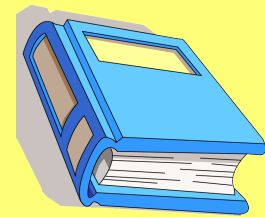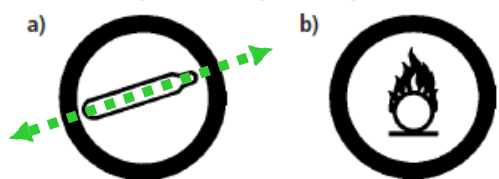<u>Homework</u>:

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Questions: 3,5, 8 9, 10
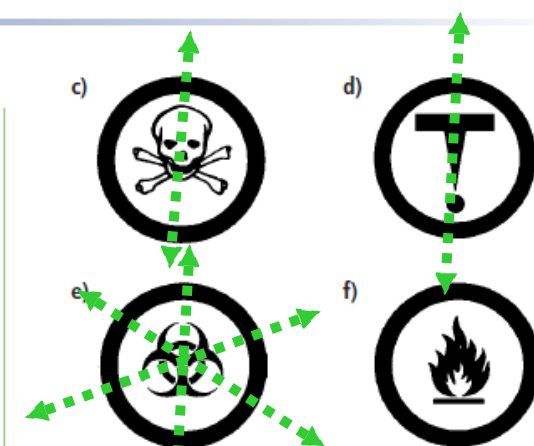
**Practice**

*Check*

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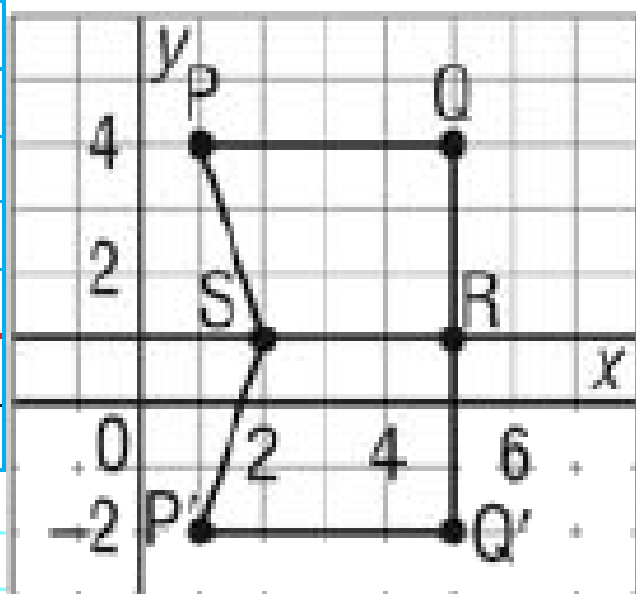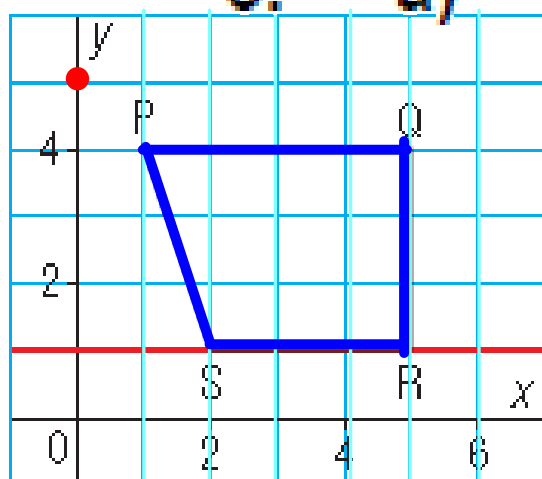lab. Which symbols have line symmetry?
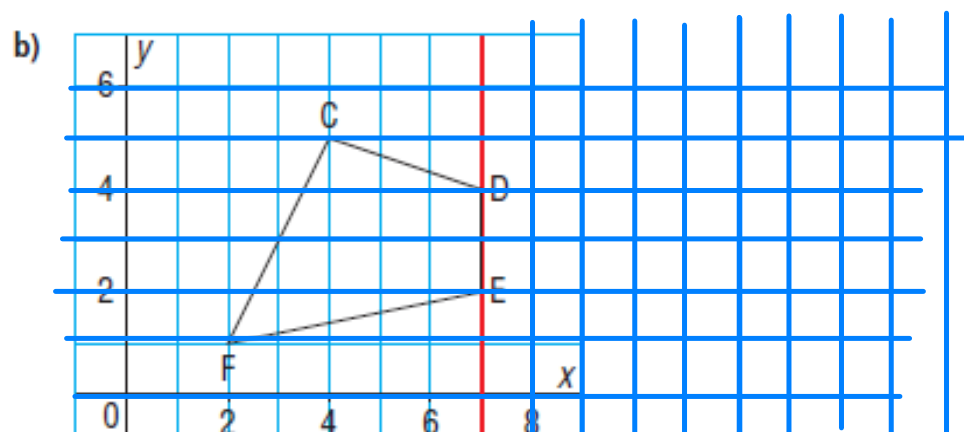How many lines of symmetry?

