

Pre-Content/content Post-Content	Learning outcomes/Objectives	
	General	Specific
<u>Pre-Content</u> Perimeter and area of a circle <u>Content</u> Area of sector and segment of a circle Area of combination of plane figures <u>Post-content</u> To work out extra practice questions	Students will be able to recall the formulas for area and perimeter of a circle calculate area of sector and segment of a circle calculate area of combination of figures apply the knowledge learnt related to area related to circles	Students will be able to make use of the formulas and calculate the area and perimeter of a circle apply the formulas to calculate area of sector and segment of a circle calculate area of combination of figures which we come across in our daily life and also in the form of different designs apply the concept learnt to solve various problems - acquire <u>Problem solving</u> skills based on the given formulae and conditions.

Home Work /Assignments

NCERT exercise/solved examples given as home task.

Questions from sample papers to solve.

Selected questions from NCERT Exemplar.

Teacher's Activity	Student's Activity	Teacher's observation and Remedial
Teacher will ask them to recall the formulas and give them related problems to solve explain the concept with the help of examples and explains the method of getting the area of the three sectors of a triangle via hands on activity(Annexure 12) help them understand the combination of plane figures and hence finding the area give them extra similar questions to solve	Students will calculate the perimeter and area of a circle calculate the area of sector and segment of a circle using the formulas and perform the activity as per the instructions (Annexure 12) apply the concept and solve the questions use the concepts and formulas learnt to solve different problems	Teacher will write his/her observations after the completion of the topic

Teaching Aids: Smart board, Text book, Worksheets, Internet

Methodology/Innovative methods: Digital technology, Lecturing, Note giving, Questioning, Discussion, Hand On

Interdisciplinary Links: Billiards

HOD

Coordinator

Vice- Principal

Principal

ACTIVITY NO - 12

Subject	Mathematics
Class	X
Chapter/Unit	Areas related to Circles
Topic	Area of a sector
Time	15 minutes
Nature of Activity	Individual

What will I learn (Learning Outcome)?

The sum of areas of three sectors of the same radii 'r' formed at the vertices of any triangle is $\frac{1}{2}\pi r^2$ by paper cutting and pasting.

Skills: Applying and Creating

What I have to do?

To verify that the sum of areas of three sectors of the same radii 'r' formed at the vertices of any triangle is $\frac{1}{2}\pi r^2$ by paper cutting and pasting.

What do I require?

Origami sheet/coloured papers, glue stick, geometry box, colour pens, a pair of scissors

What do I need to know?

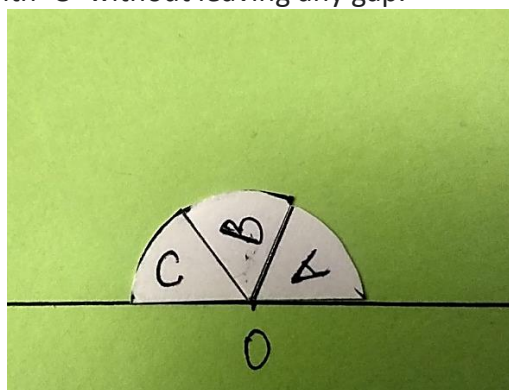
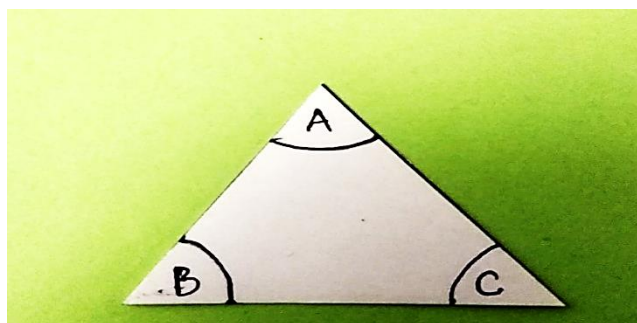
Definition of a sector, Concept of different types of triangles, Area of circle.

➤ **Teacher's Activity**

Teacher will draw the circle, sector of a circle, a triangle on the board and ask for their areas.

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

- 1) Draw a triangle ABC (Scalene/Isosceles/Equilateral) on a coloured sheet of paper and cut it.
- 2) Taking vertices A, B and C as centres of ΔABC , draw three sectors of same radii r.
- 3) Cut these three sectors and marked them as A, B and C.
- 4) Draw a straight line and mark any point 'O' on it. Place three sectors adjacent to each other so that the vertices A, B, C coincide with 'O' without leaving any gap.

**What have I observed?**

- 1) The shape of the three sectors arranged is _____
- 2) Area of three sectors together = _____

What have I learnt?

The sum of areas of three sectors of the same radii 'r' formed at the vertices of any triangle is _____

What am I curious to learn?

Prove that the sum of areas of four sectors of same radii 'r' formed at the vertices (as centre) of any quadrilateral is πr^2 .

Let me evaluate myself

- 1) What is the sum of the areas of three sectors of the same radii 'r' formed at the vertices of a Right triangle?

- 2) Vivaan divided a pizza of diameter 21 cm into 8 equal sectors and distributed them among his friends. Calculate:

- a) The angle of each sector
b) Area of each sector
