

Curriculum Outcomes

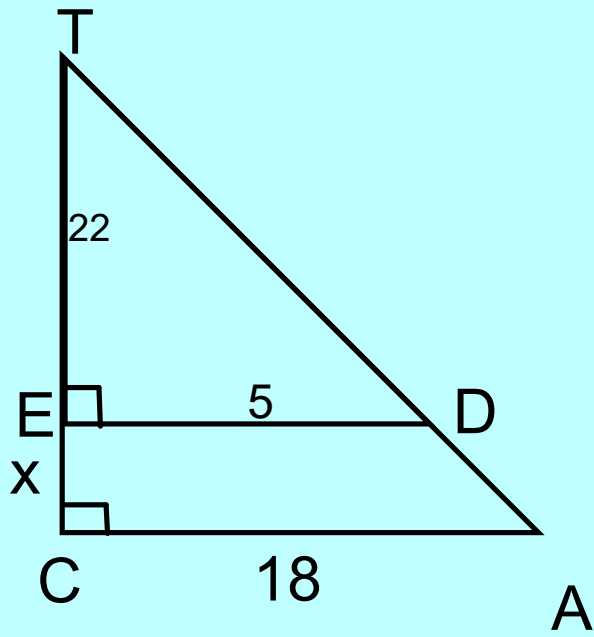
(SS3) Demonstrate an understanding of similarity of polygons.

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

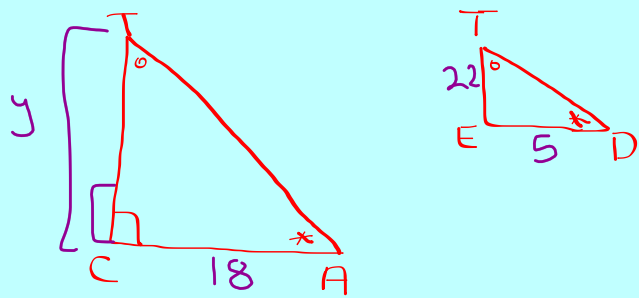
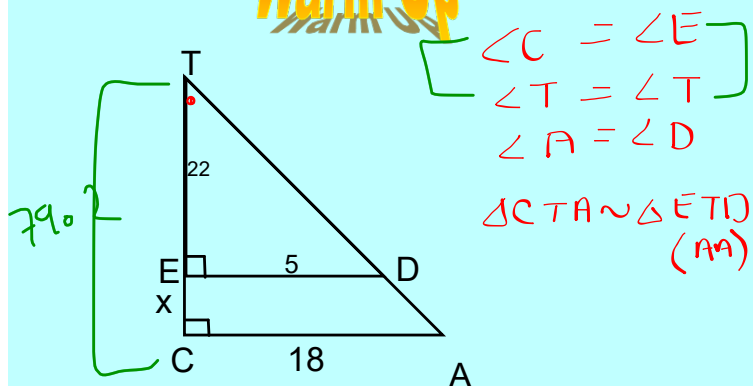
(SS5) Demonstrate an understanding of line and rotation symmetry.

Student Friendly: Reflecting a shape across a line

Warm Up



Warm Up



$$\frac{CT}{ET} = \frac{CA}{ED}$$

$$\frac{y}{22} = \frac{18}{5}$$

$$y = \frac{22(18)}{5}$$

$$y = 79.2$$

$$x = 79.2 - 22$$

$$x = 57.2$$

Quiz Day

- Separate your desk
- all you need is a calculator, pencil and an eraser



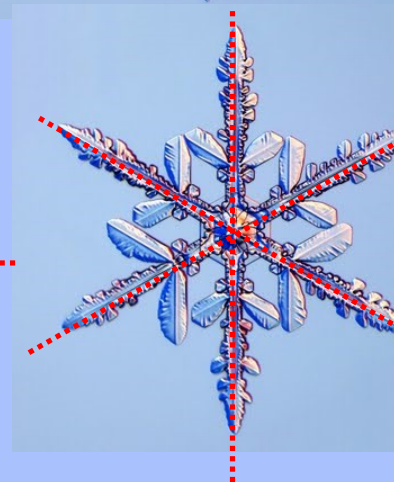
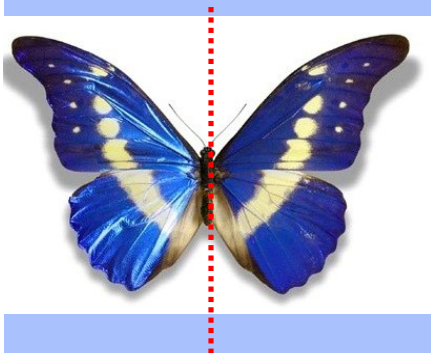
SECTION 7.5



