

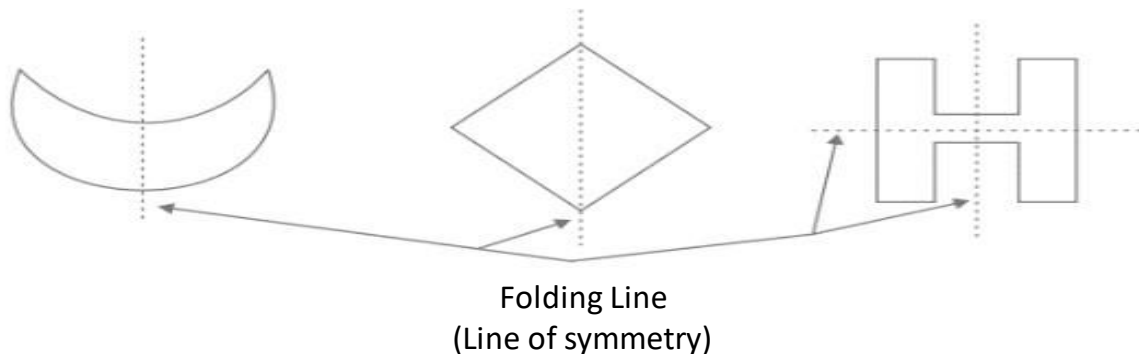
# Introduction of Symmetry

## Understanding: Introduction of Symmetry

- Symmetry means balance or equality in shape and size on both sides of a dividing line.
- A figure is said to be symmetrical if it can be folded into two equal halves.
- The line which divides the figure into two equal parts is called the Line of Symmetry.

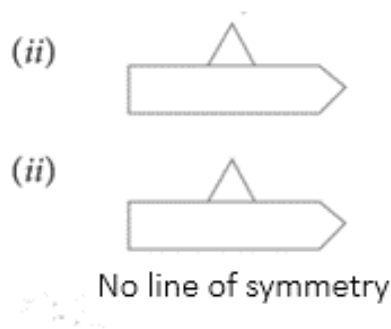
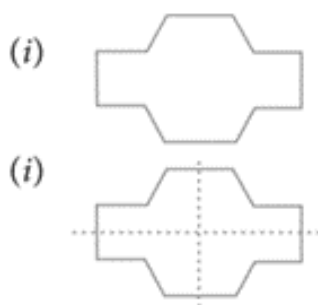
## Important Points

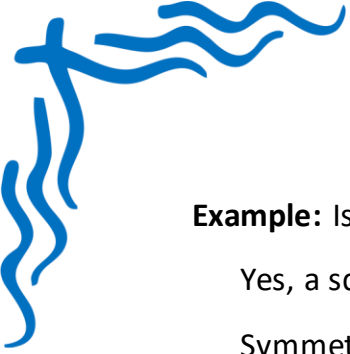
- The two halves are mirror images of each other
- A figure can have one or more lines of symmetry
- Symmetry is seen in nature, art, buildings, and designs
- Some figures have horizontal, vertical, or diagonal lines of symmetry



## Examples with Solutions

**Example:** Draw the line of symmetry of the following figures:





**Example:** Is a square symmetrical?

Yes, a square has 4 lines of symmetry – vertical, horizontal, and 2 diagonals

Symmetrical with 4 lines of symmetry

**Example:** Does a rectangle have symmetry?

Yes, a rectangle has 2 lines of symmetry – vertical and horizontal

Symmetrical with 2 lines of symmetry

**Example:** How many lines of symmetry does an equilateral triangle have?

An equilateral triangle has 3 lines of symmetry

Symmetrical with 3 lines of symmetry

**Example:** Is the English letter “A” symmetrical?

Yes, it has 1 vertical line of symmetry

Symmetrical with 1 line of symmetry

**Example:** Is the letter “N” symmetrical?

No, the letter “N” has no line of symmetry

Not symmetrical

## Summary Points

- Symmetry means having equal halves on both sides.
- The line dividing the figure equally is called the line of symmetry.
- Shapes like squares, circles, and triangles have symmetry.
- Letters and natural objects may or may not have symmetry.
- Symmetry is important in art, design, and patterns.