

**Check** Page 357-359

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)



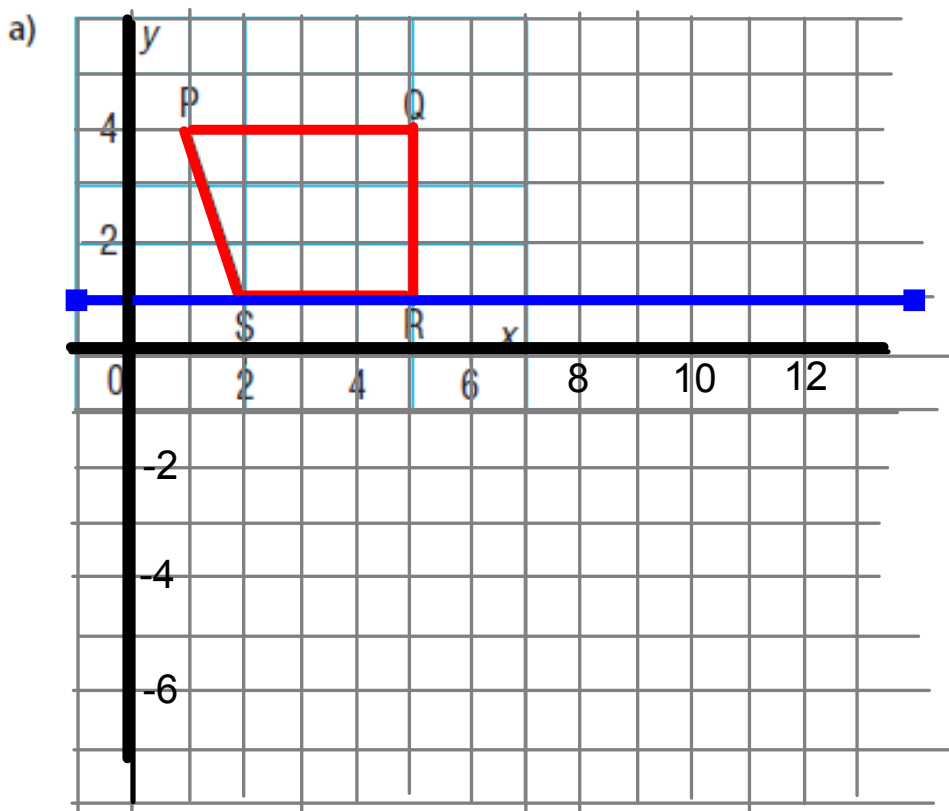
e)



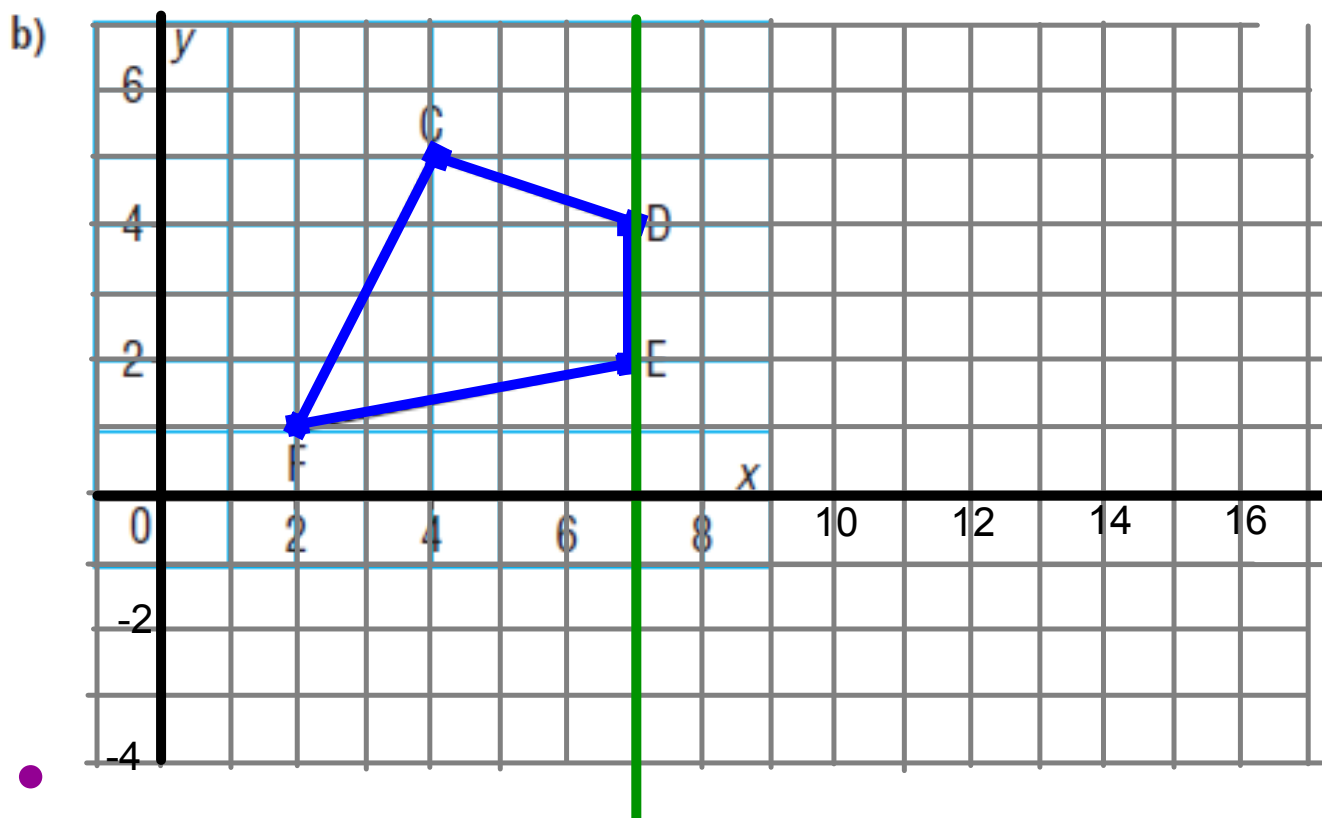
f)



