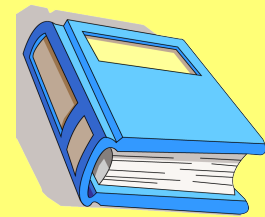


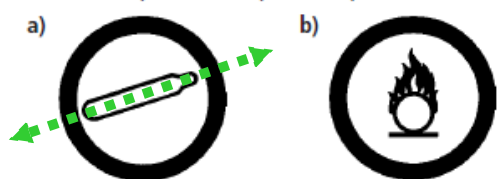
Homework:
p. 358 - 359



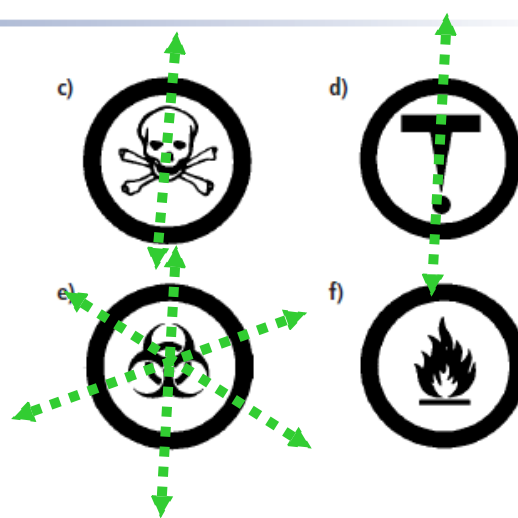
Practice

Check

3. You may have seen these hazardous substance warning symbols in the science lab. Which symbols have line symmetry? How many lines of symmetry?



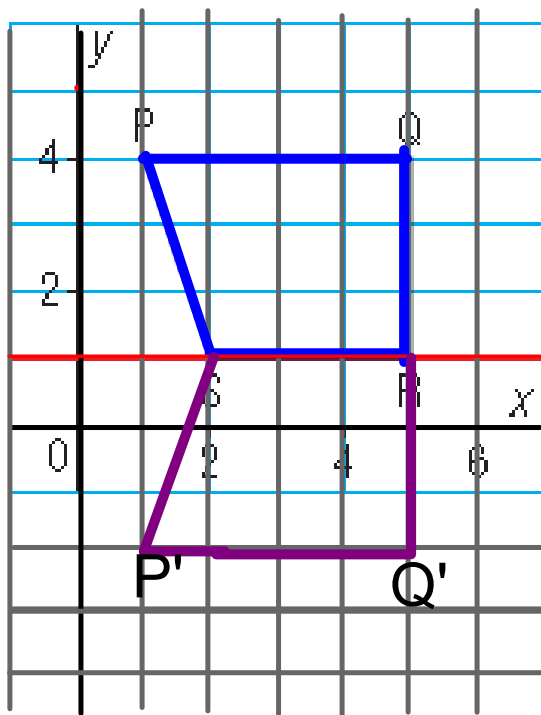
3. a) 1
c) 1
e) 3



- b) 0
d) 1
f) 0

5. Copy each polygon on grid paper. It is one-half of a shape. Use the red line as a line of symmetry to complete the shape by drawing its other half. Label the shape with the coordinates of its vertices.

a)



