

MATHEMATICS

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Class-7th

Chapter-7

Congruence of
triangles

Introduction

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Class - VII, Mathematics
Ch-07: "Congruence of Triangles"

Introduction

✓ Two objects are congruent if they have same shape and size. The relation of two objects being congruent is called congruence.

Examples :- Keys of same lock,
shaving blades of the
same company, sheets
of the same letter pad.

✓ Congruence of plane figures: The plane figures are compared using the method of superposition. If F_1 is congruent to figure F_2 we write $F_1 \cong F_2$.



✓ Congruence among line segments: If two line segments have same length, they are congruent.



[Line segments are congruent \Leftrightarrow Their lengths are same]

Here, line segment \overline{AB} completely covers \overline{CD} . Hence, $\overline{AB} \cong \overline{CD}$

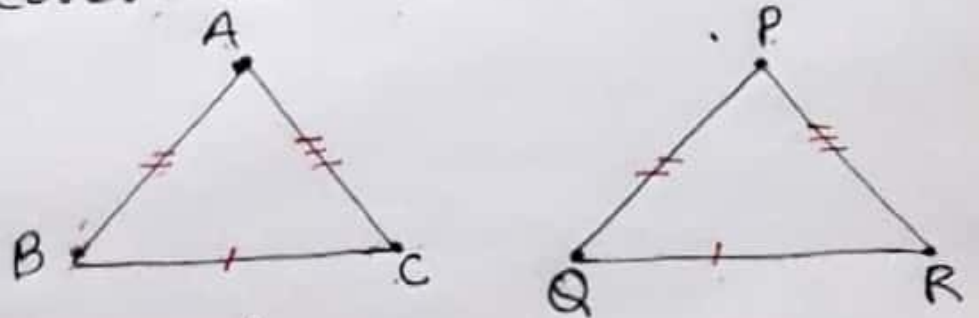
✓ Congruence of Angles: Two angles are congruent if they have the same measure.

Angles congruent \Leftrightarrow Angles measures same.



Here, $\angle PQR$ completely covers $\angle ABC$.
So, we write $\angle ABC \cong \angle PQR$.

Congruence of Triangles: Two triangles are congruent if they are copies of each other and when superposed they cover each other exactly.



Here, $\triangle ABC$ and $\triangle PQR$ have the same size and shape. They are congruent.
Hence, " $\triangle ABC \cong \triangle PQR$ " ✓