Curriculum Outcomes

(SS3) Demonstrate an understanding of similarity of polygons.

(SS4) Draw and interpret scale diagrams of 2-D shapes.

(SS5) Demonstrate an understanding of line and rotation symmetry.

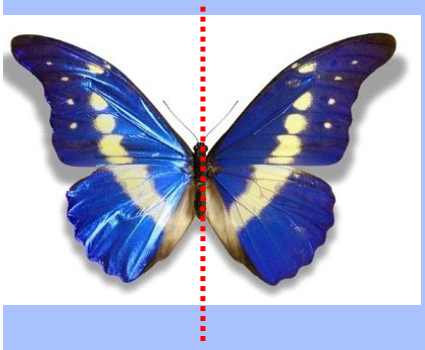
Student Friendly: Reflecting a shape across a line

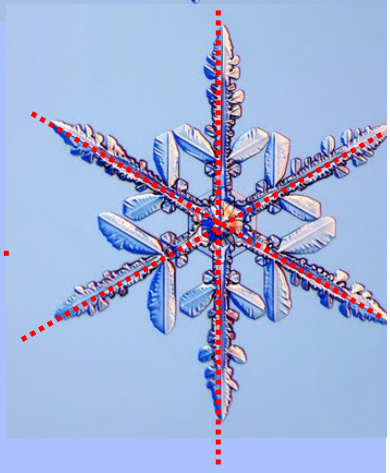
Quiz Day

SECTION 7.5

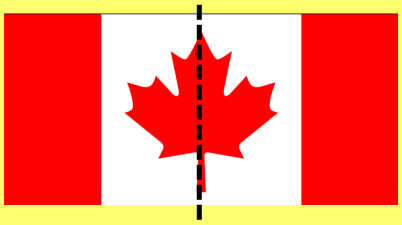
REFLECTIONS AND LINE SYMMETRY

A figure has **symmetry** when it can be folded so two halves match, or are identical.

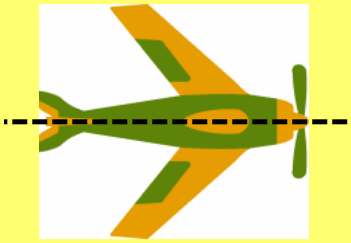




Shapes may show symmetry when folded:



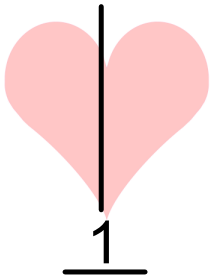
vertically



horizontally

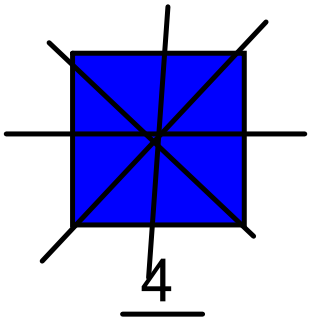
diagonally

How many lines of symmetry are in the following figures?


