

Introduction to Symmetry

1. Symmetry

A figure is said to have symmetry if it can be divided into two equal parts that are mirror images of each other.

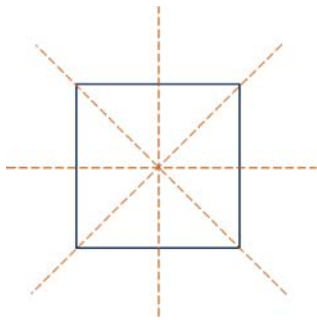
2. Line of Symmetry

A line of symmetry divides a shape into two equal and matching parts.

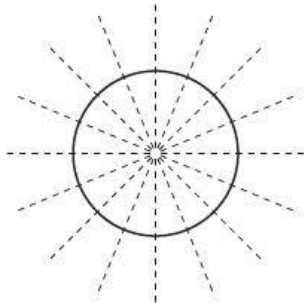
- The two parts are exactly the same when folded along the line.

3. Examples of Symmetry

- i. A square has 4 lines of symmetry



- ii. A circle has infinite lines of symmetry



- iii. English alphabet letters like A, B, C, D, E, H, K, M, O, T, U, V, W, X, Y have symmetry



- iv. A butterfly has one line of symmetry



4. Properties of Symmetrical Figures

- Both halves are mirror images
- The line of symmetry can be vertical, horizontal, or diagonal
- Shapes like square, rectangle, triangle, and circle can have symmetry
- Symmetry helps in design, art, and patterns
- Figures without symmetry are called asymmetrical

5. Common Shapes and Their Lines of Symmetry

Shape	Lines of Symmetry
Square	4
Rectangle	2
Circle	Infinite
Equilateral Triangle	3
Isosceles Triangle	1

6. Summary

- Symmetry = Two equal mirror halves
- Line of symmetry = Divides figure equally
- Found in shapes, letters, nature, and designs
- Symmetrical figures are balanced and beautiful

Example: Fold a paper heart — both sides match → It is symmetrical!

