

MISSION SELECTION



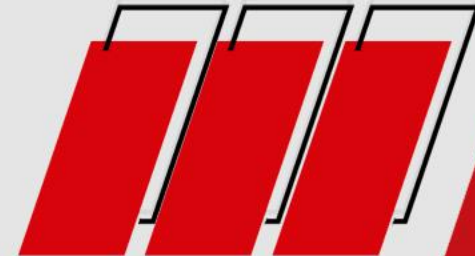
एसएससी CGL/CHSL/CPO SERIES



MATHS

Similarity & Congruence **(समरूपता और सर्वांगसमता)**

7:30 PM



Ex: In triangle ABC, $\angle B = 90^\circ$, $\angle C = 45^\circ$ and D is the mid-point of AC. If $AC = 4\sqrt{2}$ cm, then find BD.

उदा: त्रिभुज ABC में , $\angle B = 90^\circ$, $\angle C = 45^\circ$ और AC का मध्य बिंदु D है. यदि $AC = 4\sqrt{2}$ सेमी. , तब BD की लम्बाई ज्ञात कीजिये ?

Ex: In $\triangle ABC$, G is the centroid , $AB = 15\text{cm}$, $BC = 18\text{cm}$ and $AC = 25\text{cm}$, find GD, where D is the midpoint of BC ?

उदा: $\triangle ABC$ में, G केन्द्रक है , $AB = 15$ सेमी. , $BC = 18$ सेमी. और $AC = 25$ सेमी. है । GD की लम्बाई ज्ञात कीजिये ? जहाँ D , BC का मध्य बिंदु है ।



Ex: In Triangles ABC, the sides AB and AC are produced to points E and D respectively. OB and OC is the external bisectors of $\angle EBC$ and $\angle DCB$ respectively meet at point O, if $\angle BAC = 54^\circ$, then find $\angle BOC$?

उदा.: त्रिभुज ABC में, भुजा AB और AC को क्रमशः बिन्दु E और D तक बढ़ाया जाता है, $\angle EBC$ और $\angle DCB$ के बाह्य समद्विभाजक OB और OC बिन्दु O पर मिलते हैं, यदि $\angle BAC = 54^\circ$, तो $\angle BOC$ ज्ञात कीजिए ?



Ex: If Triangle ABC, OB and OC is the internal bisectors of $\angle ABC$ and $\angle ACB$ respectively meet at point O, if $\angle BAC = 50^\circ$, then find $\angle BOC$?

उदा: त्रिभुज ABC में $\angle ABC$ और $\angle ACB$ के आन्तरिक समद्विभाजक क्रमशः OB और OC बिन्दु O पर मिलते हैं। यदि $\angle BAC = 50^\circ$ तो $\angle BOC$ ज्ञात कीजिए ?