1


5


1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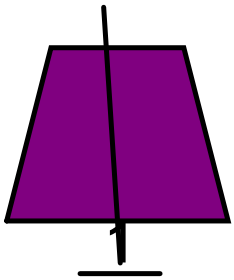
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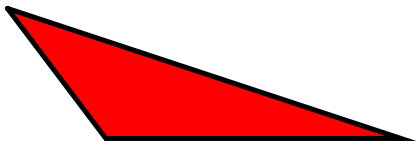
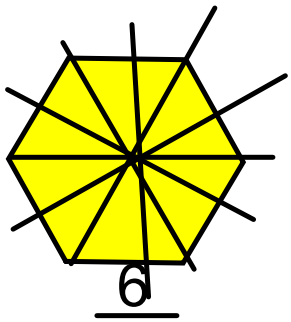
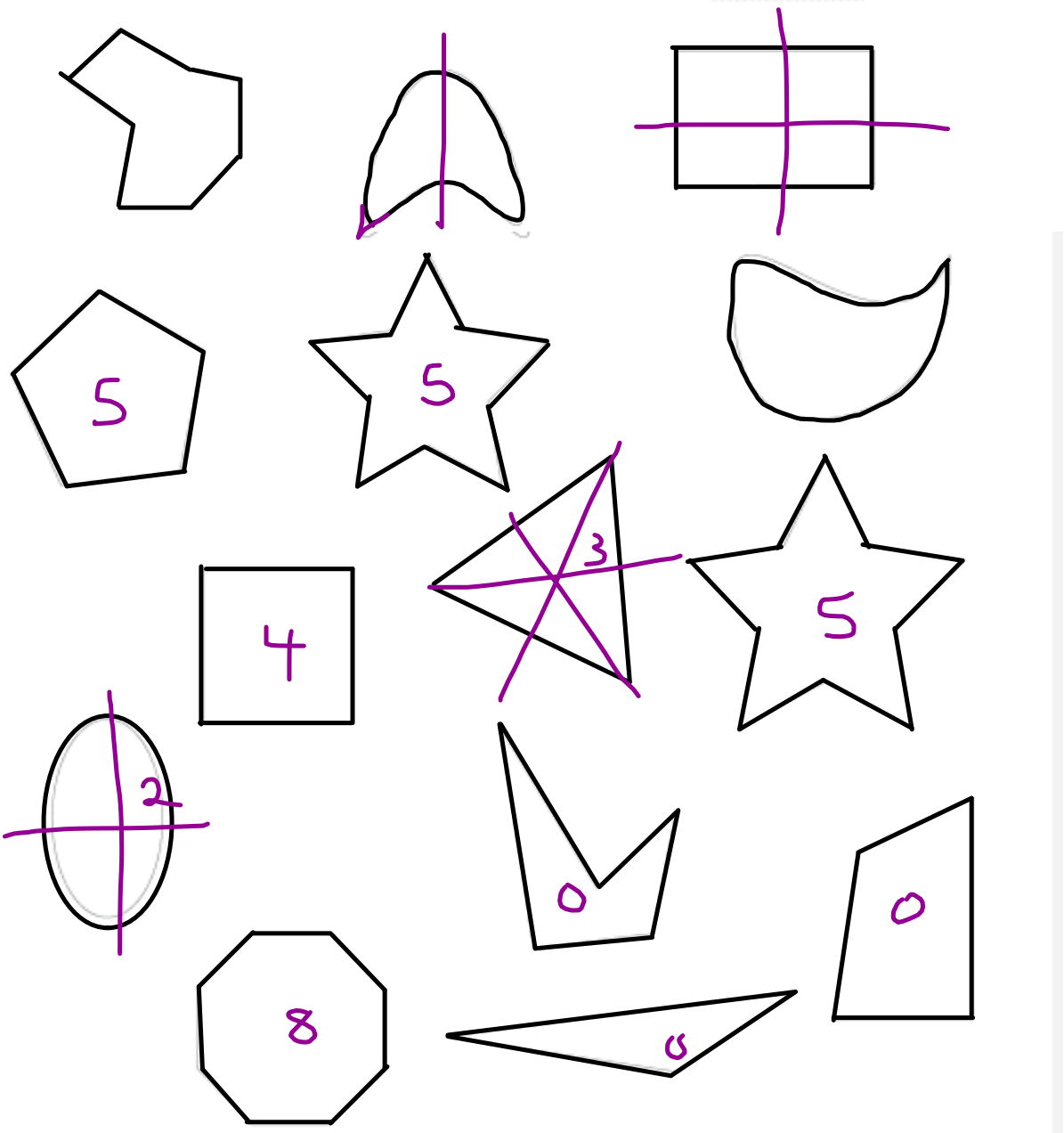

0


6

Symmetry

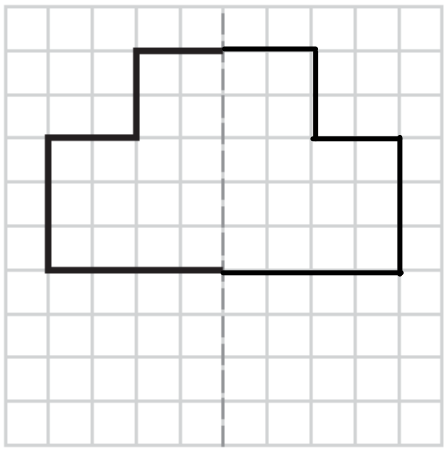
Color the shapes that are symmetric.