$$P (1, 4)$$

$$P' (1,-2)$$

$$Q (5,4)$$

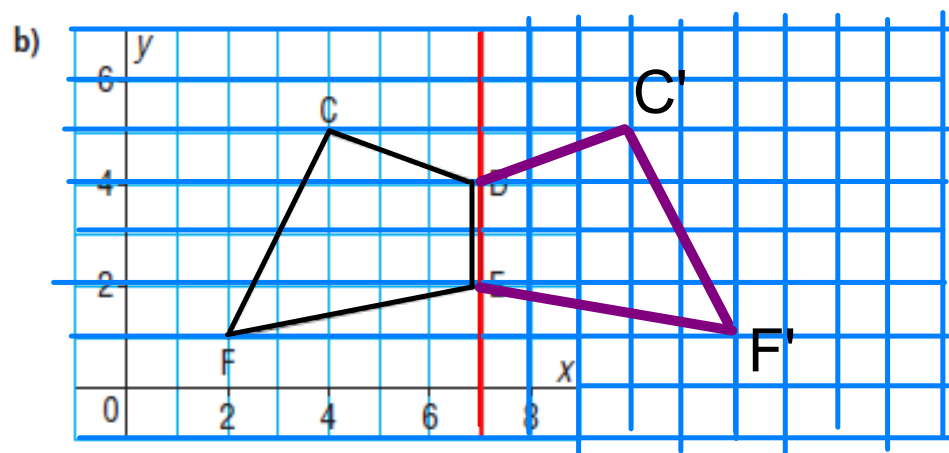
$$Q' (5, -2)$$

$$R (5, 1)$$

$$R' (5, 1)$$

$$S (2, 1)$$

$$S' (2, 1)$$

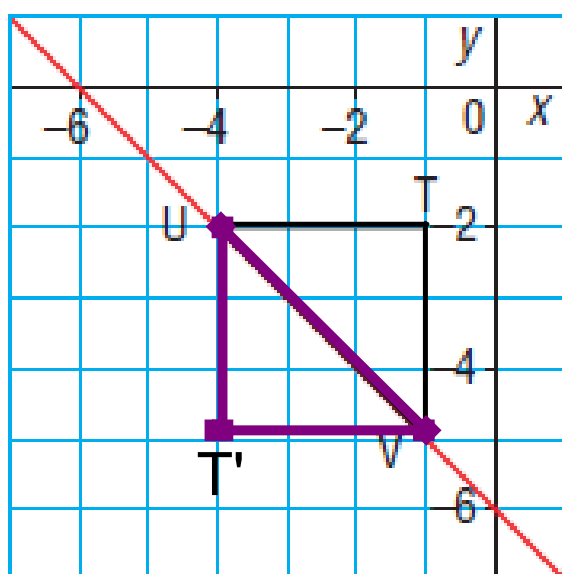


$$C (4, 5) \quad C' (10,5)$$

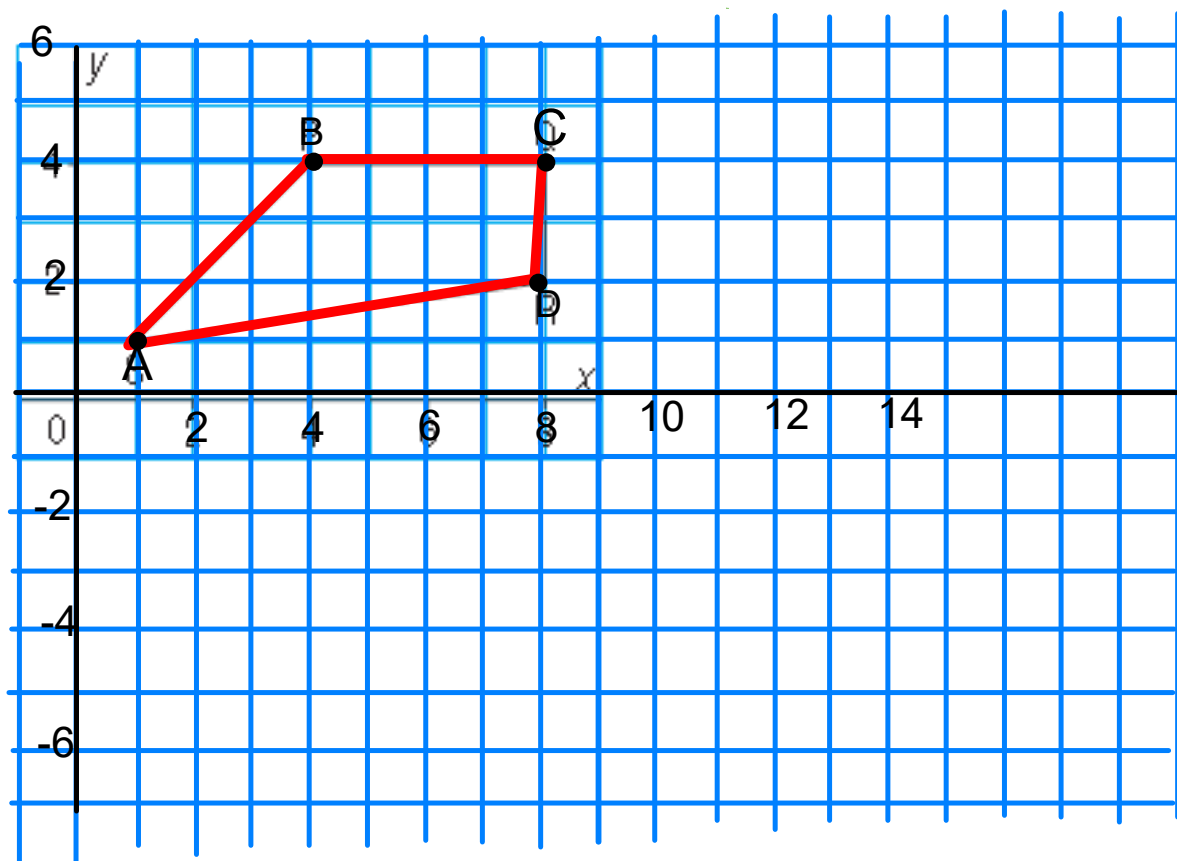
$$D (7,4) \quad D' (7, 4)$$