REFLECTIONS AND LINE SYMMETRY



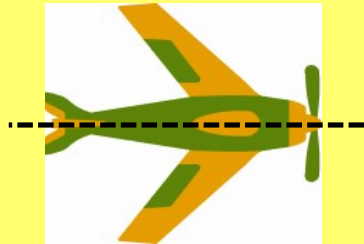
A figure has symmetry when it can be folded so two halves match, or are identical.



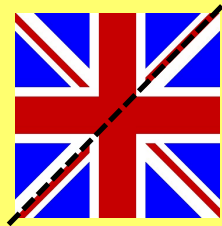
Shapes may show symmetry when folded:



vertically

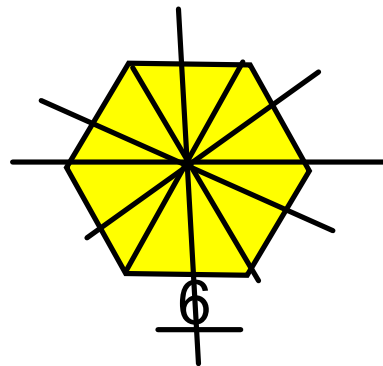
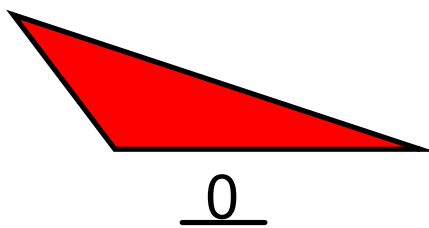
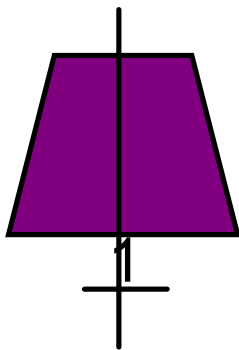
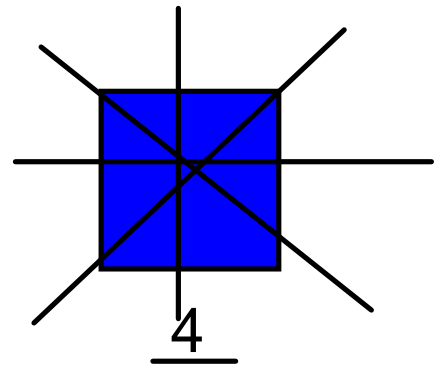
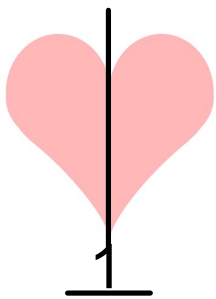


horizontally



diagonally

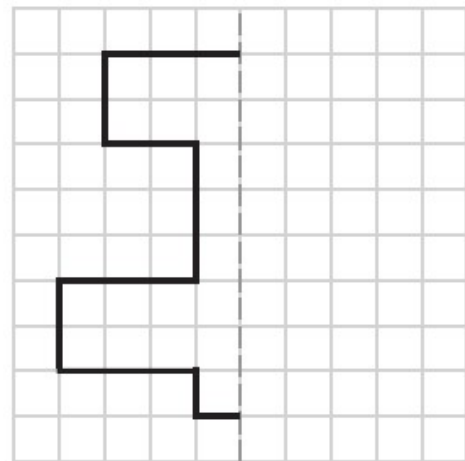
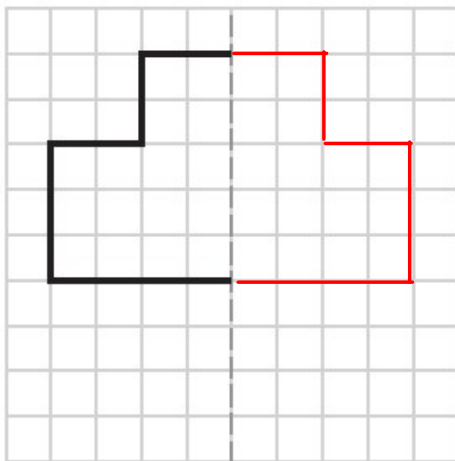
How many lines of symmetry are in the following figures?