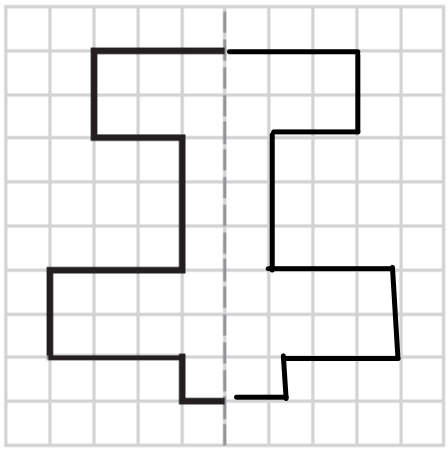


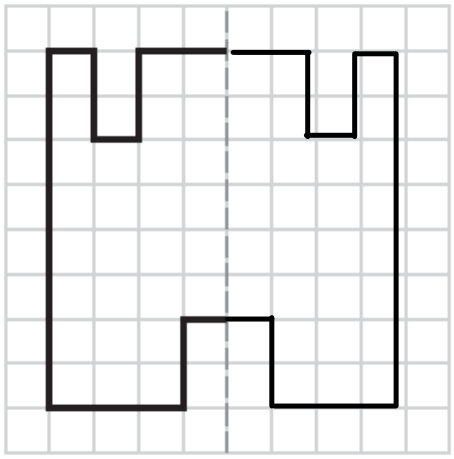
Creating Symmetry

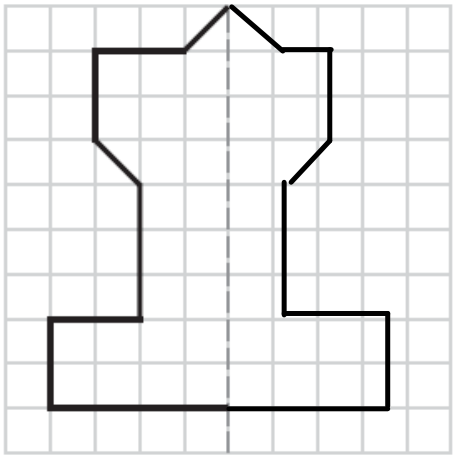
Name: _____ Class: _____

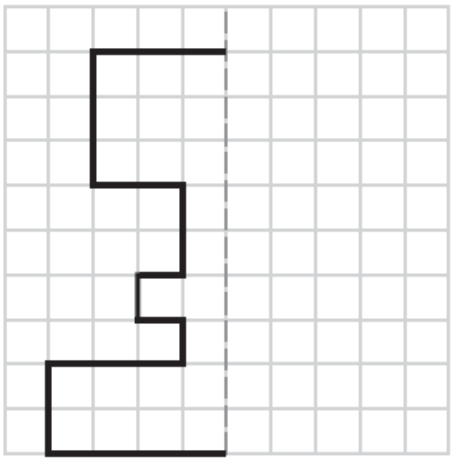
Each figure is half of a symmetric shape. Complete each figure by using the dotted line as the line of symmetry.

