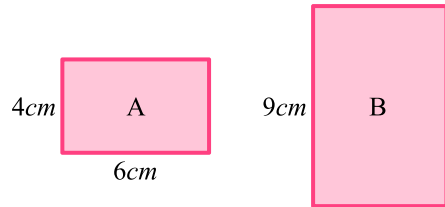


Methods in Geometry (Foundation)

Scale factors and enlargement

Rectangle B is an enlargement of rectangle A. Find the area of rectangle B.



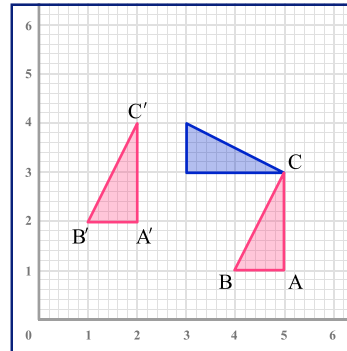
$$= 54\text{cm}^2$$

Describing a transformation

a) Describe the single transformation that maps ABC to A'B'C'.

$$= \text{Translation, } \begin{pmatrix} -3 \\ 1 \end{pmatrix}$$

b) Rotate triangle ABC 90° clockwise about point C.

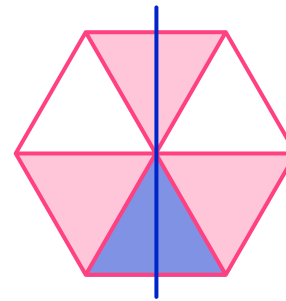


Symmetry

Pictured is a patterned regular hexagon.

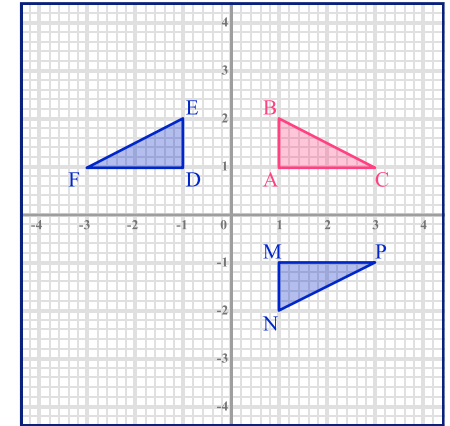
- State the order of rotational symmetry. $= 3$
- Use shading to indicate how the object could be changed to have only one line of reflection symmetry.

Example



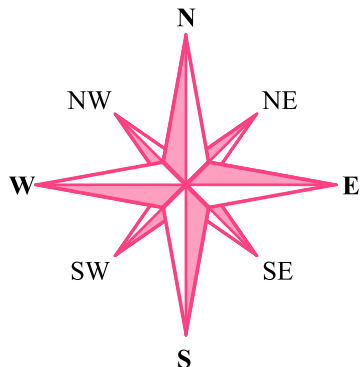
Reflections

- Reflect triangle ABC in the y-axis, and label the image DEF.
- Reflect triangle ABC in the x-axis, and label the image MNP.



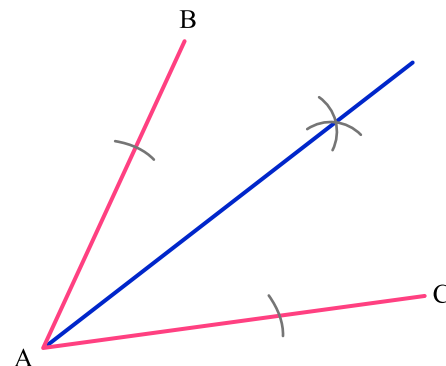
Bearings

- What is the bearing of east from north?
 $= 090^\circ$
- What is the bearing of south west from north?
 $= 225^\circ$

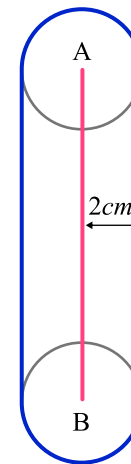


Loci

Draw the locus of all points that are equidistant from the lines AB and AC.



Draw the locus of all points that are 2cm from line AB.



Vectors

ABCDEF is a regular hexagon.

$$\vec{AB} = \underline{\mathbf{a}} \quad \text{and} \quad \vec{BC} = \underline{\mathbf{b}}$$

In terms of \mathbf{a} and \mathbf{b} , express the vectors:

- $\vec{OF} = -\underline{\mathbf{a}}$
- $\vec{BF} = \underline{\mathbf{b}} - 2\underline{\mathbf{a}}$
- $\vec{EA} = \underline{\mathbf{a}} - 2\underline{\mathbf{b}}$

