

LESSON PLAN CLASS 9 [2019-2020]



Class	Subject	Time Slot	Lesson	Topic
IX	MATHS	35Min+35Min P7+P8	Triangles	Some more criteria for congruence of triangles.

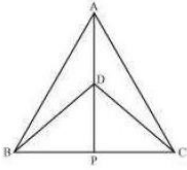
Expected Learning Outcome: The learners will be able to :

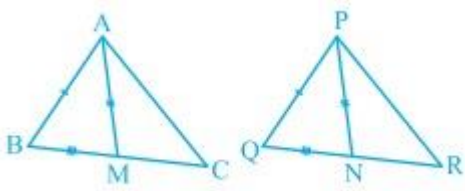
1. Identify the congruence rule of SSS and RHS.
2. Apply SSS and RHS congruence Rule to solve the problems.

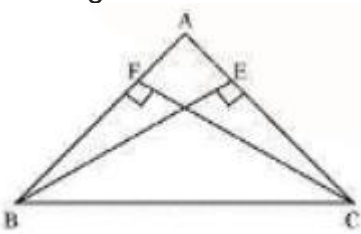
Expected skill development:

- Developing connections of different properties of triangles.
- Logical thinking while proving two triangles congruent.
- Visual and spatial ability to identify the type of congruency being used.
- Procedural thinking while finding the corresponding sides and angles.
- Problem solving while doing HOTS based questions.

FLOW OF LESSON WITH RESPECT TO TIME (Introduction/warm-up, Content, Think Line, Closure)

Pedagogy	Content
(5 Min) Warm Up <u>Interactive method</u> 1. The facilitator will discuss two important congruence criteria SSS and RHS.	SSS congruence Rule : Two triangles are congruent if the three sides of one triangle are equal to the corresponding three sides of the other triangle. RHS congruence Rule : Two triangles are congruent if the hypotenuse and one side of one triangle are respectively equal to the hypotenuse and one side of the other triangle.
(20 Mins) Demonstration by facilitator on board. <u>(Demonstration / Discussion method)</u> The facilitator will show its proof on the board and verify it with the help of few examples. The facilitator takes up the questions from the exercise and encourages the learners to do it on their own.	Proof of side-side-side (SSS) and Right Angle - Hypotenuse Side(RHS).  $\triangle ABC$ and $\triangle DBC$ are two isosceles triangles on the same base BC and vertices A and D are on the same side of BC (see Figure). If AD is extended to intersect BC at P, show that (i) $\triangle ABD \cong \triangle ACD$

	(ii) $\triangle ABP \cong \triangle ACP$ (iii) AP bisects $\angle A$ as well as $\angle D$. (iv) AP is the perpendicular bisector of BC
(5 Minutes) Closure: Two sides AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of $\triangle PQR$ (see Figure). Show that: (i) $\triangle ABM \cong \triangle PQN$ (ii) $\triangle ABC \cong \triangle PQR$	

a) Proposed Questions (must include the questions asked in the classroom <u>and</u> the ones given as class-work in the notebook) BE and CF are two equal altitudes of a triangle ABC. Using RHS congruence rule, prove that the triangle ABC is isosceles.	
	
b) Evaluation/Assessment: Peer discussion will be done. Teacher will assess the children randomly and also through student teacher interaction.	
Learners on the way AD is an altitude of an isosceles triangle ABC in which $AB = AC$. Show that (i) AD bisects BC (ii) AD bisects $\angle A$. Draw its figure.	Advanced Learners ABC is an isosceles triangle with $AB = AC$. Draw $AP \perp BC$ to show that $\angle B = \angle C$.
Materials needed/Resources: NCERT Text book.	
Common Misconceptions: Students are not able to understand that congruence theorem ASA mean two angle and any one side .	Addressing the Misconceptions: ASA means two angles and included side only.

HOME ASSIGNMENTS:

Do exercise 7.3 (Complete Exercise)

Teaching Methodology :

- Discussion/ interaction method.
- Lecture
- Demonstation.