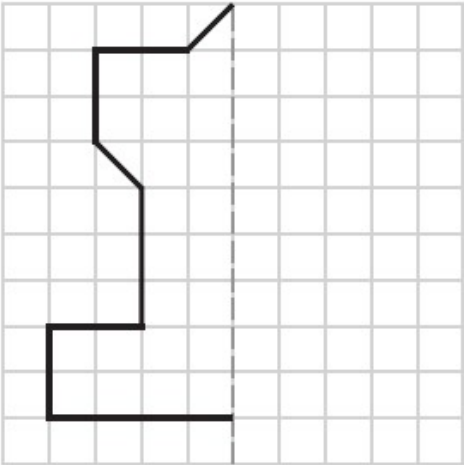
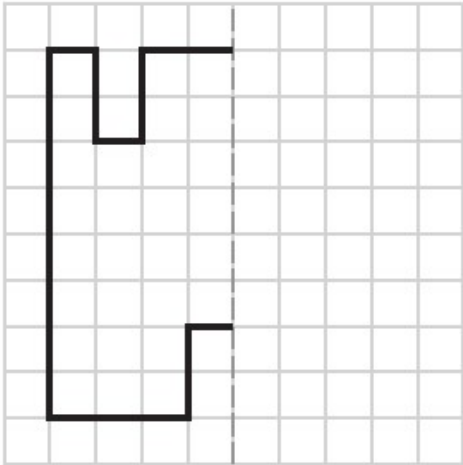