a)

b)

c)

d)

e)

f)

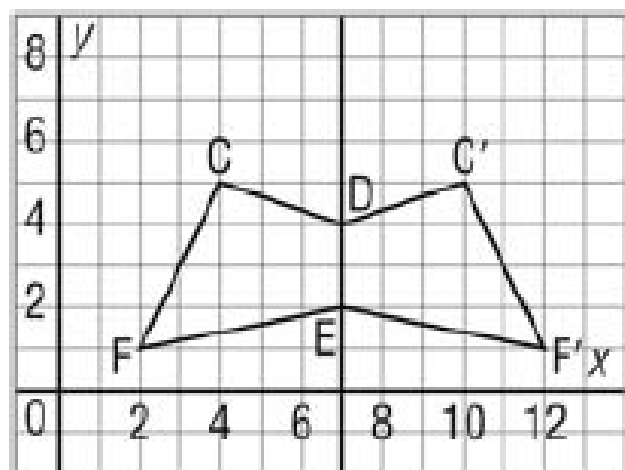| 3. | a) | 1 | b) | 0 |
|----|----|----|----|----|
|    | c) | 1 | d) | 1 |
|    | e) | 3 | f) | 0 |

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.
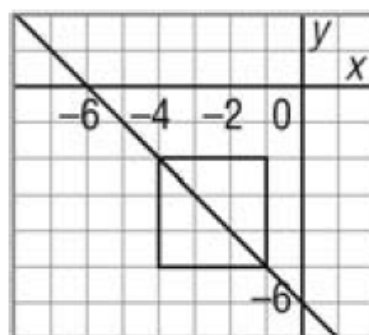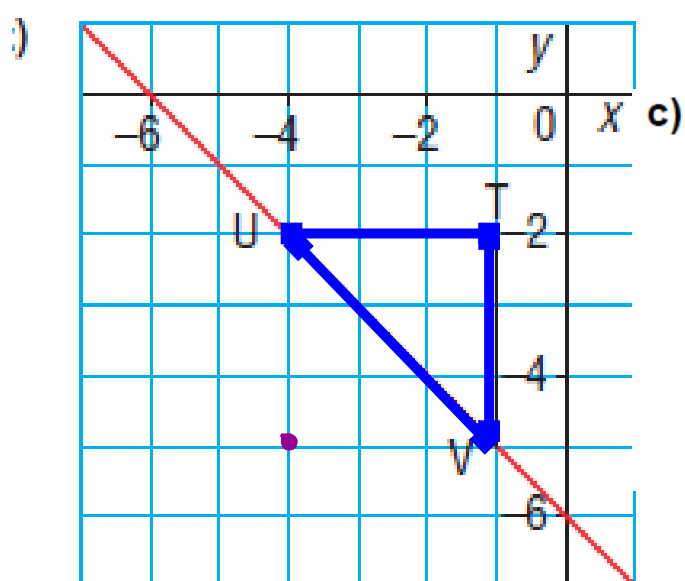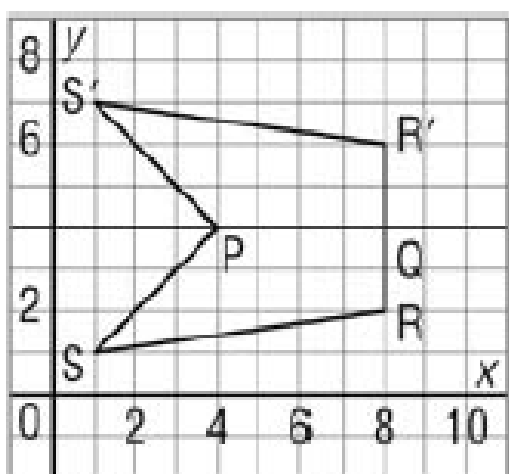
a)

