**Task card 1** Transformations of Functions

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

**Task card 2** Transformations of Functions

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

**Task card 3** Transformations of Functions

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?

**Task card 4** Transformations of Functions

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

**Task card 5** Transformations of Functions

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

**Task card 6** Transformations of Functions

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?

**Task card 7** Transformations of Functions

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

**Task card 8** Transformations of Functions

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

**Task card 9** Transformations of Functions

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.

**Task card 10** Transformations of Functions

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.

**Task card 11** Transformations of Functions

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

**Task card 12** Transformations of Functions

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.

**Task card 13** Transformations of Functions

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.

**Task card 14** Transformations of Functions

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?

**Task card 15** Transformations of Functions

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

**Task card 16** Transformations of Functions

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.

**Task card 17** Transformations of Functions

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?

**Task card 18** Transformations of Functions

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.

**Task card 19** Transformations of Functions

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

**Task card 20** Transformations of Functions

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

**Task card 21** Transformations of Functions

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

**Task card 22** Transformations of Functions

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

**Task card 23** Transformations of Functions

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

**Task card 24** Transformations of Functions

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 Task Cards

Recording sheet · Grade 11 · Use the rules for shifts, stretches and reflections.

Name: _____ Date: _____

Scan to check your answers

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |

# Transformations of Functions Task Cards: Answer Key

Grade 11 · Easy

The answers online

| | | |
|---|---|---|
| **1.** $y = (x + 2)^2 + 2$ | **2.** $y = (x - 4)^3 - 6$ | **3.** (0, -3) |
| **4.** $y = (x - 2)^3 - 1$ | **5.** $y = (x - 5)^3 - 1$ | **6.** (-9, -1) |
| **7.** $y = \|x + 6\| + 6$ | **8.** (-6, 3) | **9.** $y = -(x - 3)^3 + 3$ |
| **10.** $y = -(x - 5)^2 - 1$ | **11.** (4, 3) | **12.** $y = -(x + 3)^2 + 4$ |
| **13.** $y = -\|x - 5\| + 4$ | **14.** (1, 5) | **15.** $y = \|x - 1\| - 4$ |
| **16.** $y = -\|x - 3\| - 6$ | **17.** (3, 9) | **18.** $y = -(x + 4)^3 + 1$ |
| **19.** $y = (x - 2)^3 + 1$ | **20.** $y = \|x - 5\| + 1$ | **21.** (-1, 1) |
| **22.** $y = \|x + 2\| - 3$ | **23.** $y = \|x - 6\| - 1$ | **24.** (-4, -10) |