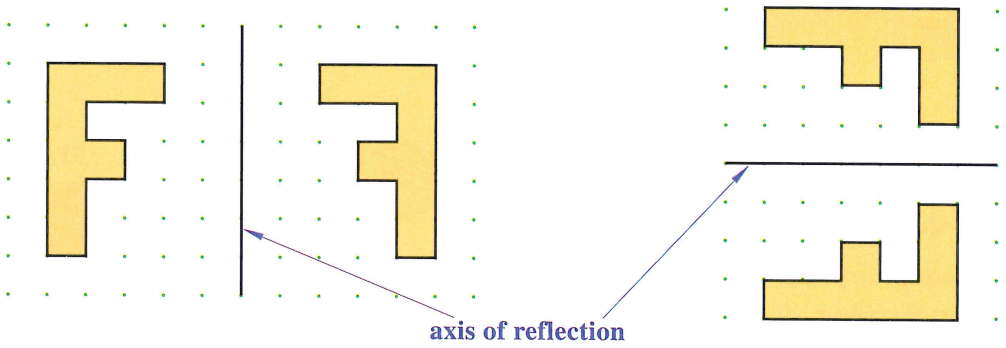
Axial Symmetries (Reflections in Lines)

Under an **axial symmetry**, shapes are flipped over an **axis of reflection** to a new position that is the mirror image. The two shapes in the figure below are **reflections** of each other in a vertical axis of reflection (left) and a horizontal axis of reflection (right).

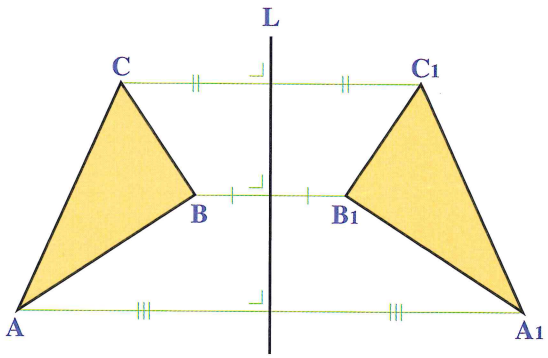


Under an **axial symmetry**, any point and its image are the same distance from the **axis of reflection**.

Example

Construct the image of the triangle ABC under an **axial symmetry** in the line L.

1. Through A, draw a line perpendicular to the line L and extend to the other side.
2. Measure the distance from A to the line L and mark this distance on the other side of L to locate A_1.
3. Repeat the procedure for each of the points B and C. Join the points in order to obtain the image triangle.



Exercise

The *incomplete* designs shown below are made up on a grid of 15 mm squares. Draw the grids and complete each of the designs using an **axial symmetry**.