GEOMETRY

Similarity and Congruency

CONDITIONS FOR TRIANGLES TO BE SIMILAR

Three angles are Equal

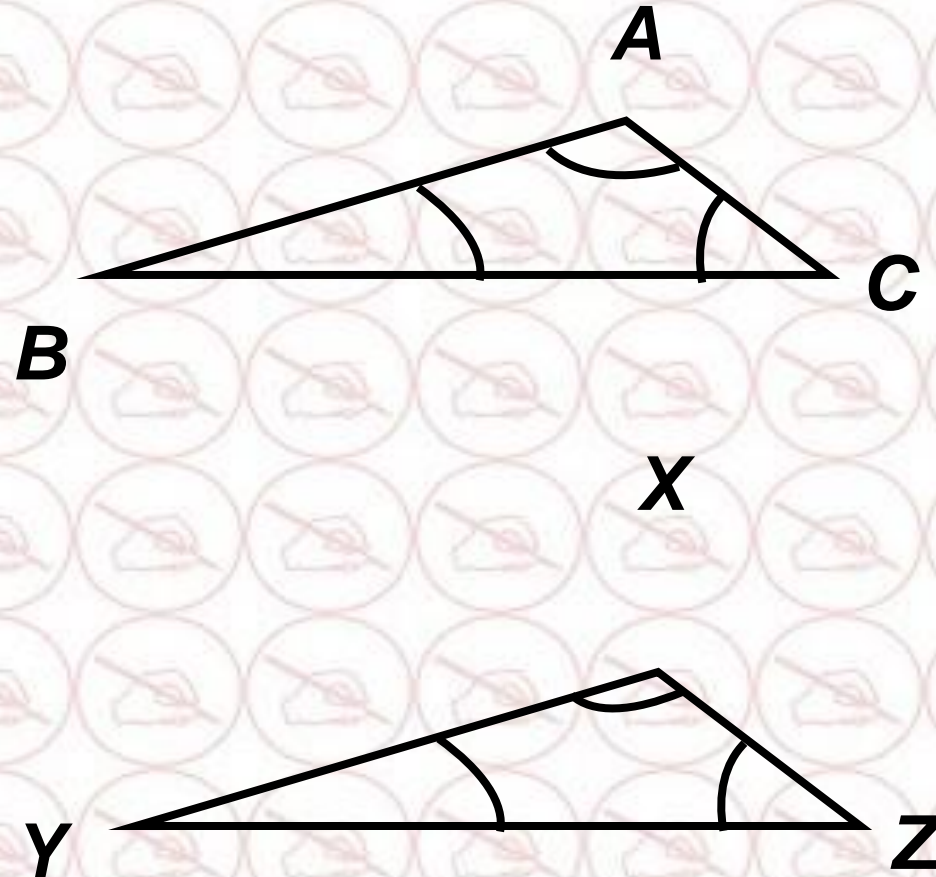
If $\angle A = \angle X$

$\angle B = \angle Y$

and $\angle C = \angle Z$

then $\triangle ABC \sim \triangle XYZ$.

Reference: AAA



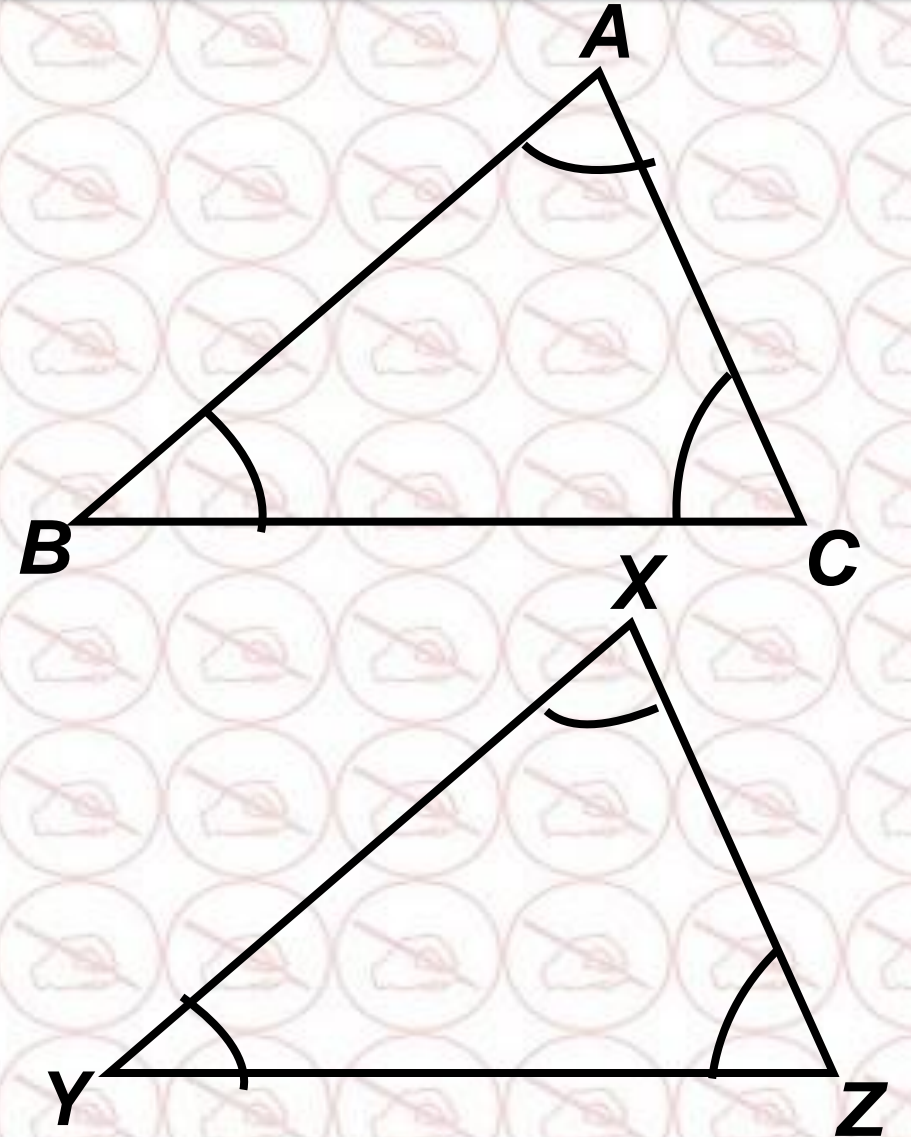
WHEN TWO TRIANGLE ARE SIMILAR

Three Angles are Equal

If $\triangle ABC \sim \triangle XYZ$.

