

Y6 Translations Reflections

KS2 Y6 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Reflect (4, 3) in the y-axis.

Step 1 · The point is 4 to the right of the y-axis
it goes 4 to the left

Step 2 · A reflection in the y-axis keeps y the same
 $y = 3$

Answer: (-4, 3)

Check: Reflecting in the y-axis changes the sign of x ✓

2. Now try one with the steps

Reflect (2, 5) in the x-axis.

Step 1 · 5 above the x-axis

Step 2 · x stays the same

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. Translate (2, 3) by 4 left. Where is it now?

2. Translate (-1, 4) by 3 down. Where is it now?

3. Translate (-3, -2) by 5 right and 6 up.

4. Reflect (5, 2) in the y-axis.

5. Reflect $(5, 2)$ in the x-axis.

6. Reflect $(-3, -4)$ in the x-axis.

7. Reflect $(-6, 1)$ in the y-axis.

8. Describe the translation that moves $(1, -2)$ to $(-4, 3)$.

9. Reflect $(0, 3)$ in the y-axis.

10. Reflect the triangle $(1, 2)$, $(4, 2)$, $(1, 5)$ in the x-axis. Write the new corners.

11. Translate the square $(-1, 1)$, $(1, 1)$, $(1, -1)$, $(-1, -1)$ by 3 right and 2 up. Write the new corners.

12. Point P is reflected in the y-axis and lands on $(-2, -5)$. Where was P?

13. Reflect $(3, 4)$ in the x-axis, then reflect the result in the y-axis. Where does it end up?

14. After a translation or a reflection, is the shape the same size? Does a reflection change which way it faces?

15. A point moves from $(4, 1)$ to $(-4, 1)$. Give two different ways this could happen.

4. Before you hand it in

Reflecting (2, 5) in the x-axis as (-2, 5).

The x-axis is horizontal. Reflecting in it moves the point up or down, so y changes sign: (2, -5).

Translating (-3, -2) by 5 right and getting (-8, -2).

Right means add to x: $-3 + 5 = 2$.

Thinking a reflected shape is a different size.

Translations and reflections never change the size or shape; only the position (and, for a reflection, the way it faces).