

CHAPTER 07

Triangles

Important results:

- The angle opposite to longer side of a triangle is larger.
- The side opposite to the longer angle of a triangle is longer.
- The sum of any two sides of a triangle is always greater than the third side.
- Two triangles are congruent if they have exactly the same shape and size.
- Congruence relation is equivalent i.e. Reflexive, Symmetric and Transitive.
- A triangle with all its sides equal is an equilateral triangle.
- A triangle with at least two sides is an isosceles triangle.
- Equilateral triangle can be an isosceles triangle. Isosceles triangle need not be an equilateral triangle.
- In an equilateral triangle all the three angles are equal and each is 60° .
- In an isosceles triangle,

Two sides are equal $\Rightarrow$ Angles opposite to the equal sides are equal.

Two angles are equal $\Rightarrow$ Sides opposite to equal angles are equal.

