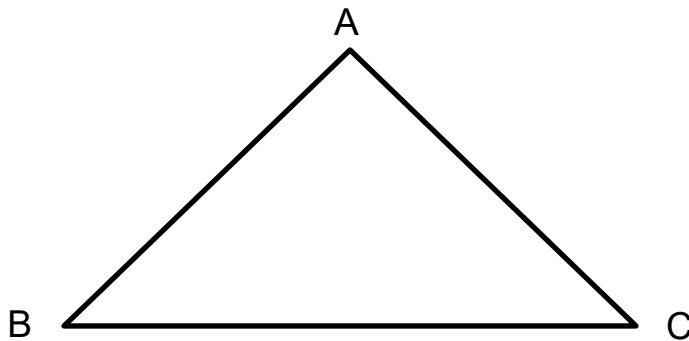


**Triangle:** A triangle is a closed figure with three sides.



Here, ABC is a triangle.

**Characteristics:**

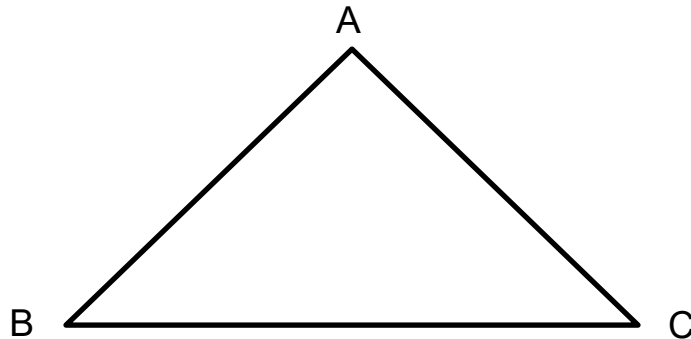
- 1) It has three sides.
- 2) It has three corners / vertices.
- 3) It has three angles.
- 4) All triangles have angles adding up to  $180^\circ$ .

**Types of triangles based on angles:**

There are three types of triangle based on the angles. They are:

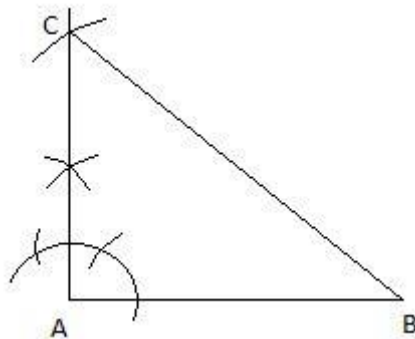
- 1) Acute angled triangle
- 2) Right angled triangle
- 3) Obtuse angled triangle

**1) Acute angled triangle:** Acute angled triangles have all acute angles. All three angles are less than  $90^\circ$ .



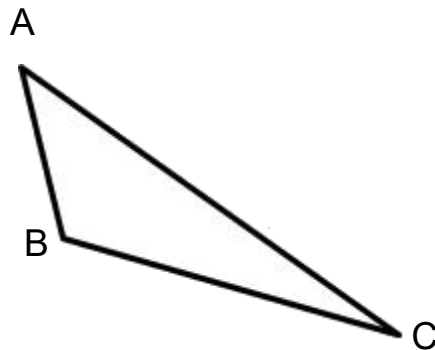
Here, ABC is an acute angled triangle. Here  $\angle A$ ,  $\angle B$  and  $\angle C$  are less than  $90^\circ$ .

**2) Right angled triangle:** Right angled triangles have one right angle. One of the angles is  $90^\circ$ .



Here, ABC is a right angled triangle.  $\angle A = 90^\circ$ .

**3) Obtuse angled triangle:** Obtuse angled triangle have one obtuse angle. One of the angles is greater than  $90^\circ$ .



Here, ABC is an obtuse angled triangle.  $\angle B$  is greater than  $90^\circ$ .

### Exercise

- 1) How many vertices does a triangle have?
- 2) How many sides are there in a triangle?
- 3) How many angles are there in a triangle?
- 4) If all the angles of a triangle are acute, the triangle is called \_\_\_\_\_
- 5) If one angle of a triangle measures  $90^\circ$ , the triangle is called \_\_\_\_\_
- 6) If one angle of a triangle is obtuse, the triangle is called \_\_\_\_\_
- 7) Draw an acute angled triangle with one of the angles is  $60^\circ$ .
- 8) What is obtuse angled triangle?
- 9) Draw a triangle with one of the angles is  $90^\circ$ .
- 10) Draw an obtuse angled triangle with one of the angles  $120^\circ$ .

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