Then, $\frac{BC}{YZ} = \frac{AC}{XZ} = \frac{AB}{XY}$

Reference:By similar Triangles



CONDITIONS FOR TRIANGLES TO BE CONGRUENT



CONDITIONS FOR TRIANGLES TO BE CONGRUENT

A

Three Sides Equal

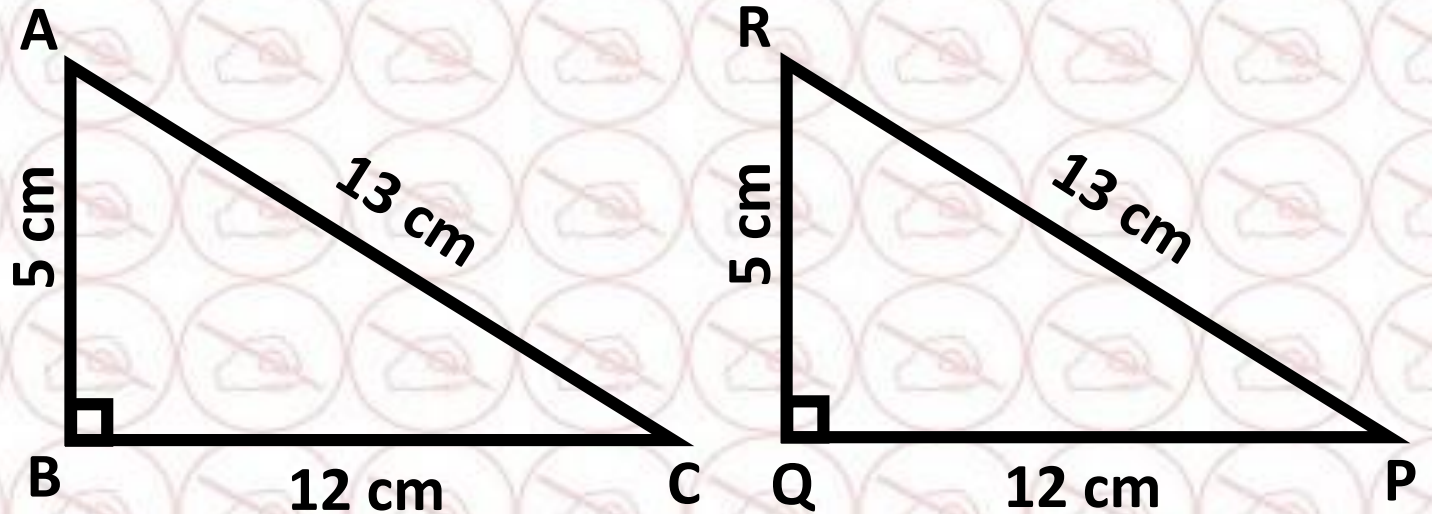
$$AB = QR$$

$$BC = PQ$$

$$AC = PR$$

$$\triangle ABC \cong \triangle RQP.$$

Reference: SSS



CONDITIONS FOR TRIANGLES TO BE CONGRUENT

B

Two Sides & Their Included Angles Equal

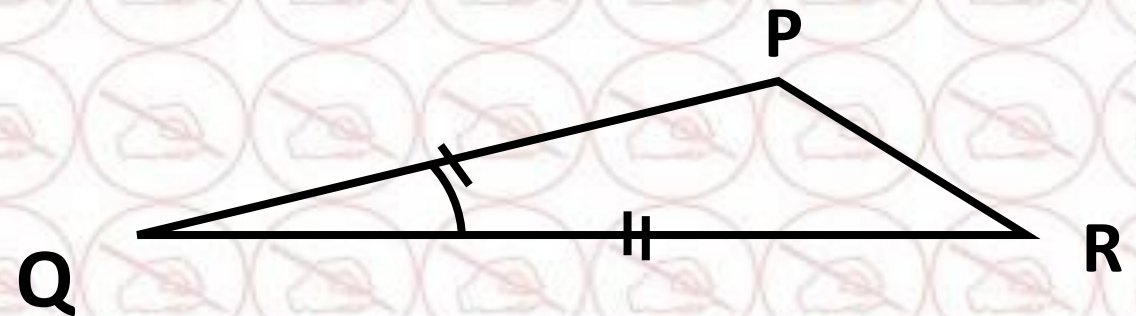
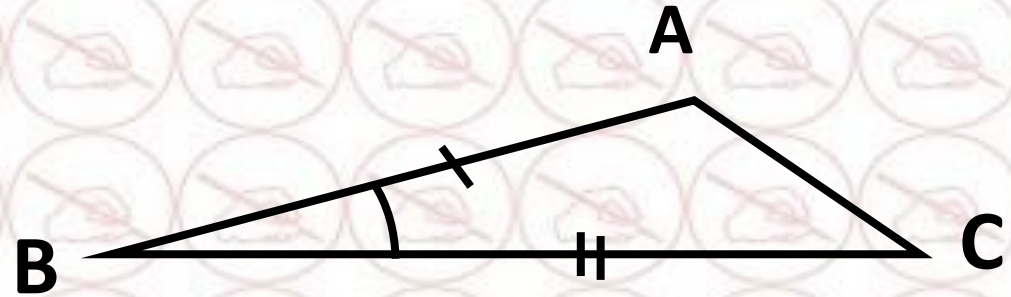
If $AB = PQ$

$BC = QR$,

and $\angle B = \angle Q$

Then $\triangle ABC \cong PQR$.

