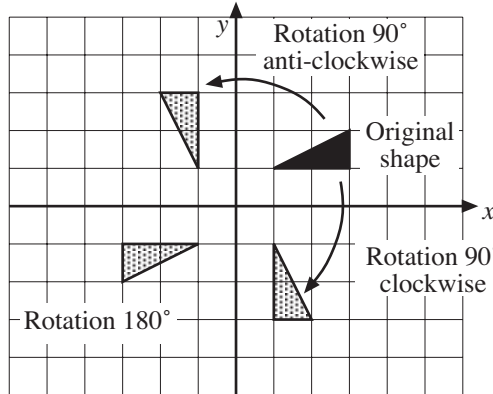
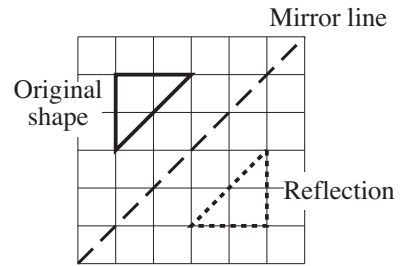


Reflections, Rotations and Enlargements

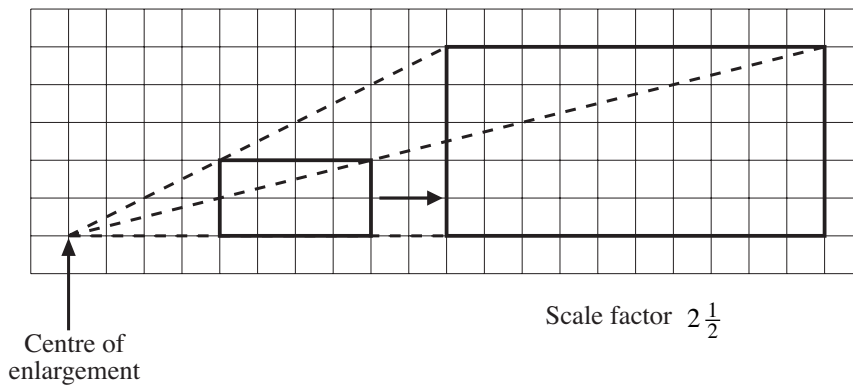
Essential information

- **Reflections** are obtained when you draw the image of a shape in a mirror line. An example is shown opposite.
- **Rotations** are obtained when a shape is rotated about a point, the *centre of rotation*, through a specified angle. For example,



- **Transformation** - moving a shape so that it is in a different position but retains the same size, area, angles and line lengths.
- An **enlargement** is similar to a transformation but it alters (enlarges or reduces) the size of the image. An enlargement is described in terms of a *scale factor* and also a *centre of enlargement* which defines the exact location of the image.

For example, the image on the left below has been enlarged by a scale factor of $2\frac{1}{2}$, with a specified centre of enlargement.



The enlargement opposite (actually a reduction) of scale factor $\frac{1}{3}$ has no specified centre of enlargement, so the actual location of the smaller shape could be anywhere.