**5.** **a)**

b)



b)

c)

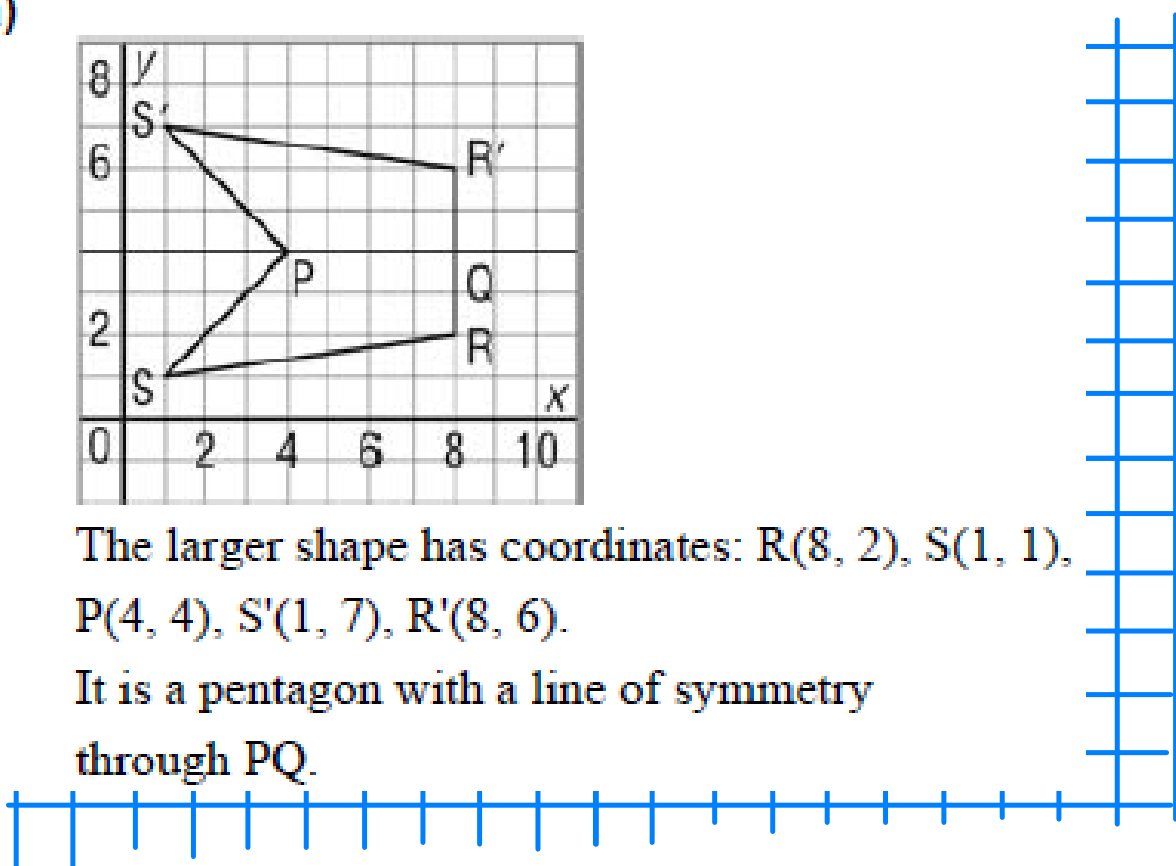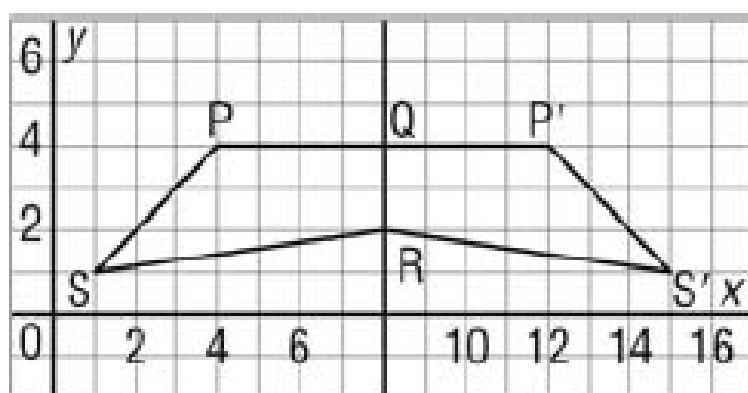**8.** a) a reflection in the horizontal line through  ape.