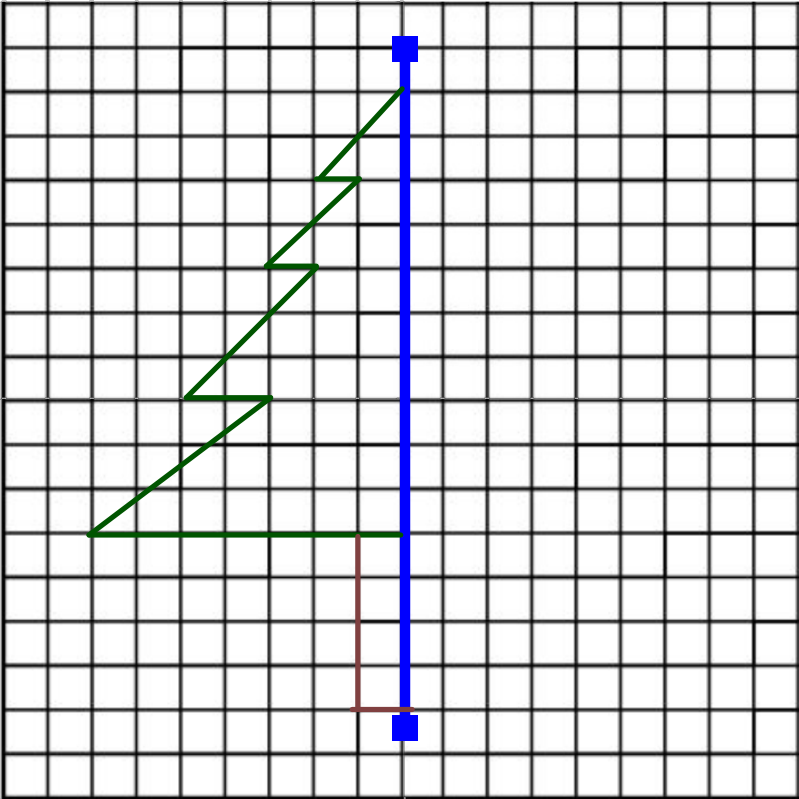
Creating Symmetry

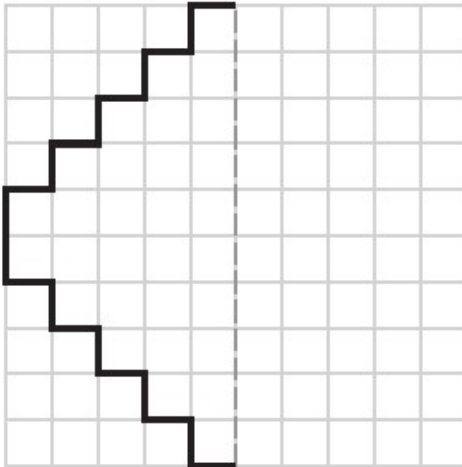
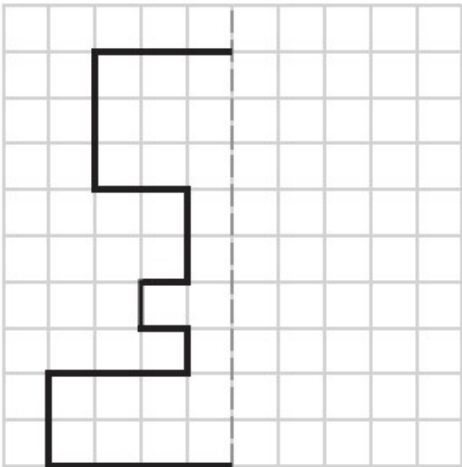
Name: _____ Class: _____

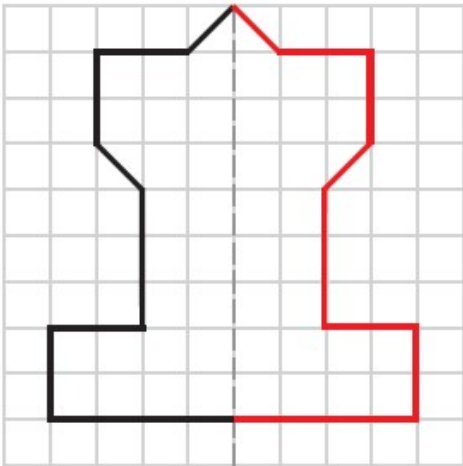
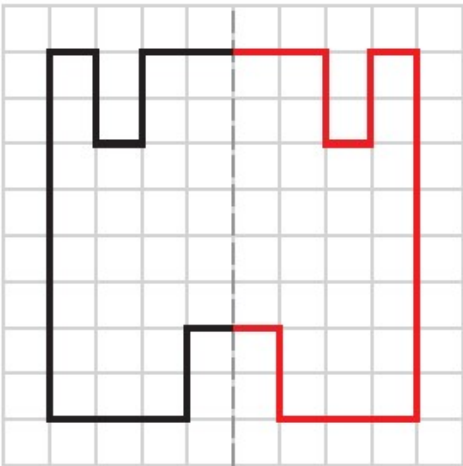
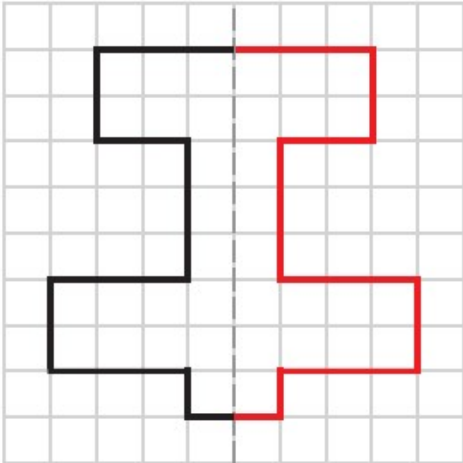
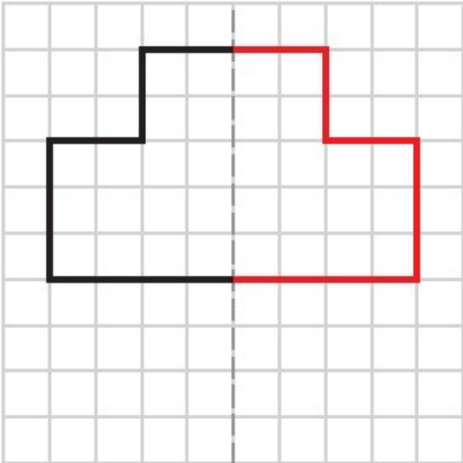
Each figure is half of a symmetric shape. Complete each figure by using the dotted line as the line of symmetry.