$$E (7, 2) \quad E' (7, 2)$$

$$F (2, 1) \quad F' (12, 1)$$

 $T(-1, -2)$ $T'(-4, -4)$ $U(-4, -2)$ $U'(-4, -2)$ $V(-1, -5)$ $V'(-1, -5)$

a) a reflection in the horizontal line through
-2 on the y-axis



A (,) A' (__, __)

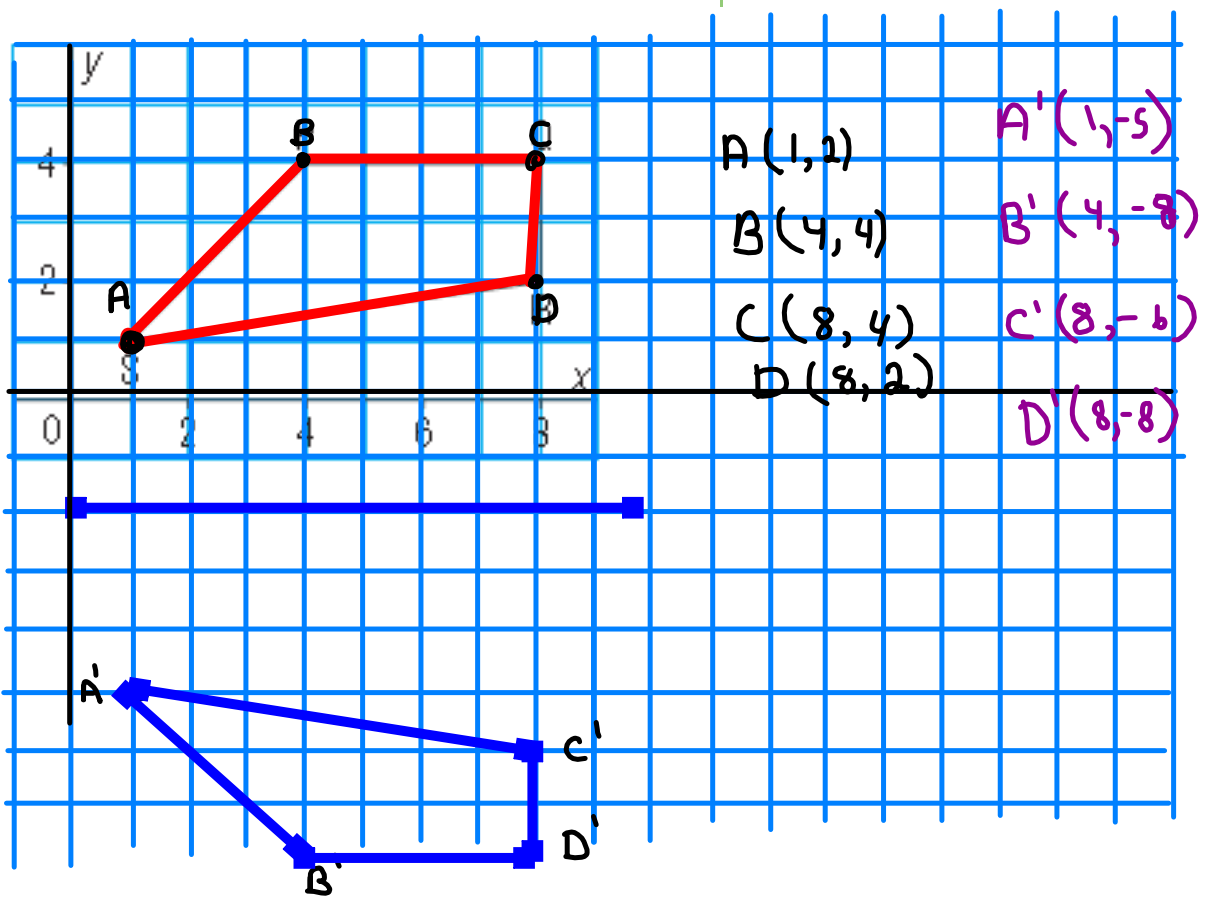
B (,) B' (__, __)