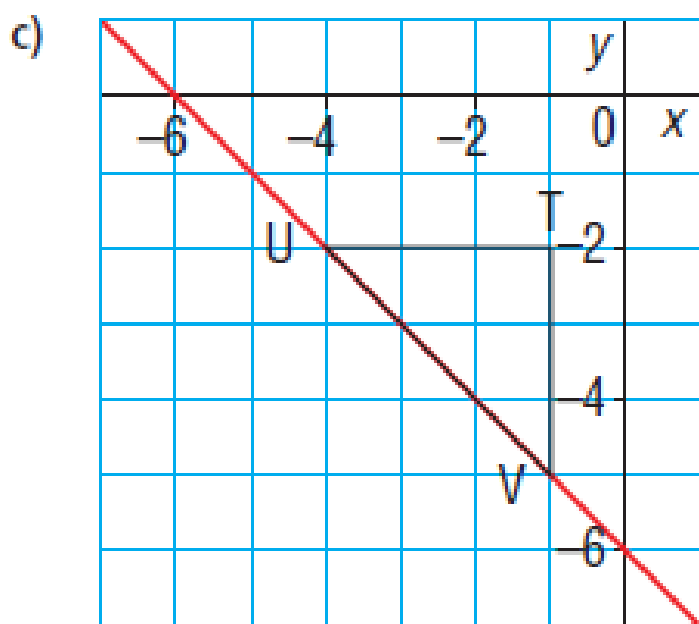
5. Copy each polygon on grid paper. It is one-half of a shape. Use the red line as a line of symmetry to complete the shape by drawing its other half. Label the shape with the coordinates of its vertices.



P ( , )	P' ( , )
Q ( , )	Q' ( , )
R ( , )	R' ( , )
S ( , )	S' ( , )



$C( \quad , \quad )$        $C'( \quad , \quad )$   
 $D( \quad , \quad )$        $D'( \quad , \quad )$   
 $E( \quad , \quad )$        $E'( \quad , \quad )$   
 $F( \quad , \quad )$        $F'( \quad , \quad )$

