Transformations of Functions · 1

The graph of $y = x^2$ is shifted 2 units left, then shifted 2 units up. Write the equation of the new graph.

Transformations of Functions · 2

The graph of $y = x^3$ is shifted 4 units right, then shifted 6 units down. Write the equation of the new graph.

Transformations of Functions · 3

The point (-5, 0) is on the graph of $y = f(x)$. Which point must be on the graph of $g(x) = f(x - 5) - 3$?

Transformations of Functions · 4

The graph of $y = x^3$ is shifted 2 units right, then shifted 1 unit down. Write the equation of the new graph.

Transformations of Functions · 5

The graph of $y = x^3$ is shifted 5 units right, then shifted 1 unit down. Write the equation of the new graph.

Transformations of Functions · 6

The point (-4, -3) is on the graph of $y = f(x)$. Which point must be on the graph of $g(x) = f(x + 5) + 2$?

Transformations of Functions · 7

The graph of $y = |x|$ is shifted 6 units left, then shifted 6 units up. Write the equation of the new graph.

Transformations of Functions · 8

The point (-3, -2) is on the graph of $y = f(x)$. Which point must be on the graph of $g(x) = f(x + 3) + 5$?

Transformations of Functions · 2

ANSWER

$y = (x - 4)^3 - 6$

Transformations of Functions · 1

ANSWER

$y = (x + 2)^2 + 2$

Transformations of Functions · 4

ANSWER

$y = (x - 2)^3 - 1$

Transformations of Functions · 3

ANSWER

$(0, -3)$

Transformations of Functions · 6

ANSWER

$(-9, -1)$

Transformations of Functions · 5

ANSWER

$y = (x - 5)^3 - 1$

Transformations of Functions · 8

ANSWER

$(-6, 3)$

Transformations of Functions · 7

ANSWER

$y = |x + 6| + 6$

Transformations of Functions · 9

The graph of $y = x^3$ is reflected across the x-axis, shifted 3 units right, then shifted 3 units up. Write the equation of the new graph.

Transformations of Functions · 10

The graph of $y = x^2$ is reflected across the x-axis, shifted 5 units right, then shifted 1 unit down. Write the equation of the new graph.

Transformations of Functions · 11

The point (-1, -1) is on the graph of y = f(x). Which point must be on the graph of g(x) = f(x - 5) + 4?

Transformations of Functions · 12

The graph of $y = x^2$ is reflected across the x-axis, shifted 3 units left, then shifted 4 units up. Write the equation of the new graph.

Transformations of Functions · 13

The graph of y = |x| is reflected across the x-axis, shifted 5 units right, then shifted 4 units up. Write the equation of the new graph.

Transformations of Functions · 14

The point (3, 2) is on the graph of y = f(x). Which point must be on the graph of g(x) = f(x + 2) + 3?

Transformations of Functions · 15

The graph of y = |x| is shifted 1 unit right, then shifted 4 units down. Write the equation of the new graph.

Transformations of Functions · 16

The graph of y = |x| is reflected across the x-axis, shifted 3 units right, then shifted 6 units down. Write the equation of the new graph.

Transformations of Functions · 10

ANSWER

$$y = -(x - 5)^2 - 1$$

Transformations of Functions · 9

ANSWER

$$y = -(x - 3)^3 + 3$$

Transformations of Functions · 12

ANSWER

$$y = -(x + 3)^2 + 4$$

Transformations of Functions · 11

ANSWER

$$(4, 3)$$

Transformations of Functions · 14

ANSWER

$$(1, 5)$$

Transformations of Functions · 13

ANSWER

$$y = -|x - 5| + 4$$

Transformations of Functions · 16

ANSWER

$$y = -|x - 3| - 6$$

Transformations of Functions · 15

ANSWER

$$y = |x - 1| - 4$$

Transformations of Functions · 17

The point (2, 4) is on the graph of y = f(x). Which point must be on the graph of g(x) = f(x - 1) + 5?

Transformations of Functions · 18

The graph of $y = x^3$ is reflected across the x-axis, shifted 4 units left, then shifted 1 unit up. Write the equation of the new graph.

Transformations of Functions · 19

The graph of $y = x^3$ is shifted 2 units right, then shifted 1 unit up. Write the equation of the new graph.

Transformations of Functions · 20

The graph of y = |x| is shifted 5 units right, then shifted 1 unit up. Write the equation of the new graph.

Transformations of Functions · 21

The point (0, -2) is on the graph of y = f(x). Which point must be on the graph of g(x) = -f(x + 1) - 1?

Transformations of Functions · 22

The graph of y = |x| is shifted 2 units left, then shifted 3 units down. Write the equation of the new graph.

Transformations of Functions · 23

The graph of y = |x| is shifted 6 units right, then shifted 1 unit down. Write the equation of the new graph.

Transformations of Functions · 24

The point (1, 5) is on the graph of y = f(x). Which point must be on the graph of g(x) = -f(x + 5) - 5?

Transformations of Functions · 18

ANSWER

$y = -(x + 4)^3 + 1$

Transformations of Functions · 17

ANSWER

$(3, 9)$

Transformations of Functions · 20

ANSWER

$y = |x - 5| + 1$

Transformations of Functions · 19

ANSWER

$y = (x - 2)^3 + 1$

Transformations of Functions · 22

ANSWER

$y = |x + 2| - 3$

Transformations of Functions · 21

ANSWER

$(-1, 1)$

Transformations of Functions · 24

ANSWER

$(-4, -10)$

Transformations of Functions · 23

ANSWER

$y = |x - 6| - 1$