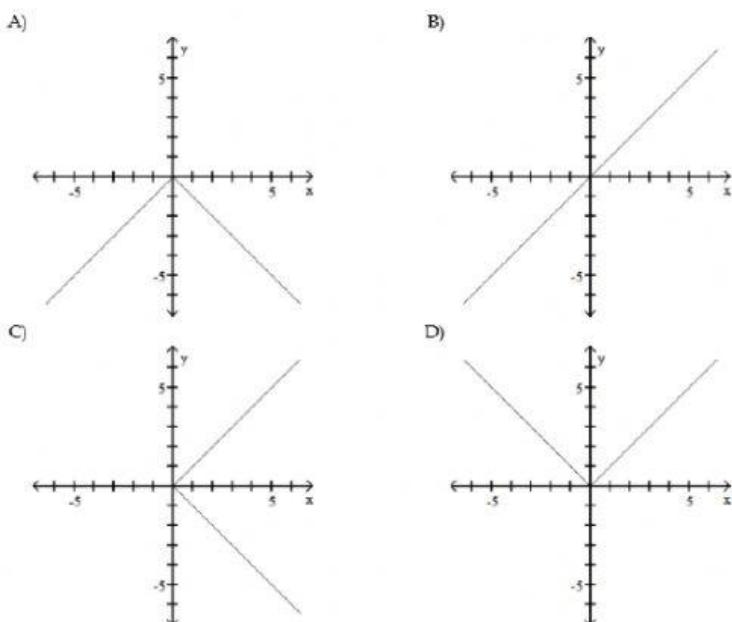
Choose the correct graph for the following equation.

7) $f(x) = x^2$



Choose the correct graph for the following equation.

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



9) Which of the following is the parent function for $y = \sqrt{-\frac{1}{3}x}$?

a. $f(x) = x$
b. $f(x) = |x|$
c. $f(x) = x^3$
d. $f(x) = \sqrt{x}$

Choose the correct description to transform the graph of f into the graph of g .

10) $f(x) = \frac{1}{x}$ and $g(x) = \frac{1}{x-7}$

A) Shift the graph of the reciprocal function up 7 units.
B) Shift the graph of the reciprocal function left 7 units.
C) Shift the graph of the reciprocal function down 7 units.
D) Shift the graph of the reciprocal function right 7 units.

11) $f(x) = \sqrt{x}$ and $g(x) = -\sqrt{x+6}$

A) Shift the graph of f left 6 units and then reflect across the y -axis.
B) Shift the graph of f left 6 units and then reflect across the x -axis.
C) Shift the graph of f right 6 units and then reflect across the x -axis.
D) Shift the graph of f up 6 units and then reflect across the y -axis.

12) $f(x) = |x|$ and $g(x) = |-x| - 7$

A) Reflect across the x -axis and translate 7 units to the left.
B) Reflect across the y -axis and translate 7 units to the left.
C) Reflect across the y -axis and translate 7 units down.
D) Reflect across the x -axis and translate 7 units down.

13) Which of the following IS a transformation that can be used to graph the function below?

$$f(x) = -7\sqrt{5(x+9)} + 12$$

A) Vertical translation 12 units up C) Reflection over the y-axis
B) Horizontal stretch by a factor of 5 D) Horizontal translation 9 units right

14) Which of the following IS NOT a transformation that can be used to graph the function below?

$$f(x) = -6(x-4)^2 + 2$$

A) Vertical translation 2 units up C) Reflection over the x-axis
B) Horizontal shrink by a factor of $\frac{1}{6}$ D) Horizontal translation 4 units right

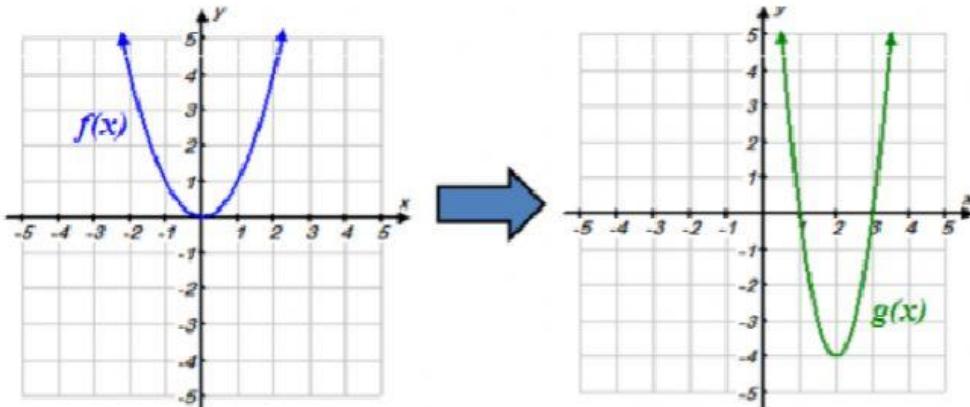
Choose the correct equation for the following parent graph transformation.

