

Y4 Completing Symmetric Figures

KS2 Y4 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

A square is coloured 1 square to the left of a vertical mirror line. Where does its reflection go?

Step 1 · Count the squares from the shape to the mirror line

1 square

Step 2 · Count the same distance on the other side

1 square to the right of the line

Answer: The reflection is 1 square to the right of the mirror line, in the same row

Check: A reflection is the same distance from the mirror line ✓

2. Now try one with the steps

A square touches a vertical mirror line on its left. Where is its reflection?

Step 1 · Distance from the line

Step 2 · Its reflection also touches the line

Answer:

3. Practice

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

1. A coloured square is 2 squares to the left of a vertical mirror line. How many squares to the right of the line is its reflection?

2. A coloured square is 4 squares to the right of a vertical mirror line. How many squares to the left of the line is its reflection?

3. A square is 1 square above a horizontal mirror line. Where is its reflection?

4. When you reflect a square in a vertical mirror line, does it stay in the same row? Write yes or no.

5. A shape is drawn touching a mirror line. Will its reflection touch the line too? Write yes or no.

6. Half a shape has 6 coloured squares. How many coloured squares does the whole symmetrical shape have?

7. The left half of a picture has a tall thin rectangle near the mirror line. On the right, will the rectangle be tall and thin too? Write yes or no.

8. A triangle points left on the left of a vertical mirror line. Which way does its reflection point?

9. A square is 3 squares left of a vertical mirror line and 2 squares up from the bottom of the grid. Where is its reflection?

10. Half of a symmetrical shape covers 9 squares and 2 of them touch the mirror line. How many squares does the whole shape cover?

11. The left half of a shape is 3 squares wide. How wide is the whole symmetrical shape if it touches the mirror line? Give the number of squares.

12. Half a letter is drawn left of a vertical mirror line: a slanted line from the bottom-left up to the top of the mirror line, and a short bar across the middle from the slant to the mirror line. What capital letter is completed?

13. Draw half a heart on the left of a mirror line. Describe how the right half should look.

14. Tom reflected a square 2 squares left of the mirror line and drew it 3 squares to the right. What mistake did he make?

4. Before you hand it in

Copying the half instead of reflecting it (sliding it across).

A reflection is flipped. Squares close to the line stay close to the line; far squares stay far.

Counting from the edge of the grid instead of from the mirror line.

Always count the squares between the shape and the mirror line, then count the same on the other side.

Moving squares up or down when reflecting in a vertical line.

In a vertical mirror line, each square stays in its own row. Run your finger along the row.

Leaving a gap at the mirror line.

If the half touches the line, the reflection must touch it too, so the two halves join.