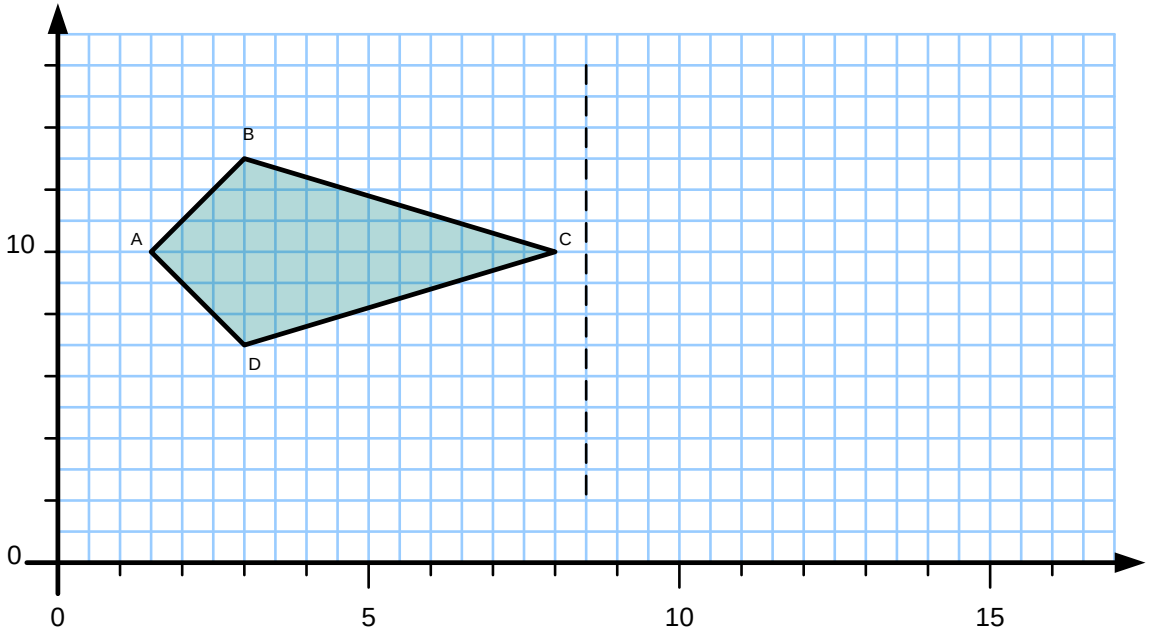


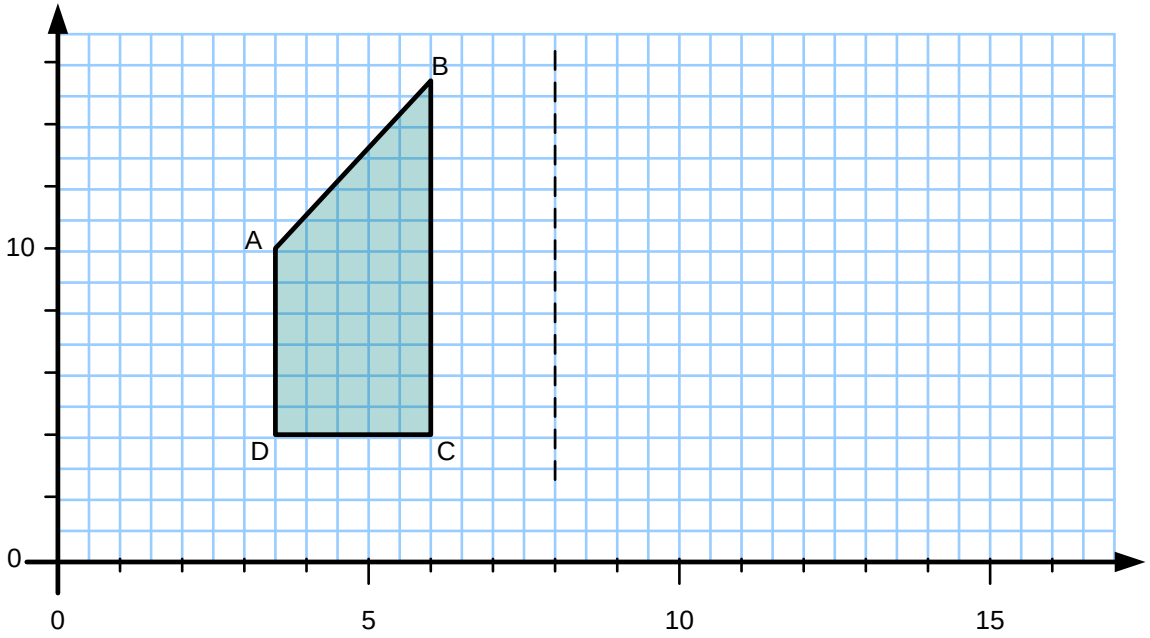
Above is a picture of a kite.