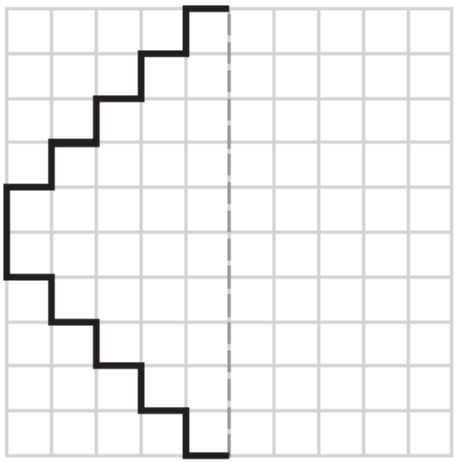


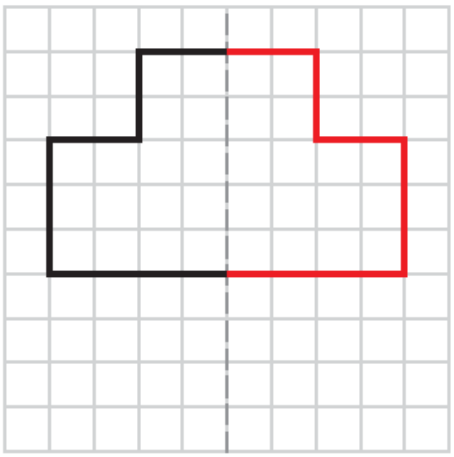


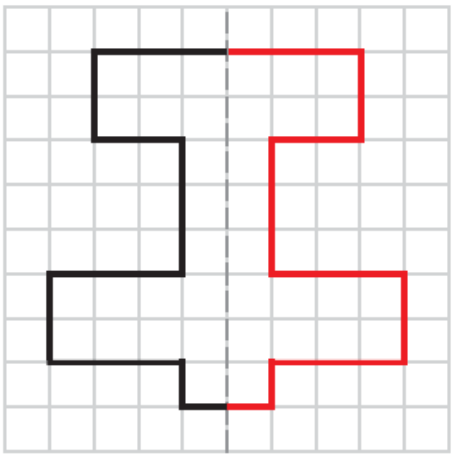


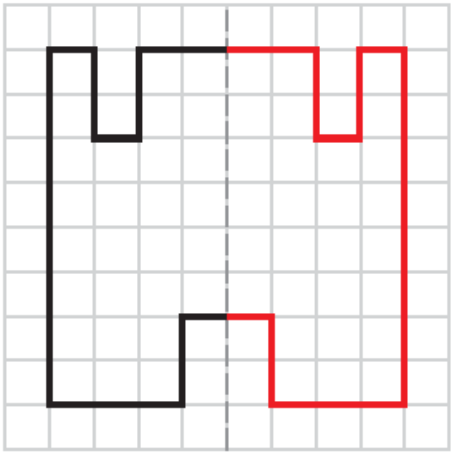


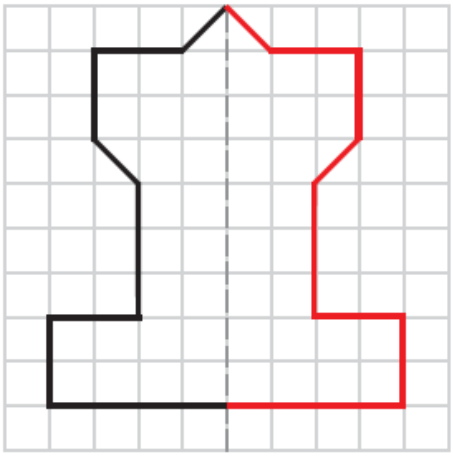


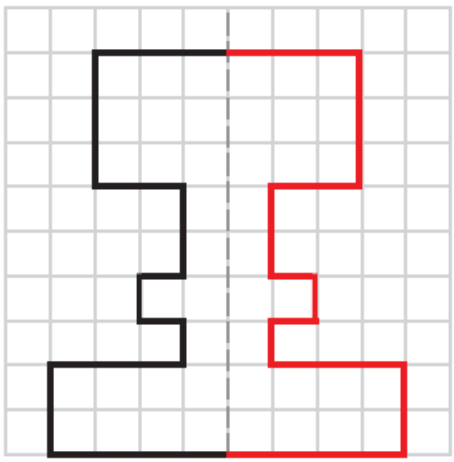


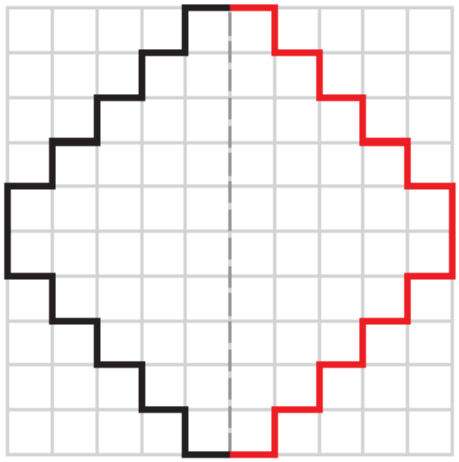




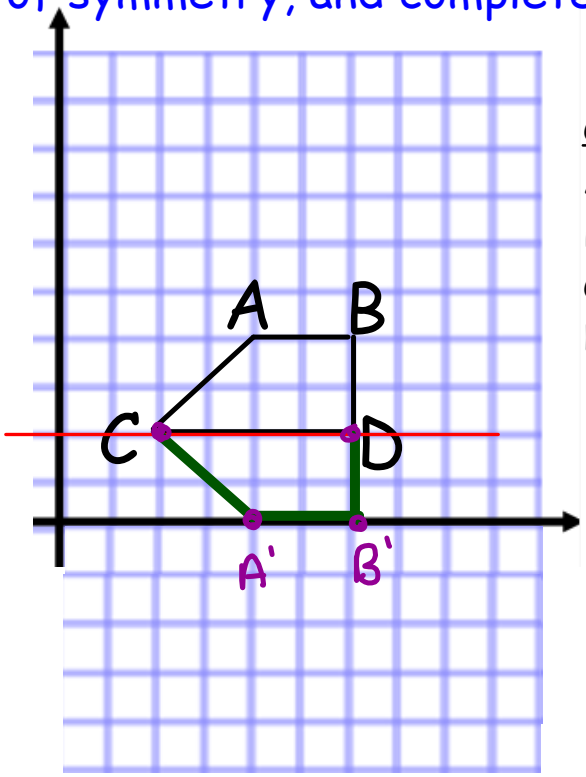








Copy the shape on graph paper. Use the red line as a line of symmetry, and complete the other half.

