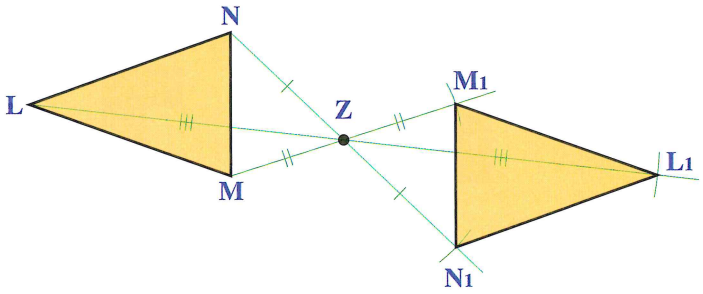
Central Symmetries (Reflections in Points)

Under a **central symmetry** in a point Z, any point and its image are the same distance from Z. The point Z is called the **centre of symmetry**.

Example

Construct the image of the triangle LMN under a **central symmetry** in the point Z.

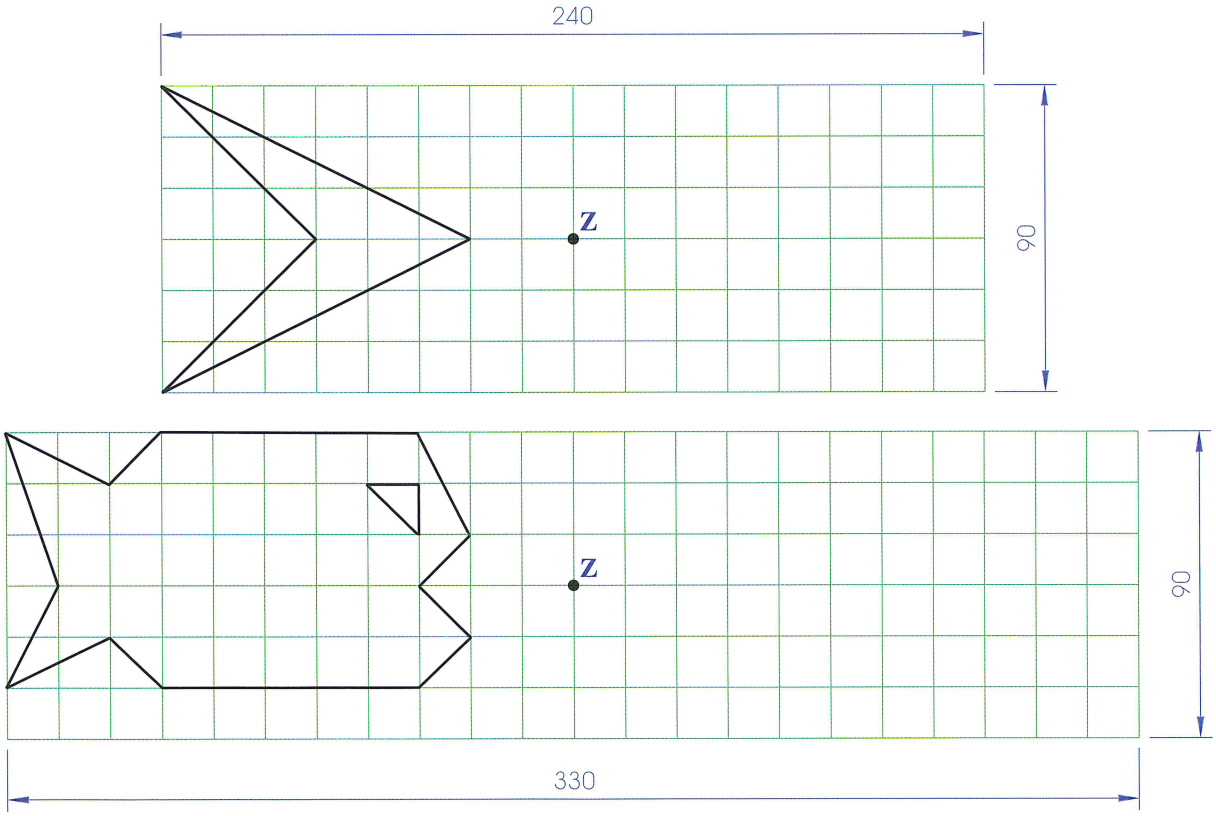
1. Join L to Z and extend to the other side.
2. Measure the distance from L to Z and mark this distance on the other side of Z to locate L_1.
3. Repeat the procedure for each of the points M and N. Join the points in order to obtain the image triangle.



Under a **central symmetry**, any point and its image are equidistant from the **centre of symmetry**.
A **central symmetry** is equivalent to a **rotation** through 180° about the centre of symmetry.

Exercises

1. The figures shown below are made up on a grid of 15 mm squares. Copy the grids and the associated figures, and draw the image of each figure under a **central symmetry** in the point Z.



Answer Worksheets 15C and 15D