

Properties of Triangles

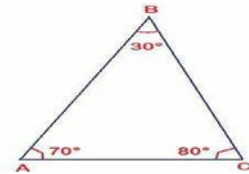


1. Angle Sum Property

As per the angle sum property, the sum of the three interior angles of a triangle is always 180° .

Example: In the given triangle,

$$\angle A + \angle B + \angle C = 70^\circ + 30^\circ + 80^\circ = 180^\circ$$



2. Triangle Inequality Property

As per the triangle inequality theorem, the sum of the length of the two sides of a triangle is greater than the third side.

Example: If $a = 4$ units, $b = 6$ units, $c = 3$ units, let us verify the triangle inequality property as follows:

- $a + b > c$ ($4 + 6 > 3$)
- $c + a > b$ ($3 + 4 > 6$)
- $c + b > a$ ($3 + 6 > 4$)