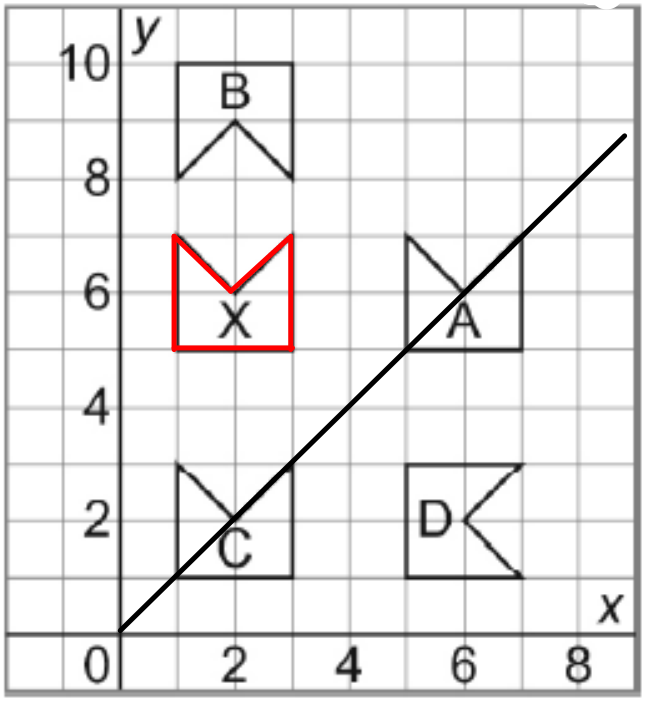


Coordinates:

A (4, 4)
B (6, 4)
C (2, 2)
D (6, 2)

A' (4, 0)
B' (6, 0)
C' (2, 2)
D' (6, 2)

Identify the shapes that are related to the shape X by a line of **reflection**. Describe the symmetry in each case.



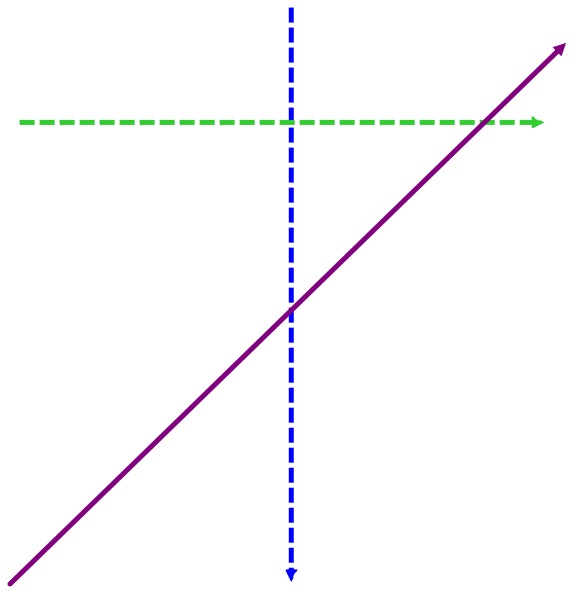
A: reflected in vertical line passing through 4 on the x-axis

