

TOPIC :HERON'S FORMULA

CLASS: IX

Pre-Content/content Post-Content	Learning Outcome/Objectives	
	General	Specific
<u>Pre-Content</u> Recall • Concept of area of rectilinear figures <u>Content</u> • Area of triangles when three sides are given • Application of Heron's Formula in finding areas of quadrilaterals <u>Post-content</u> • To work out extra practice questions • To work out assignment from learning series	Students will be able to ✓ recall all the formulas of different rectilinear figures. ✓ calculate the area of a triangle when three sides of the triangle are given ✓ apply Heron's formula in solving various problems. ✓ apply the knowledge of Heron's Formula to solve various problems	Students will be able to ✓ discuss and make use of all the formulas of rectilinear figures. ✓ develop reverence and respect towards the contribution of famous mathematician Heron for giving such a utility formula and develop skills of finding areas. ✓ develop problem solving ability and solve various problems ✓ apply the knowledge of formula to solve various problems.

Home Work /Assignments

1. NCERT Exercise /solved examples given as home task
2. Questions from sample papers to solve
3. Selected questions from NCERT Exemplar

Teacher's Activity	Student's Activity	Teacher's Observation And Remedial
Teacher will initiate the discussion by asking questions to the students related to various formulas for finding areas of rectilinear figures. share her knowledge about the Heron's formula and at the same time will tell about the famous Mathematician Heron Ex-12.1 give examples on application based questions and will motivate them to solve the questions given in the exercise and ask them to perform the related activity. ANNEXURE-1 Ex-12.2 questions give extra practice questions and assignment	Students will get involved in thinking process and will share their previous knowledge about areas of rectilinear figures. listen about the mathematician and will appreciate his contribution to the field of Mathematics Ex-12.1 try to solve application based questions and perform the related activity. ANNEXURE-1 Ex-12.2 work on the questions and the assignment	Teacher will write her/his observations after completion of the topic

Teaching Aids : Smart board, ICR, Cartesian Plane, Graph Paper

Methodology/Innovative Methods: Discussion, Question-Answer method, Activity ,problem solving, Drawing skills

Interdisciplinary Links: Science, Statistics

Faculty Head

Coordinator

Vice-Principal

Principal

ANNEXURE-1

Subject	MATHEMATICS
Class	IX
Chapter/Unit	Mensuration
Topic	Heron's Formula
Time	20 minutes
Nature of Activity	Individual

What will I learn(Learning outcome)?

To calculate the area of triangle using heron's formula.

Skills:- Creating, Applying, Problem solving

What I have to do?

To calculate the cloth required to stitch an umbrella

What do I require?

Umbrella, measuring tape

What do I need to know?

Calculating area of a triangle using Heron's formula

Teacher's Activity

The teacher will ask the students to bring an umbrella and count its ribs and thus calculate area of each rib using Heron's formula and thus find out the total area of cloth required to stitch an umbrella

How will I proceed?➤ **Student's Activity**

- Take an umbrella
- Count the number of ribs
- Note the length of sides of a rib which is in the form of a triangle.
- Calculate the area of one rib using heron's formula and multiply it with the number of ribs

What have I observed?

How many ribs does an umbrella chosen by you have?

How will you find the total cloth required to make the umbrella?

What have I learnt?

The total number of ribs are _____ and area of each rib is _____ and thus area of umbrella is _____.

4/4

What am I curious to know?

Make a net of a tetrahedron using coloured paper of length 4 cm and hence calculate its area.

Let me evaluate myself

1. Sides of a triangle are in the ratio 12: 17: 25 and its perimeter is 540cm . Calculate its area

2. A field is in the form of a parallelogram has sides 60m and 40m and one of its diagonals is 80m . Find the area of the parallelogram.
