

Class 7-Mathematics

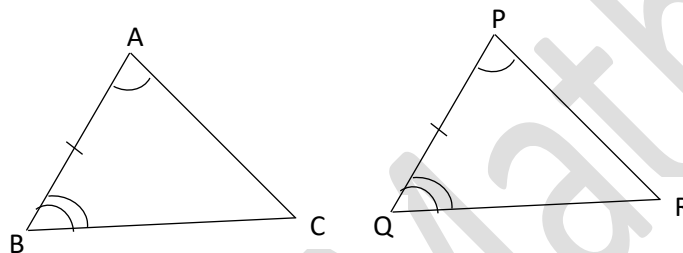
Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 12

CONGRUENCE OF TRIANGLES

Criteria for Congruence of Triangles(Continued)

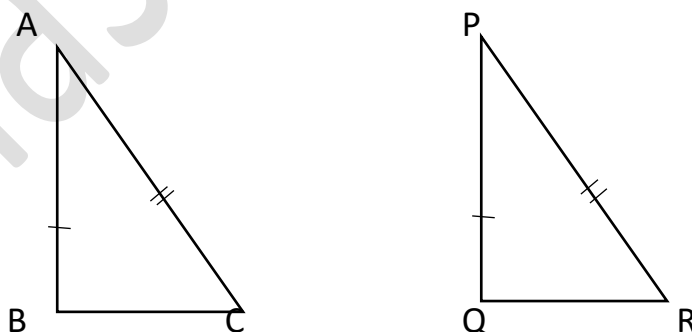
3. **ASA (Angle-Side-Angle)** Congruence criterion: Two triangles are congruent if two angles and the included side of one triangle are equal to two angles and included side of the other triangle.



In ΔABC and ΔPQR , $\angle A = \angle P$, $\angle B = \angle Q$, $AB = PQ$

$\therefore \Delta ABC \cong \Delta PQR$

4. **RHS (Right angle-Hypotenuse- Side)** Congruence criterion: Two right angled triangles are congruent if hypotenuse and one side of one triangle are equal to one side and hypotenuse of the other triangle.



In Right angled ΔABC and ΔPQR , $AB = PQ$, $AC = PR$

$\therefore \Delta ABC \cong \Delta PQR$

Exercise 12.2

3. One additional pair of corresponding parts are $BC = QR$

ASA criterion is applied here.

4. i) Congruent by ASA.

$$\triangle DEF \cong \triangle QPR$$

ii) Not congruent

iii) Not congruent.

6. i) $\angle DAC = \angle BAC$

$$\angle DCA = \angle BCA$$

$$AC = AC$$

ii) $\triangle DAC \cong \triangle BAC$ (ASA)

iii) $AB = CD$ (C.P.C.T)

iv) $CB = CD$ (C.P.C.T)

Home work: Solve Exercise **12.2** in the Maths copy.