1. Write the co-ordinates of each of the vertices on the kite.
2. The broken line represents a mirror line. Give an equation to describe the broken line.
3. On graph paper, draw the reflection of the kite as it would be if it was reflected in the mirror line.
4. Write the co-ordinates of each of the vertices of the reflection.
5. On graph paper, rotate the kite 90° anticlockwise about point (10,10).
6. On graph paper, translate the kite by the following:

   $x \rightarrow x + 8$

   $y \rightarrow y + 4$
7. On graph paper, transform the shape by recalculating the co-ordinates and then drawing the shape.

   $x \rightarrow 3x + 4$, $y \rightarrow 2y - 5$.

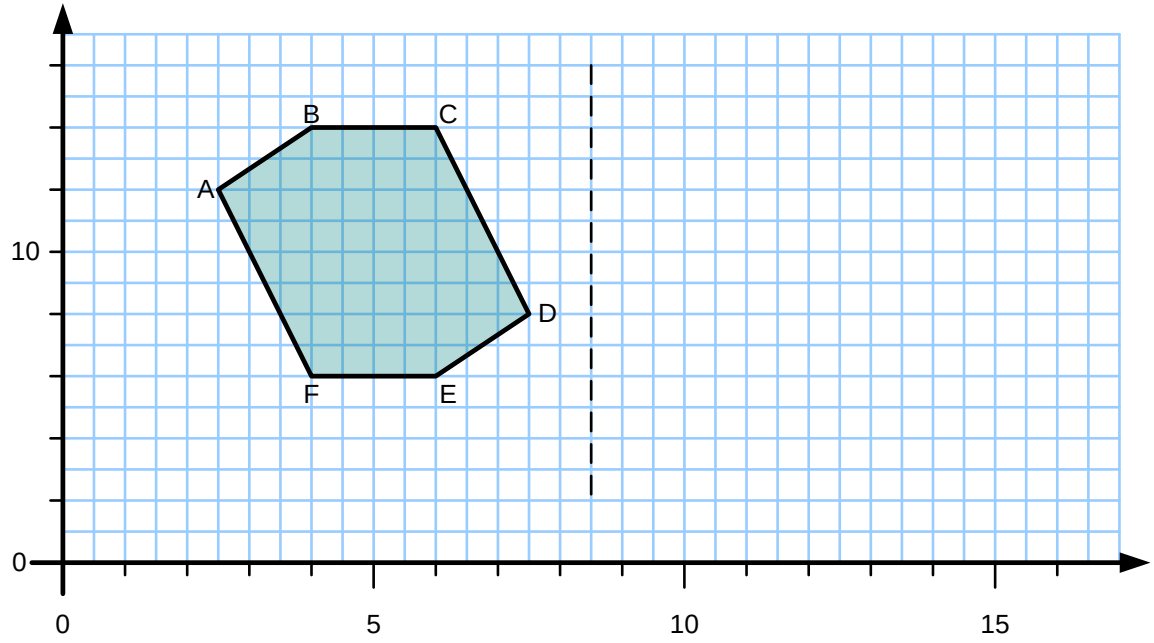


Above is a picture of a trapezium.

1. Write the co-ordinates of each of the vertices on the trapezium.
2. The broken line represents a mirror line. Give an equation to describe the broken line.
3. On graph paper, draw the reflection of the trapezium as it would be if it was reflected in the mirror line.
4. Write the co-ordinates of each of the vertices of the reflection.
5. Can you draw a trapezium with one axis of symmetry?
6. On graph paper, rotate draw the trapezium and then rotate it 90° clockwise about point (7,10).
7. On graph paper, draw the trapezium but with it translated by:

$$x \rightarrow x+7$$

$$y \rightarrow y-3$$



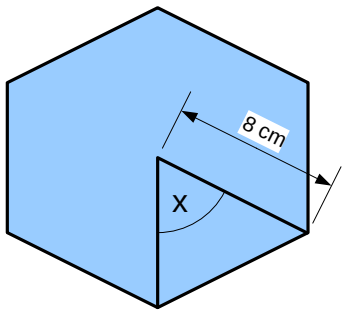
Above is a picture of an irregular hexagon.

1. What are the co-ordinates of the hexagon?

2. On graph paper, draw the reflection of the hexagon. What are the co-ordinates of the reflected hexagon?

3. On graph paper, rotate the original drawing 90° anticlockwise around point (8,8).

4. On graph paper, translate the hexagon moving it x→ x + 9, y→ y - 3.



5. Construct a regular hexagon using a compass, pencil, straight edge and paper. Measure the angle marked as x above.