C (,) C' (__, __)

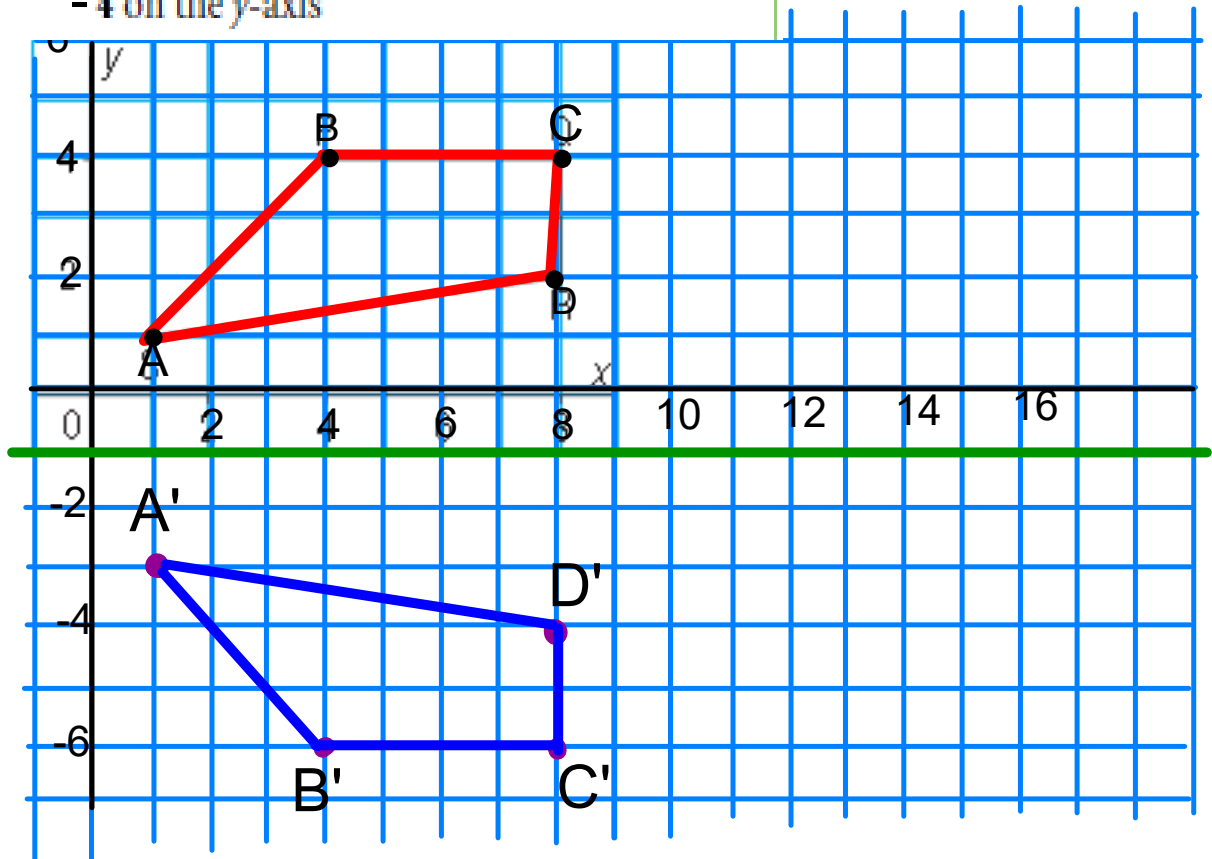
D (,) D' (__, __)