a)



The larger shape has coordinates: R(8, 2), S(1, 1),

P(4, 4), S'(1, 7), R'(8, 6).

It is a pentagon with a line of symmetry

through PQ.

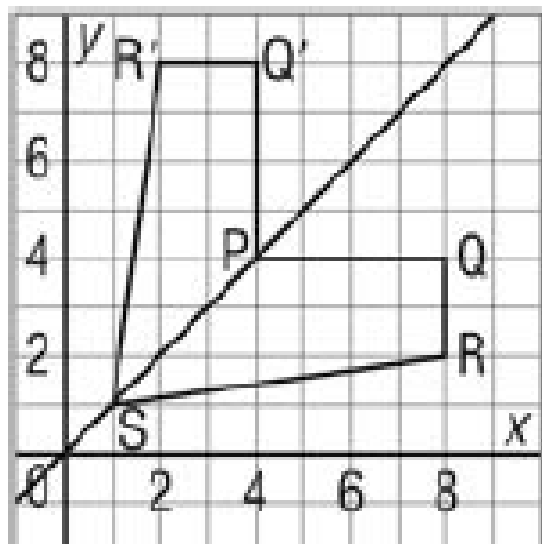**b)** a reflection in the vertical line through

**b)**



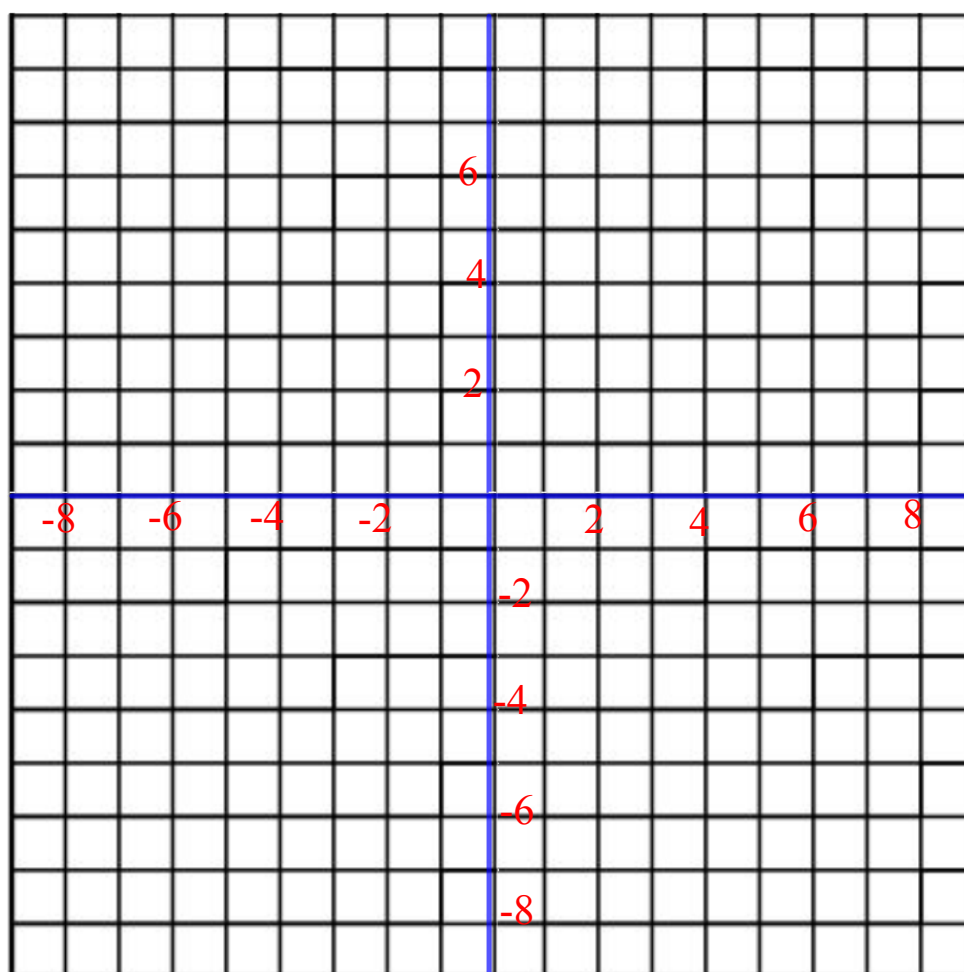The larger shape has coordinates: R(8, 2), S(1, 1),
P(4, 4), P'(12, 4), S'(15, 1)
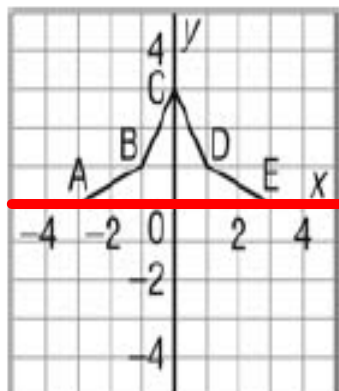It is a pentagon with a line of symmetry