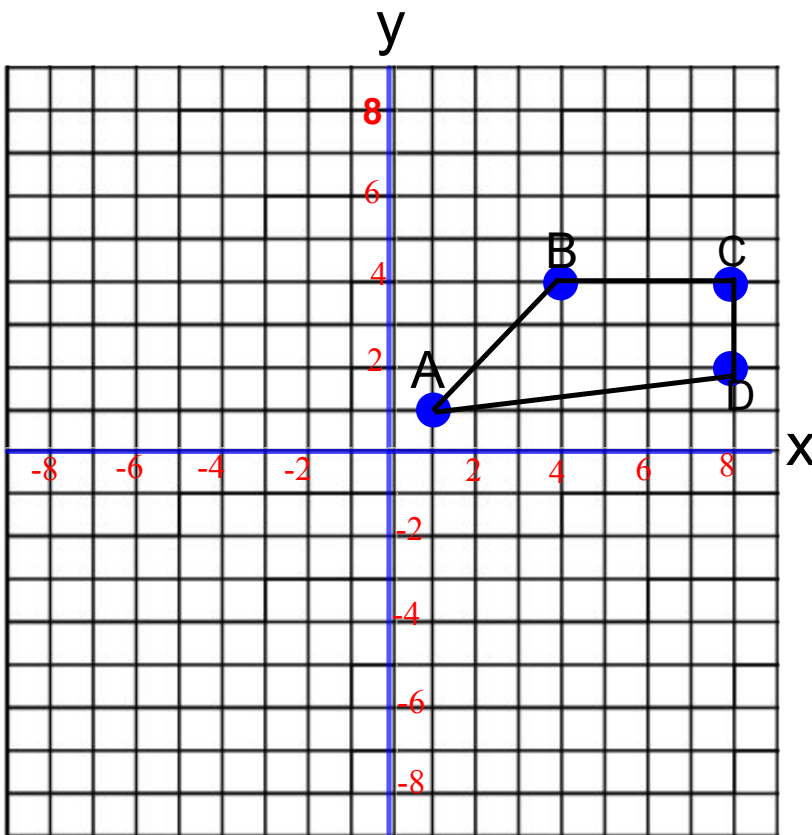


$T( , )$        $T'( , )$

$U( , )$        $U'( , )$

$V( , )$        $V'( , )$

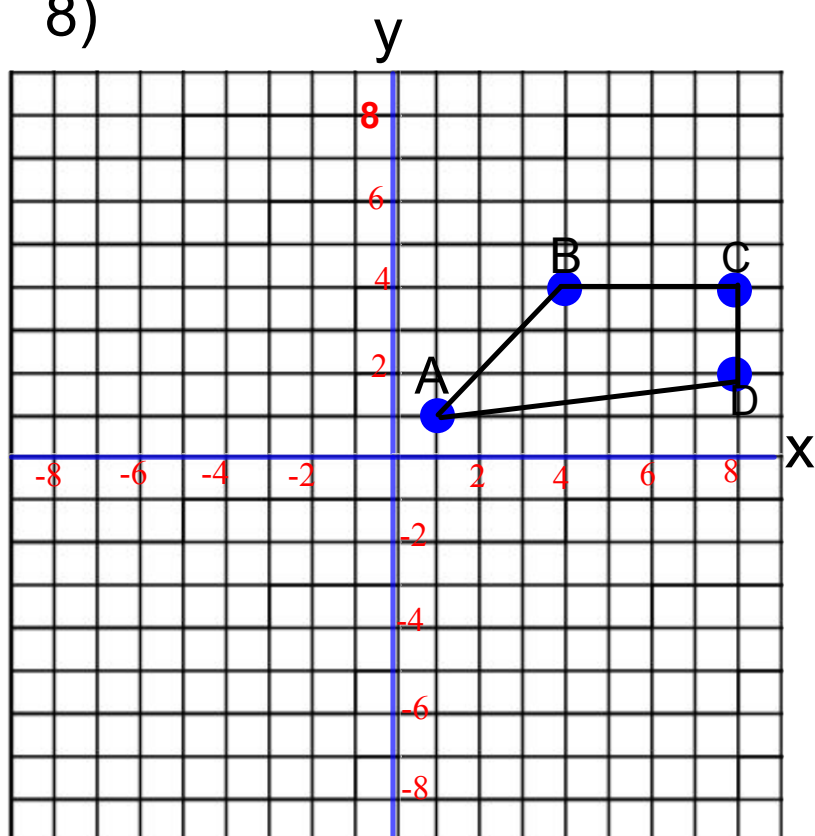
8)



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

A ( , )	A' ( , )
B ( , )	B' ( , )
C ( , )	C' ( , )
D ( , )	D' ( , )

