our-way reflections

eflect a shape in two lines of symmetry

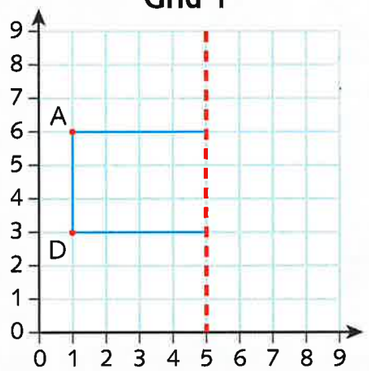
You will need:
- Resource 24: 9 x 9 coordinate grids
- ruler

Use Resource 24: 9 x 9 coordinate grids.

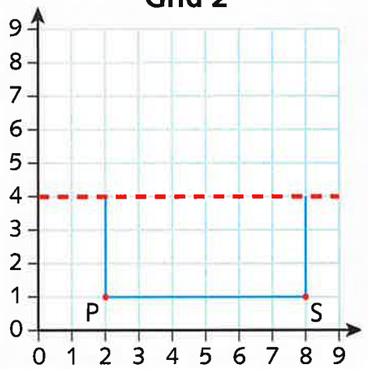
a For Grid 1, copy the line of symmetry and the shape onto a 9 x 9 coordinate grid. Complete rectangle ABCD and write the coordinates of B and C.

b For Grid 2, copy the line of symmetry and the shape onto a 9 x 9 coordinate grid. Complete rectangle PQRS and write the coordinates of Q and R.

Grid 1

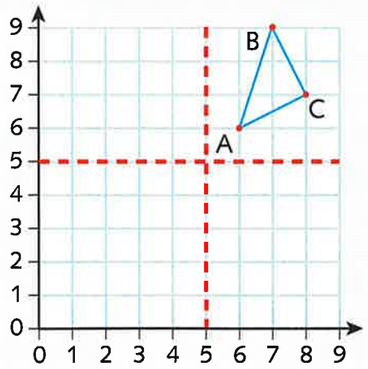


Grid 2



1 Use a grid from Resource 24: 9 × 9 coordinate grids.

- Copy triangle ABC onto the first quadrant of a 9 x 9 coordinate grid and copy the two lines of symmetry.
- Reflect triangle ABC into the other three quadrants.



You will need:
- Resource 24: 9 x 9 coordinate grids
- ruler

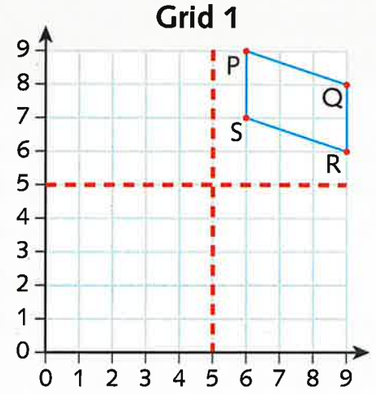
2 Using your work from Question 1, copy and complete the table for the points A, B and C, and their images in each quadrant.

1st quadrant	2nd quadrant	3rd quadrant	4th quadrant
A (6 , 6)	A′ (,)	A″ (,)	A‴ (,)
B (,)	B′ (,)	B″ (,)	B‴ (,)
C (,)	C′ (,)	C″ (,)	C‴ (,)

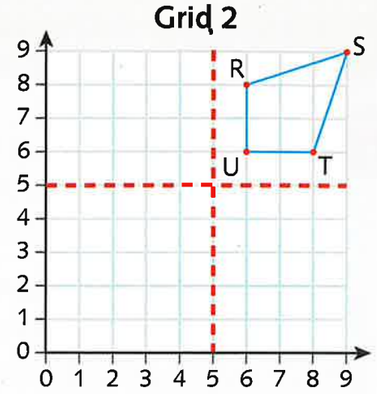
3 Use another grid from Resource 24: 9 x 9 coordinate grid.

- For each diagram, copy the shape onto the first quadrant of a 9 x 9 coordinates grid and copy the two lines of symmetry.
- Reflect each shape into the other three quadrants.

Grid 1



Grid 2



4 Using your work from Question 3, copy and complete the table for the point S in each grid.

Grid	1st quadrant	2nd quadrant	3rd quadrant	4th quadrant
1	S (,)	S′ (,)	S″ (,)	S‴ (,)
2	S (,)	S′ (,)	S″ (,)	S‴ (,)

5 a Plot these points onto a 9 × 9 coordinate grid: D (5,9), E (8,8), F (8,6), G (5,5).

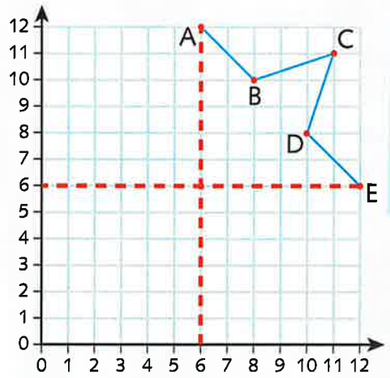
b Reflect the shape into the other three quadrants using the same lines of symmetry as in Question 3 above.

Challenge 3

1 Copy the grid and the shape onto 1 cm squared paper.

2 Reflect the points into the other three quadrants and join the points to form a shape.

3 Copy the table in Challenge 2, Question 2 and complete it for the points B, C and D in each grid.



You will need:
- 1 cm squared paper
- ruler