8 a) a reflection in the horizontal line through $y = -2$ on the y -axis

hape.



8. a) a reflection in the horizontal line through $y = -4$ on the y -axis



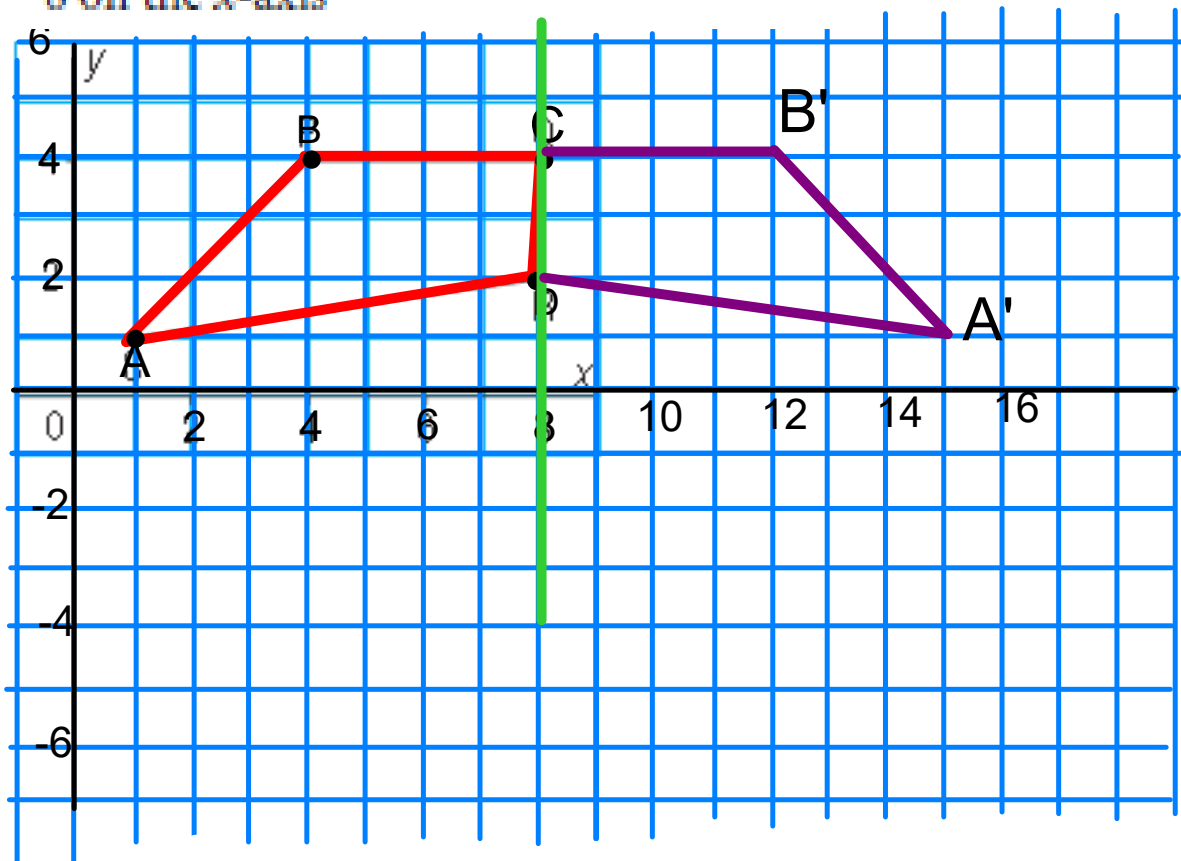
$$A (1, 1) \quad A' (1, -3)$$

$$B (4,4) \quad B' (4, -6)$$

$$C (8, 4) \quad C' (8, -6)$$