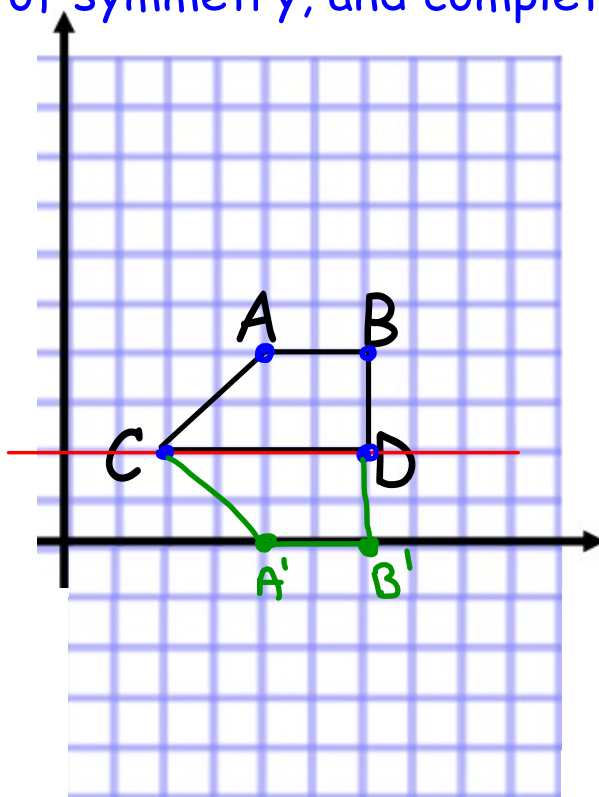








Copy the shape on graph paper. Use the red line as a line of symmetry, and complete the other half. ● ●



Coordinates:

A (4, 4)

A' (4, 0)

B (6, 4)

B' (6, 0)

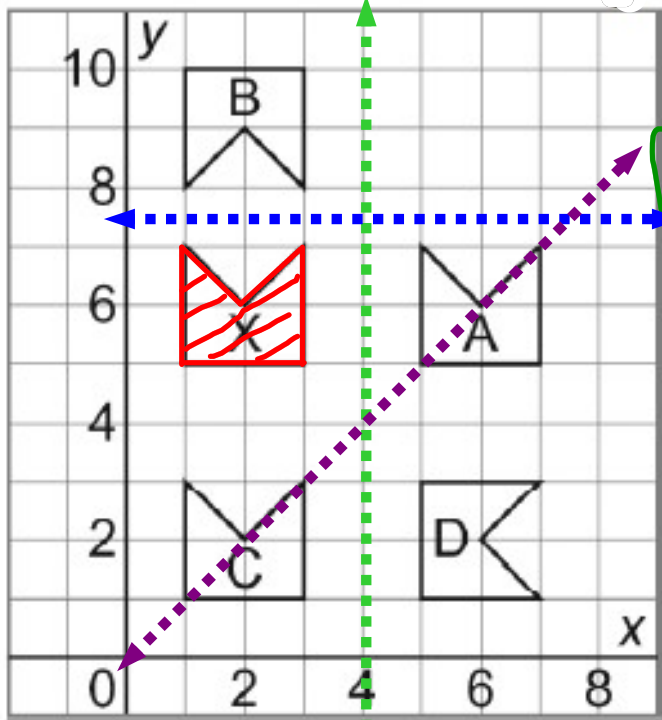
C (2, 2)

C' (2, 2)

D (6, 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.



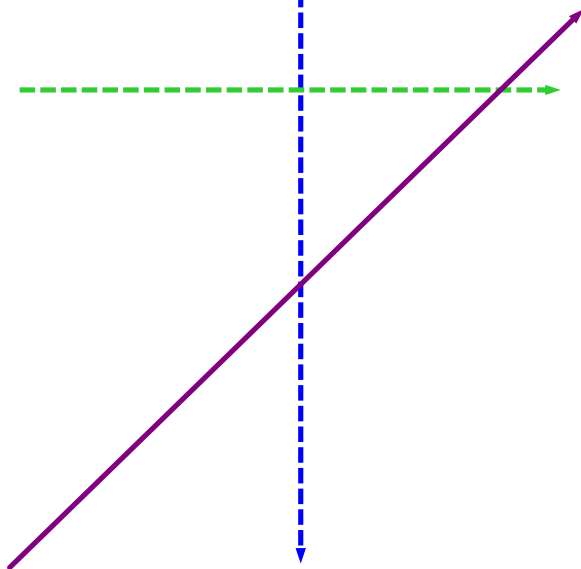
A: reflected in vertical line passing through ~~4~~ $x=4$ on the ~~x~~ axis