B: reflected in horizontal line pass through 7.5 on the y-axis

C: not related to X by line symmetry

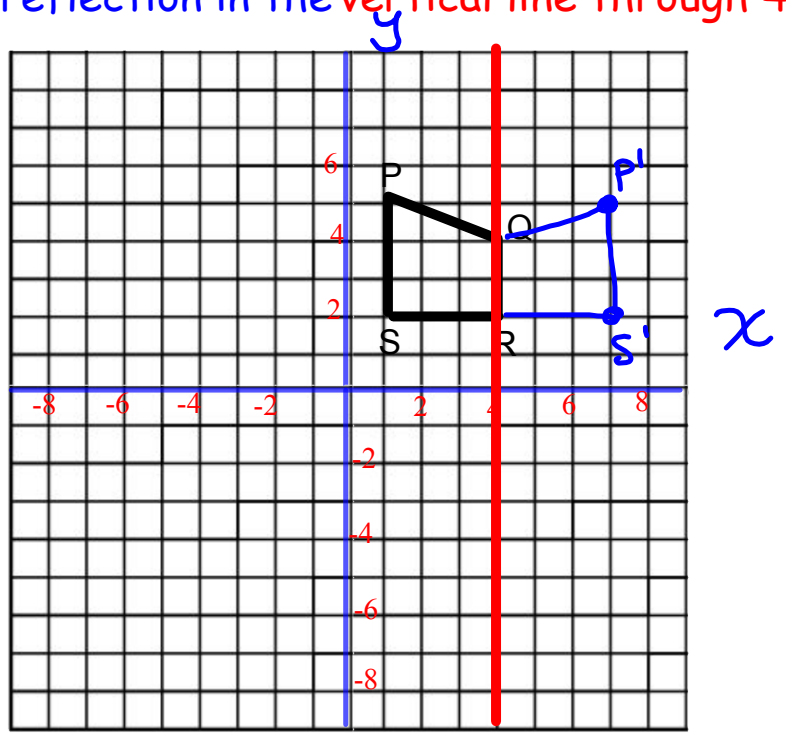
D: reflected in oblique line passing through (0, 0) and (8, 8)

Oblique just means a slanted line



Quadrilateral PQRS is part of a larger shape.

a) Draw a reflection in the vertical line through 4 on the x-axis.



b) Write the coordinates of the original shape

P (1, 5)
Q (4, 4)
R (4, 2)
S (1, 2)

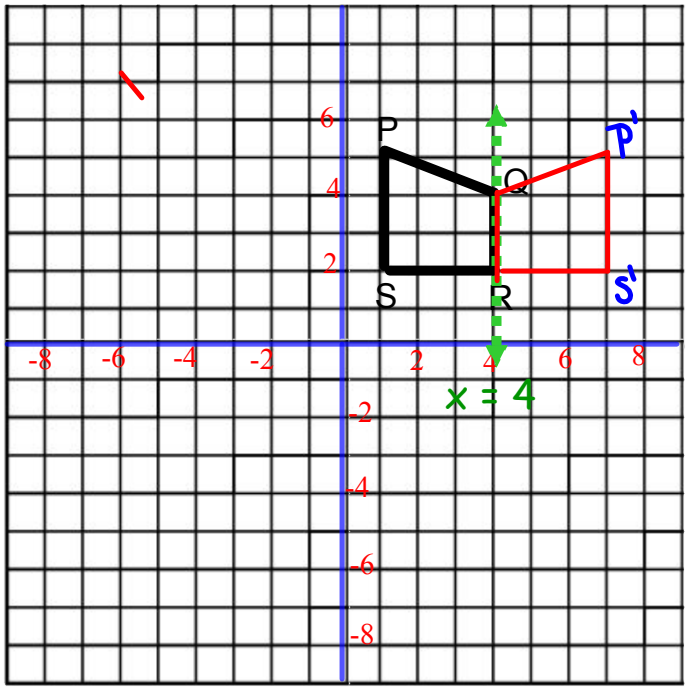
Go to next page to see answers . . . .

c) Write the coordinated of the reflected shape

P'(7, 5)
Q'(4, 4)
R'(4, 2)
S'(7, 2)

Quadrilateral PQRS is part of a larger shape.

a) Draw a reflection in the vertical line through 4 on the x-axis.