Reference: SAS



CONDITIONS FOR TRIANGLES TO BE CONGRUENT

C

Two Angles & One Side Equal

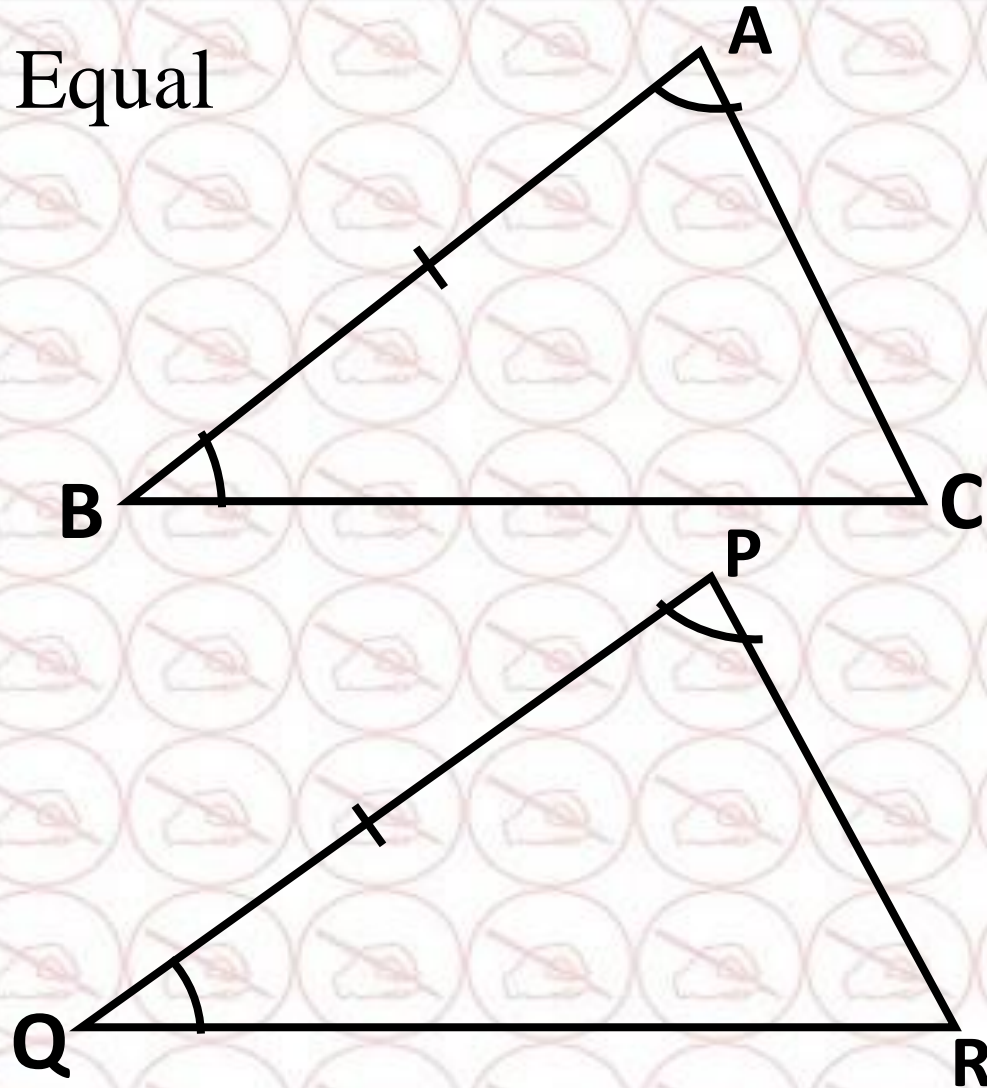
If $\angle B = \angle Q$

$\angle A = \angle P$

and $AB = PQ$

Then $\triangle ABC \cong \triangle PQR$.

Reference: ASA



Ex: In Fig. AQ and PB are perpendiculars to AB. If $AQ = 14$ cm, $PB = 3.5$ cm and $AO = 6$ cm. Calculate OP. ?
(Approx.)

