

Tender Heart High school, Sec-338, Chandigarh

Class - V

Date - 27.01.2025

Subject - Mathematics

Teacher - Ms. Sushma

### Chapter - 9 Symmetry and Nets

#### Triangles

A triangle is a shape made up of three line segments, or sides, that connect at three corners or vertices. It is represented by the symbol 'Δ'.

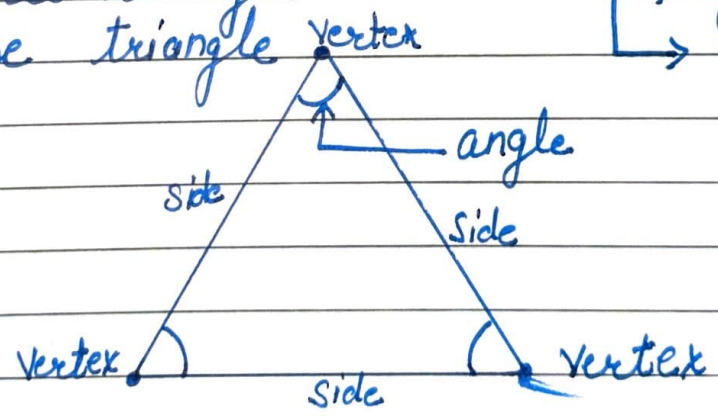
#### Types of Triangles

Based on Sides

- ↳ Equilateral Triangle
- ↳ Isosceles triangle
- ↳ Scalene triangle

Based on Angles

- ↳ Acute triangle
- ↳ Right triangle
- ↳ Obtuse triangle



Anything which can be divided in such a way that the two parts obtained look exactly the same is called symmetrical. The line which divides a figure into two identical parts

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is called the line of symmetry. It is also called the mirror line and can be horizontal, vertical or both. It can be drawn in any direction.

### Types of Symmetry

Symmetry in two-dimensional shapes of figures can be seen when they are flipped across a line or turned around a point.

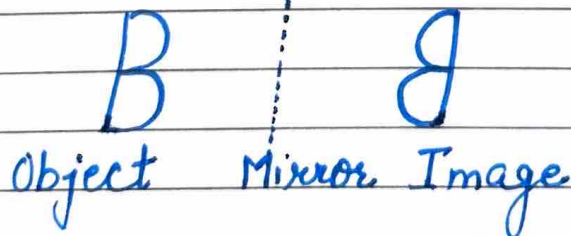
The two basic types of symmetry observed in two-dimensional shapes or figures are

- reflection symmetry
- rotational symmetry.

### Reflection Symmetry: →

Reflection is the mirror image of an object when it is flipped across a line.

Reflection symmetry is a type of symmetry in which one half of the object is the mirror image or the reflection of the other half. It is also known as mirror symmetry.



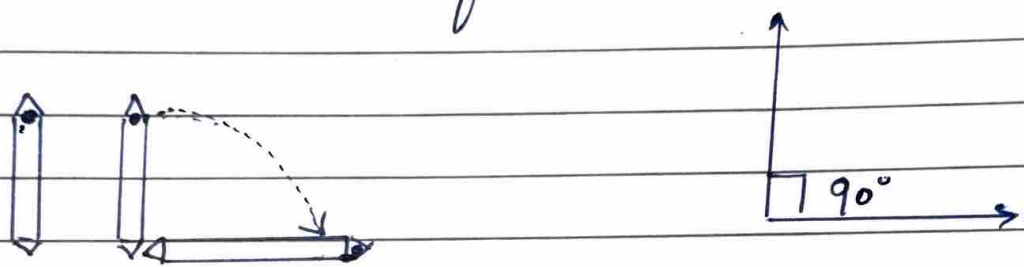
\* Every reflection has a mirror line.

# Rotational Symmetry :->

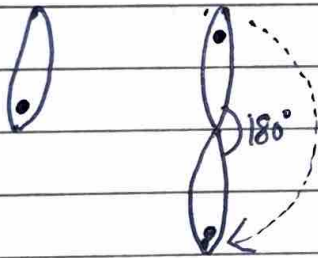
Rotation means turning or rotating a figure around its centre or a fixed point.

The fixed point around which a figure is rotated is called the 'Centre of rotation'. It can be rotated either clockwise or anticlockwise.

Quarter Turn - refers to a rotation of  $90^\circ$



Half Turn - refers to a rotation of  $180^\circ$



Full Turn - refers to a rotation of  $360^\circ$