$$D (8, 2) \quad D' (8, -4)$$

b) a reflection in the vertical line through 8 on the x -axis



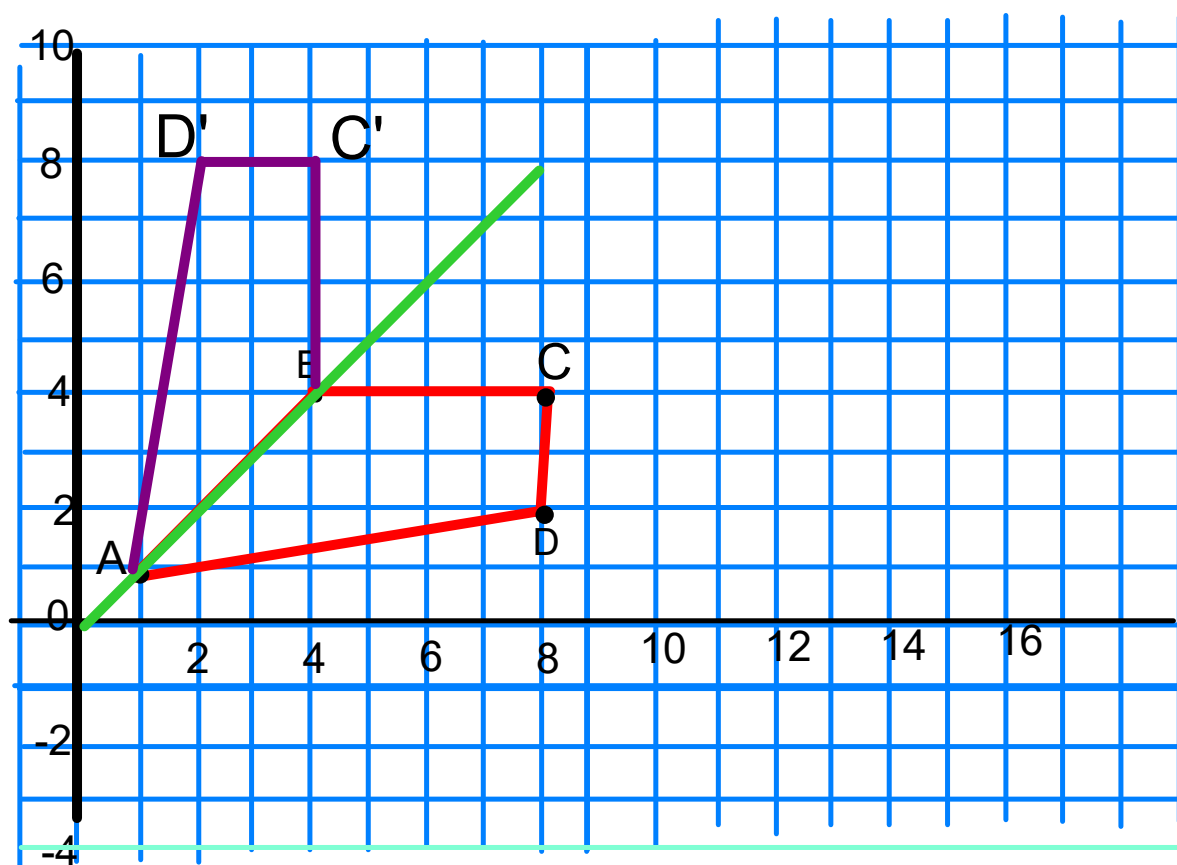
$$A (1, 1) \quad A' (15, 1)$$

$$B (4,4) \quad B' (12, 4)$$

$$C (8, 4) \quad C' (8, 4)$$

$$D (8, 2) \quad D' (8, 2)$$

c) a reflection in the oblique line through
(1, 1) and (4, 4)