through QR.

c) a reflection in the oblique line through

**c)** The larger shape has coordinates: P(4, 4), Q(8, 4), R(8, 2), S(1, 1), R'(2, 8), Q'(4, 8)

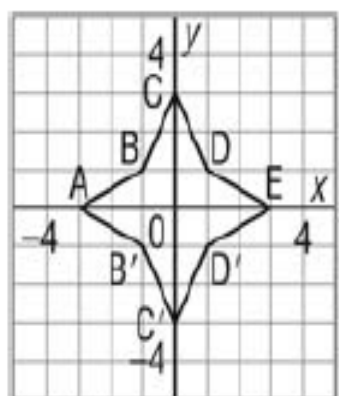It is a hexagon with a line of symmetry through PS.

**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?

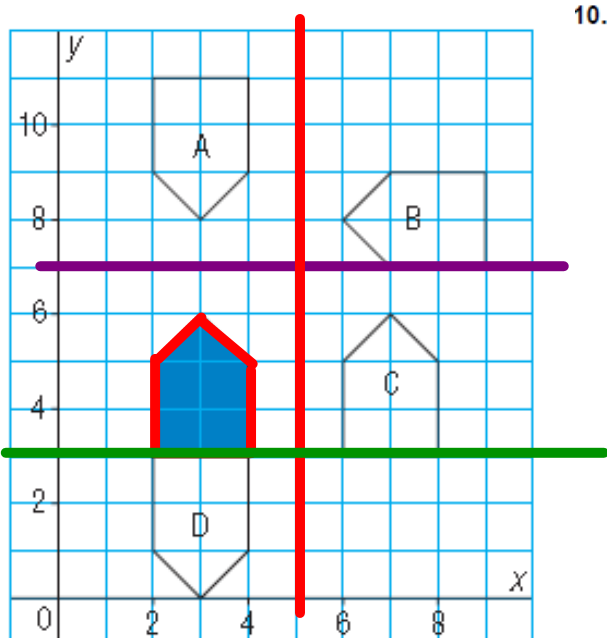**9.**  **a)**



**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.