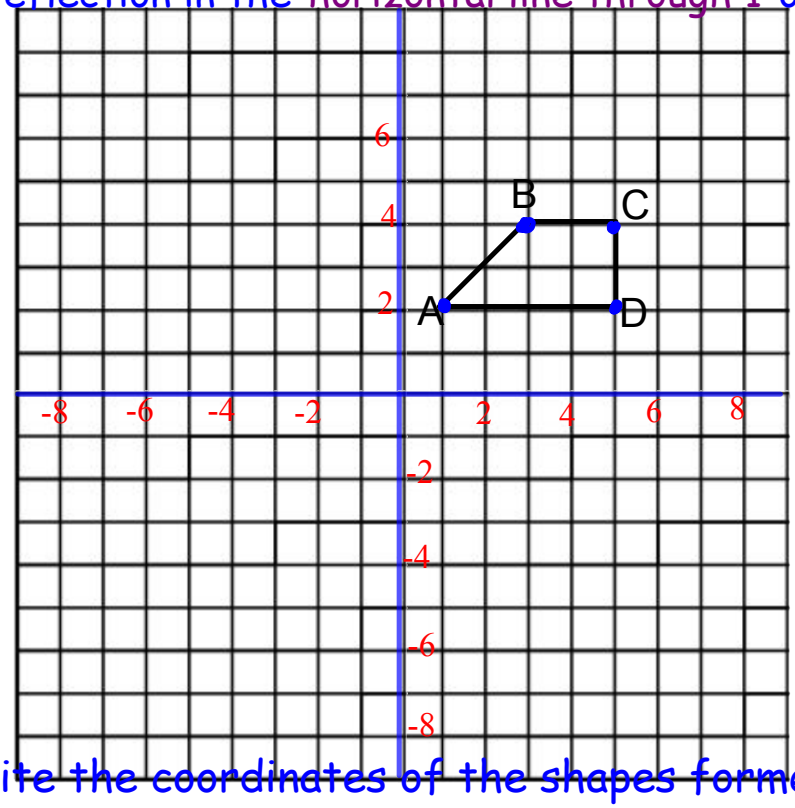
b) Write the coordinates of the original shape

P(.,) Q( ) S(., 1)

c) Write the coordinated of the reflected shape

P'(7, 5) S'(7, 1)

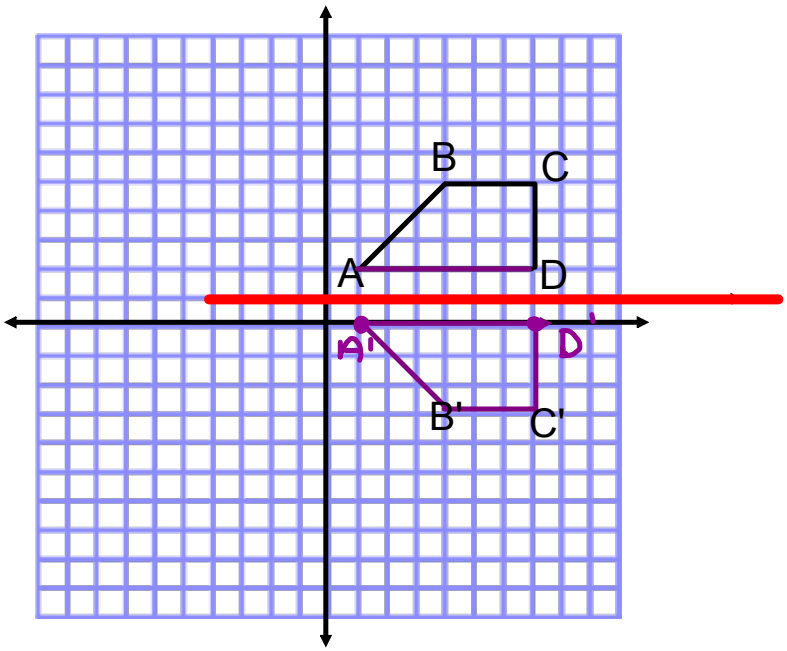
Draw a reflection in the horizontal line through 1 on the y-axis.



b) Write the coordinates of the shapes formed.

c) Describe the new shape and its symmetry.

Draw a reflection in the horizontal line through 1 on the y-axis.



b) Write the coordinates of the shape formed.

A(1, 2) B(4, 5) C(7,5) D(7,2)

A'(1,0) B'(4,-3) C'(7,-3) D(7,0)

c) ~~Describe the new shape and its symmetry.~~