REFLECTIONS 2

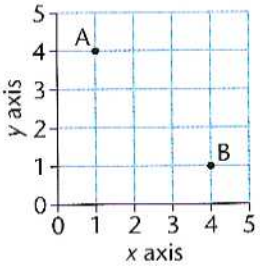
TARGET

To plot co-ordinates, to draw a shape and to predict its position following a reflection.

The position of a point on a grid is given by its *x* and *y* co-ordinates.

Examples

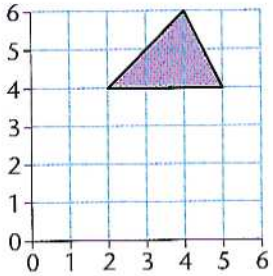
Point A is (1, 4).
Point B is (4, 1).
Remember:
The *x* co-ordinate always comes first.



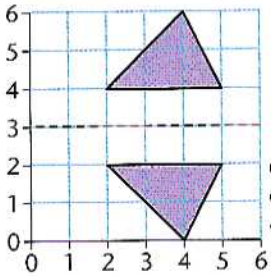
Example

Plot the following points and join up in the order given to form a triangle.

(2, 4) (4, 6) (5, 4) (2, 4)



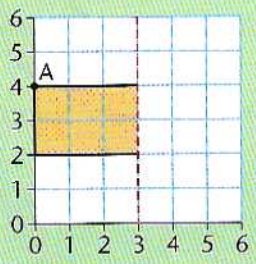
Sketch the reflection of the shape in a mirror line from (0, 3) to (6, 3). Give the co-ordinates of the reflected shape.



A

Use squared paper.
Copy the grid, the shape and the mirror line.
Sketch the reflection.

1



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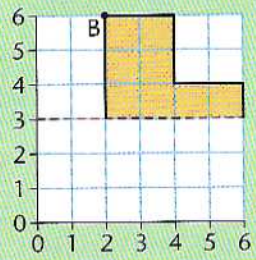

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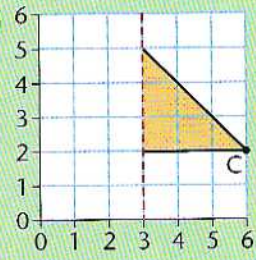

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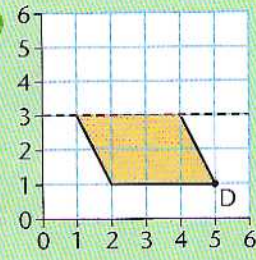

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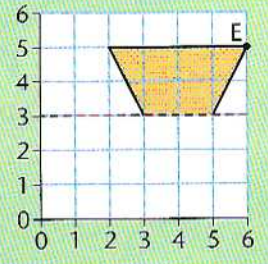

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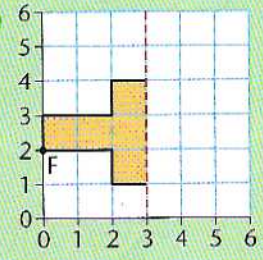

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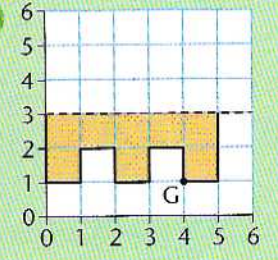
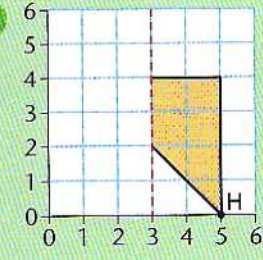


8



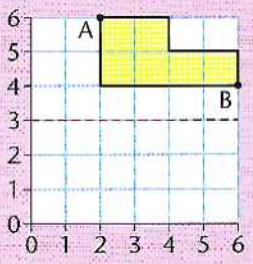
9 Give the co-ordinates of points A–H:

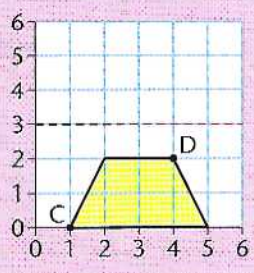
a) in the above shapes

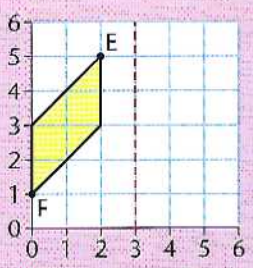
b) in the reflected shapes.

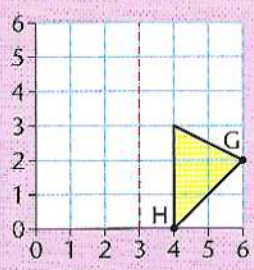
B

Copy the grid, the shape and the mirror line.
Sketch the reflection.

1 

2 

3 

4 

5 Give the co-ordinates of points A–H:
- a) in the above shapes
- b) in the reflected shapes.

Plot the co-ordinates for each of the following on a 6 × 6 grid and join them up in the order given to form a shape. Draw the mirror line and sketch the reflection.

6 (3, 4) (1, 6) (4, 6) (6, 4) (3, 4)
Mirror line (0, 3) to (6, 3)

7 (0, 0) (0, 1) (2, 1) (2, 2) (3, 2) (3, 1) (4, 1) (4, 0) (0, 0)
Mirror line (0, 3) to (6, 3)

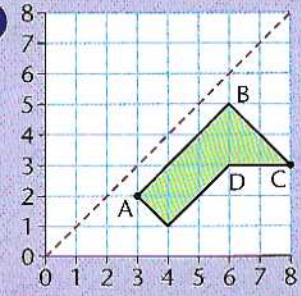
8 (2, 1) (1, 1) (0, 3) (1, 5) (2, 5) (2, 1)
Mirror line (3, 0) to (3, 6)

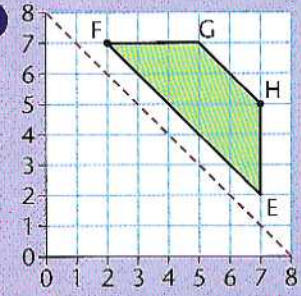
9 (4, 6) (6, 4) (5, 2) (4, 2) (4, 6)
Mirror line (3, 0) to (3, 6)

10 (0, 6) (4, 6) (3, 5) (3, 4) (1, 4) (1, 5) (0, 6)
Mirror line (0, 3) to (6, 3)

C

Copy the grid, the shape and the mirror line.
Sketch the reflection.

1 

2 

3 Give the co-ordinates of points A–H:
- a) in the above shapes
- b) in the reflected shapes.

Plot the co-ordinates on an 8 × 8 grid and join them up in the order given to form a shape. Draw the mirror line and sketch the reflection.

4 (3, 2) (6, 5) (7, 4) (7, 1) (4, 1) (3, 2)
Mirror line (0, 0) to (8, 8)

5 (1, 2) (1, 6) (3, 6) (5, 8) (5, 6) (1, 2)
Mirror line (0, 0) to (8, 8)

6 (2, 8) (8, 8) (8, 2) (6, 4) (6, 6) (4, 6) (2, 8)
Mirror line (0, 8) to (8, 0)

7 (1, 1) (1, 3) (0, 4) (0, 6) (1, 6) (6, 1) (6, 0) (4, 0) (3, 1) (1, 1)
Mirror line (0, 8) to (8, 0)