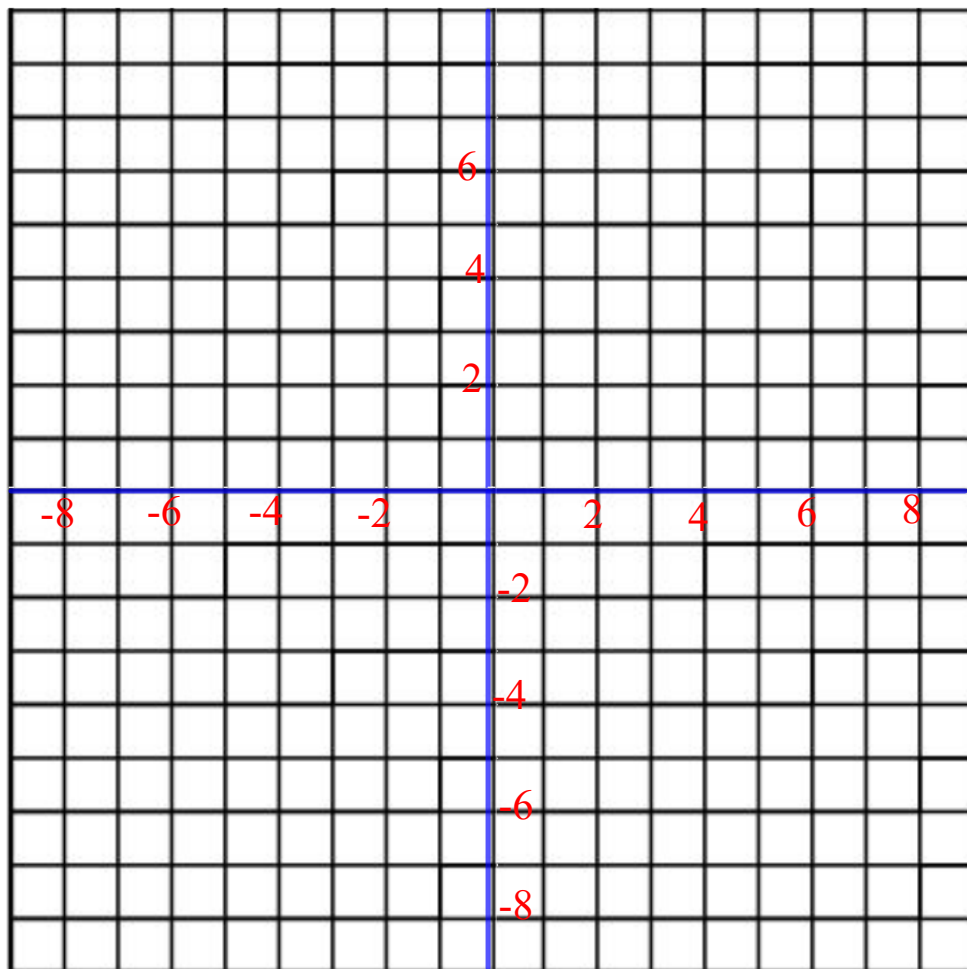
$$A (1, 1) \quad A' (1, 1)$$

$$B (4,4) \quad B' (4, 4)$$

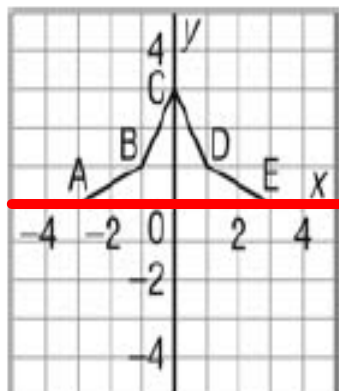
$$C (8, 4) \quad C' (4, 8)$$

$$D (8, 2) \quad D' (2, 8)$$

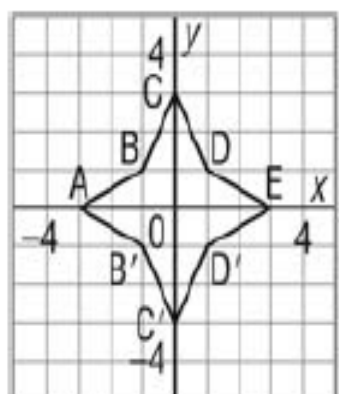
9. a) Graph these points on grid paper:
 $A(-3, 0)$, $B(-1, 1)$, $C(0, 3)$,
 $D(1, 1)$, $E(3, 0)$.
Join the points to form polygon ABCDE.
- b) Reflect the polygon in the x -axis. Draw and label its image.
- c) Write the coordinates of the shape formed by the polygon and its image.
- d) How many lines of symmetry does this shape have? How do you know?



9. a)



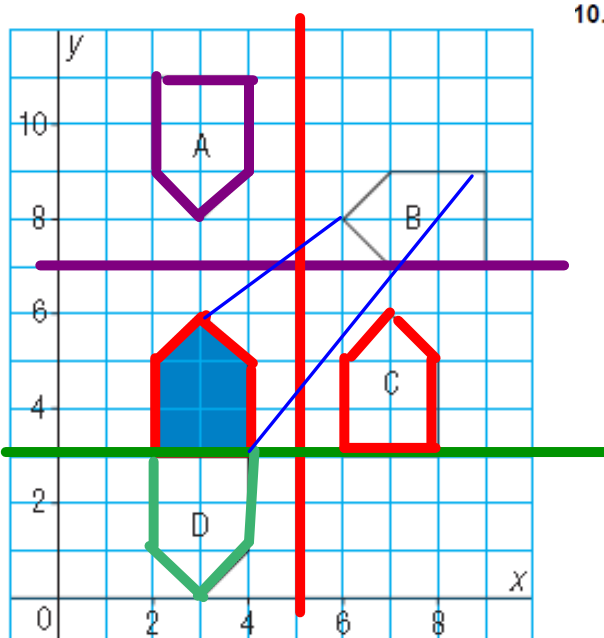
b)



c) $A(-3, 0)$, $B(-1, 1)$, $C(0, 3)$, $D(1, 1)$, $E(3, 0)$,
 $D'(1, -1)$, $C'(0, -3)$, $B'(-1, -1)$

d) The shape has 4 lines of symmetry: x -axis, y -axis,
 the line through points B' and D , the line through
 points B and D'

blue pentagon by a line of reflection.
Describe the position of each line of symmetry.



10. Pentagon A is the reflection image in the horizontal line through 7 on the y -axis. $y = 7$
The line of symmetry is the horizontal line through 7 on the y -axis.
Pentagon C is the reflection image in the vertical line through 5 on the x -axis. $x = 5$
The line of symmetry is the vertical line through 5 on the x -axis.
Pentagon D is the reflection image in the horizontal line through 3 on the y -axis. $y = 3$
The line of symmetry is the horizontal line through 3 on the y -axis.