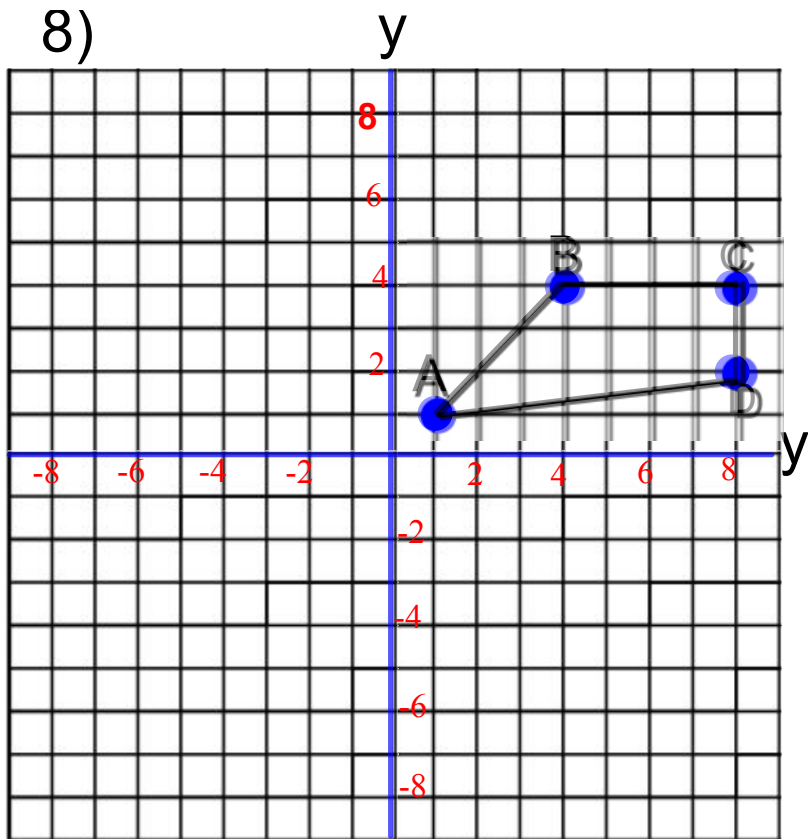
8)



b) A reflection in the vertical line through 1 on the x axis.

A ( , )	A' ( , )
B ( , )	B' ( , )
C ( , )	C' ( , )
D ( , )	D' ( , )

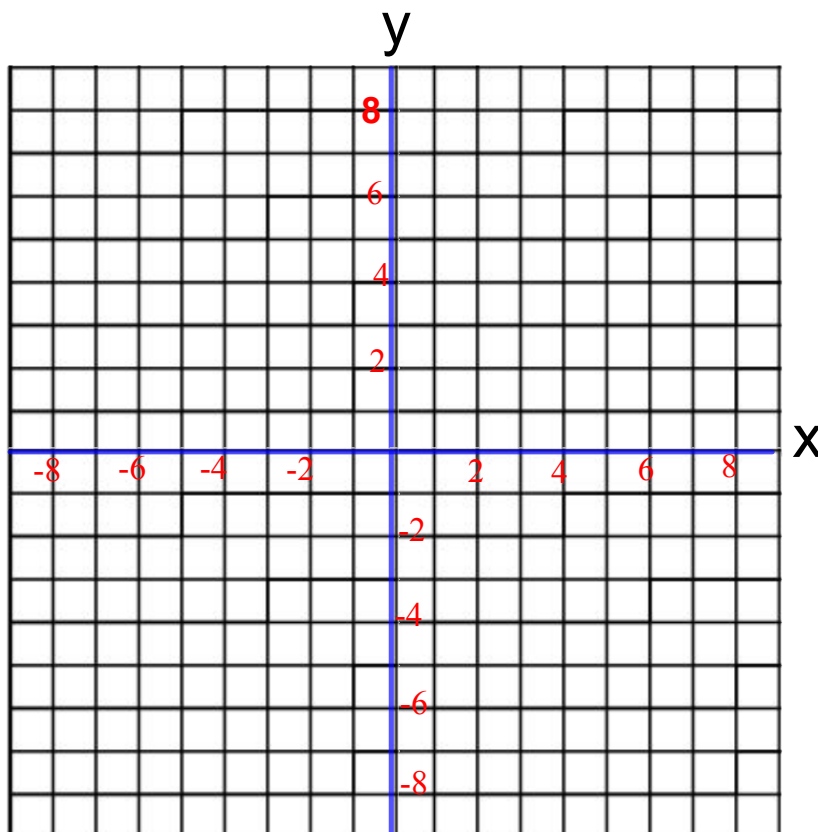
8)



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

- |         |          |
|---------|----------|
| A ( , ) | A' ( , ) |
| B ( , ) | B' ( , ) |
| C ( , ) | C' ( , ) |
| D ( , ) | D' ( , ) |

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?





10. Identify the pentagons that are related to the blue pentagon by a line of reflection. Describe the position of each line of symmetry.