B: reflected in horizontal line pass through $y=7.5$

C: not related to X by line symmetry

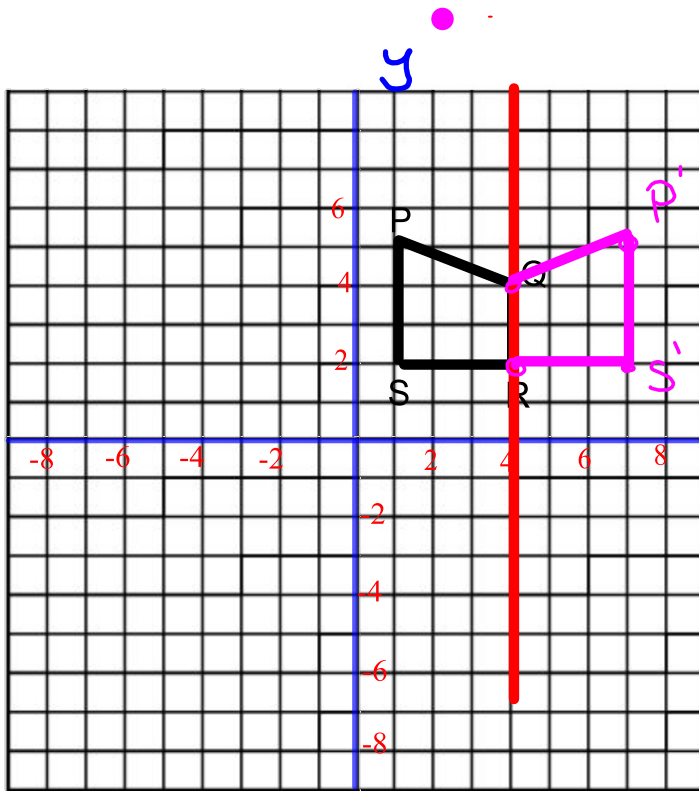
D: reflected in oblique line passing through (0, 0) and (8, 8)

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.



$P(1,5)$	$P'(7,5)$
$Q(4,4)$	$Q'(4,4)$
$R(4,2)$	$R'(4,2)$
$S(1,2)$	$S'(7,2)$

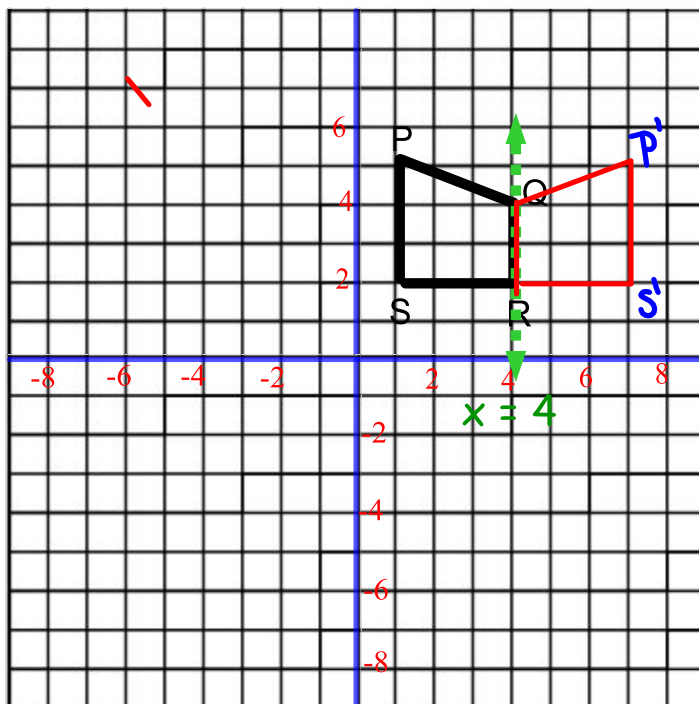
- b) Write the coordinates of the original shape

