

LESSON PLAN CLASS 9 [2019-2020]



Class	Subject	Time Slot	Lesson	Topic
IX	MATHS	35Min+35Min P9+P10	Triangles	Triangle inequality

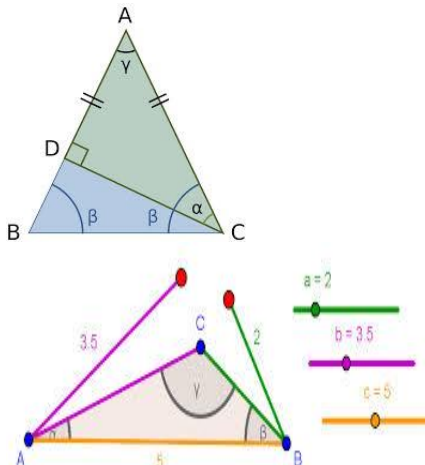
Expected Learning Outcome: The learners will be able to :

1. Examine the relation between unequal sides and unequal angles of a triangle.
2. Apply properties of inequalities in a triangle.

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)

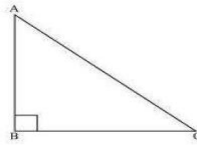
Pedagogy	Content
(5 Min) Warm Up <u>Interactive method</u> 1. The facilitator will give demonstration of the activity. 2. The facilitator will show its proof on the board and verify it with the help of few examples.	 • The property states that – The sum of any two sides of a triangle is always greater than the 3rd side. • If two sides of a triangle are unequal then angle opposite to longer side is greater than the angle opposite to the smaller side. • In any triangle the side opposite to the larger (greater) angle is longer.

(20 Mins) Demonstration by facilitator on board.

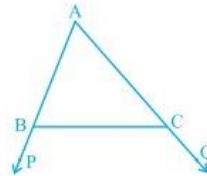
(Demonstration / Discussion method)

The facilitator takes up the questions from the exercise and encourages the learners to do it on their own.

1. Show that in a right angled triangle, the hypotenuse is the longest side.

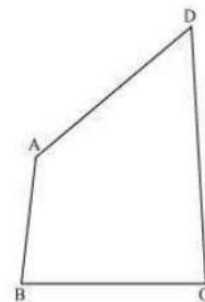


2. In Figure, sides AB and AC of $\triangle ABC$ are extended to points P and Q respectively. Also, $\angle PBC < \angle QCB$. Show that $AC > AB$.



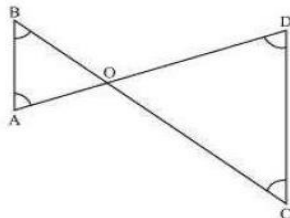
(5 Minutes) Closure:

AB and CD are respectively the smallest and longest sides of a quadrilateral ABCD (see Figure). Show that $\angle A > \angle C$ and $\angle B > \angle D$.



Proposed Questions (must include the questions asked in the classroom and the ones given as class-work in the notebook)

In Figure, $\angle B < \angle A$ and $\angle C < \angle D$. Show that $AD < BC$.



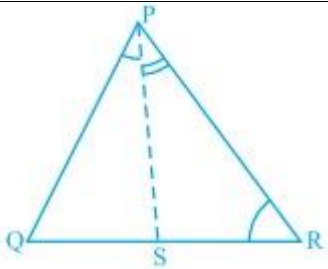
- a) Evaluation/Assessment: Peer discussion will be done. Teacher will assess the children randomly and also through student teacher interaction.

Learners on the way

Show that of all line segments drawn from a given point not on it, the perpendicular line segment is the shortest.

Advanced Learners

In Figure, $PR > PQ$ and PS bisects $\angle QPR$. Prove that $\angle PSR > \angle PSQ$.

	
Materials needed/Resources: NCERT Text book.	
Common Misconceptions: Students think that triangle inequalities are valid for two different triangles also.	Addressing the Misconceptions: Explanation This property is valid only for one triangle not in two different triangles.

HOME ASSIGNMENTS:

Do exercise 7.4 (Question No 5 and 6)

Teaching Methodology :

- Discussion/ interaction method.
- Lecture
- Demonstation.