15) The graph of $f(x) = \sqrt{x}$ is shifted 4 units to the left. Then the graph is shifted 6 units upward.

A) $g(x) = 6\sqrt{x+4}$
B) $g(x) = \sqrt{x-4} + 6$
C) $g(x) = \sqrt{x+6} + 4$
D) $g(x) = \sqrt{x+4} + 6$

Choose the correct equation for each of the following parent graph transformations.

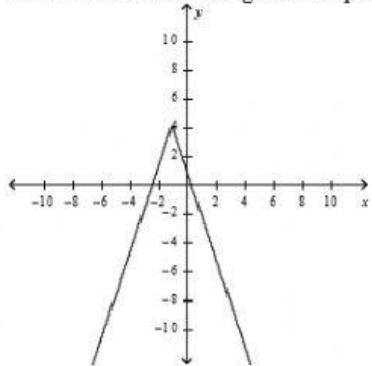
16) Given the graph of the parent function is $f(x) = x^2$:



Which function below correctly describes the graph of $g(x)$?

a. $g(x) = \left(\frac{1}{4}x + 2\right)^2 - 4$ c. $g(x) = \frac{1}{4} \cdot (x+2)^2 - 4$
b. $g(x) = (4x+2)^2 - 4$ d. $g(x) = 4 \cdot (x-2)^2 - 4$

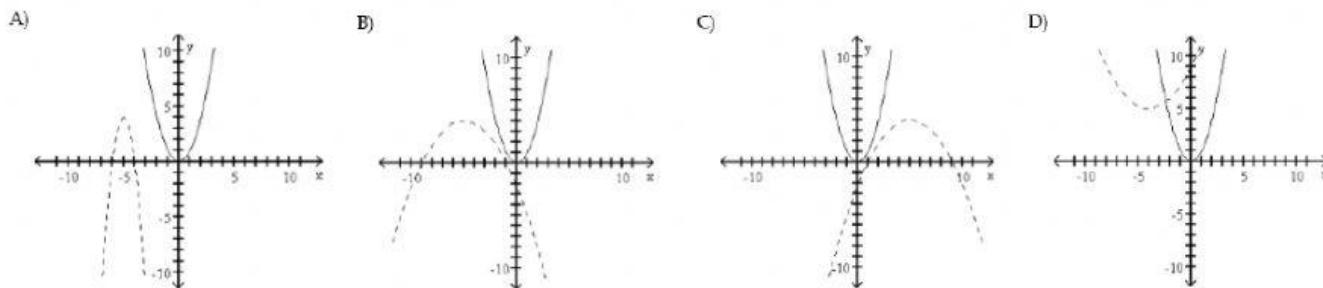
17) Which of the following is the equation for the graph shown?



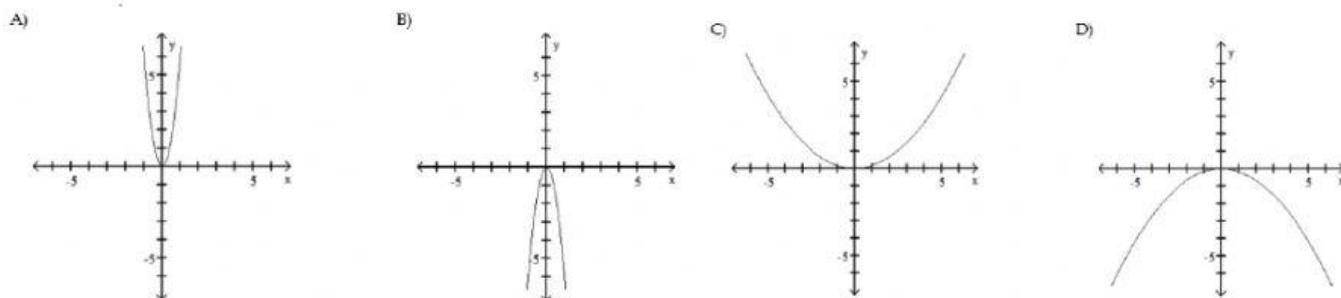
a. $y = 3|x + 1| - 4$
 b. $y = -4|x + 1| + 3$
 c. $y = -3|x + 1| + 4$
 d. $y = -|x + 4| + 3$

Choose the correct graph for each of the following equations.

18) $f(x) = x^2$ (solid graph) $g(x) = -\frac{1}{4}(x+5)^2 + 4$ (dotted graph)



19) $f(x) = \frac{1}{6}x^2$



20) $f(x) = -x^2$