Go to next page to see answers

- c) Write the coordinates of the reflected shape

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

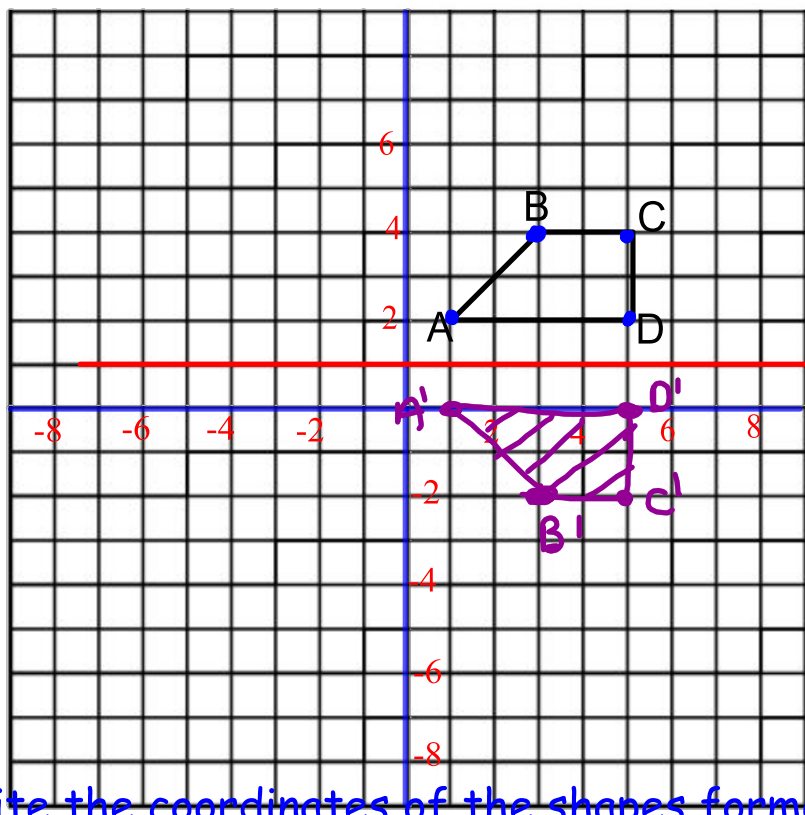
$P(1, 5)$ $Q(4, 4)$ $S(1, 1)$

- c) Write the coordinates of the reflected shape

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

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

$A(1,2)$
 $B(3,4)$
 $C(5,4)$
 $D(5,2)$

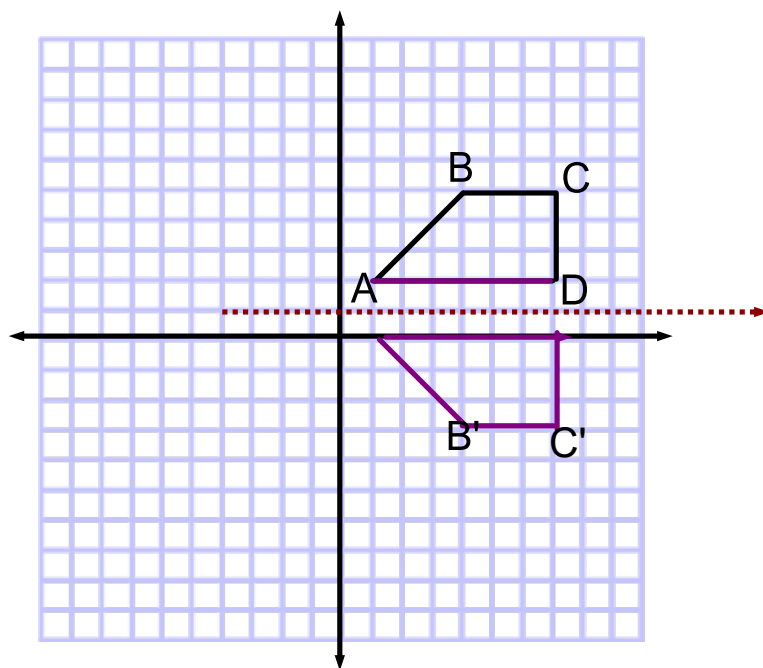


$A'(1,0)$
 $B'(3,-2)$
 $C'(5,-2)$
 $D'(5,0)$

$y=1$

- 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.

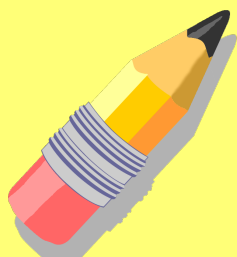


b) Write the coordinates of the shape formed.

A() B() C()

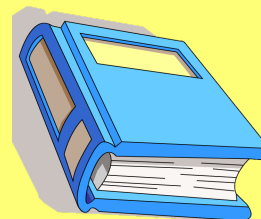
A'() B'() C'()

c) Describe the new shape and its symmetry.



Homework:

p. 357 - 359



Questions: 3, 5, 8, 9, 10