6th Standard Maths

Symmetry

In our daily life symmetry is a common term. When we see a figure with evenly balanced proportions, then we say that it is symmetrical.

If we can fold a picture in half such that the left and right halves match exactly, then the picture is said to have line symmetry. We can see that the two halves are mirror images of each other. If we place a mirror on the fold, then the image of one side of the picture will fall exactly on the other side of the picture. The line of the fold is called the line of symmetry. It divides the figure into two identical parts.

Making Symmetric Figures: Ink-Blot Devils

We can list a few objects from our surroundings of symmetry for these objects, which are symmetric. Also we can identify the lines

Figures with Two Lines of Symmetry

If we take a rectangular sheet and fold it length-wise or breadth-wise, we find that one half fits exactly over the other half. We say that a rectangle has two lines of symmetry.
Note: An isosceles triangle has only one line of symmetry.
A scalene triangle has no line of symmetry.

Figures with Multiple (Morethan Two) Lines of Symmetry

An Equilateral Triangle has three lines of symmetry whereas a circle has countless lines of symmetry.

Reflection and Symmetry

The line symmetry is closely related to mirror reflection. In mirror reflection, we have to take into account the left ↔ right changes in orientation. Symmetry has numerous applications in our daily life.
For example, in art, architecture, textile technology, design relations, Rangoli, etc.