

LESSON PLAN CLASS 9



Class	Subject	Time Slot	Lesson	Topic P4/P5
IX	MATHS	35 Mins +35 min 2 pds	Heron's formula	Exercise 12.2 contd. Application of heron's formula

Expected Learning Outcome: The learners will be able to

- Find the area of quadrilateral by dividing into different triangles by Heron's formula
- Find the area of quadrilateral whose sides and one diagonal by Heron's formula.
- Apply knowledge in real life situation.

Expected skill development:

Numeracy skills while calculating the area of a triangle and quadrilaterals.

Critical thinking while differentiating where to use heron's formula

Problem solving skills while applying Heron's formula .

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

Pedagogy	Content
(5 Min) Warm Up Discussion method Between facilitator and learner	A triangle and a parallelogram have the same base and the same area. Think of the possible dimensions of a triangle and a parallelogram The response of learners: The facilitator will explain on blackboard. Area of triangle = area of trapezium $\frac{1}{2} b \times h = b \times H$ $h = 2H$

(55 mins) Instructions by facilitator on Board

Question and answer method followed by discussion and blackboard work and student will attempt in their copy.

Q6. An umbrella is made by stitching 10 triangular pieces of cloth of two different colours (see Fig. 12.16), each piece measuring 20 cm, 50 cm and 50 cm. How much cloth of each colour is required for the umbrella?



Q7 A kite in the shape of a square with a diagonal 32 cm and an isosceles triangle of base 8 cm and sides 6 cm each is to be made of three different shades as shown in Fig. 12.17. How much paper of each shade has been used in it?



(10 mins) Closure:

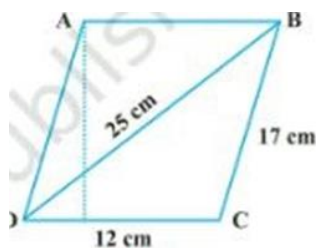
Discussion of Q – 9 Of Ex – 12.2

- 9.** A field is in the shape of a trapezium whose parallel sides are 25 m and 10 m. The non-parallel sides are 14 m and 13 m. Find the area of the field.

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

Find the area of a parallelogram given in Fig.

Also find the length of the altitude from vertex A on the side DC.



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

Learners on the way

Sanya has a piece of land which is in the shape of a rhombus (see Fig. 12.13). She wants her one daughter and one son to work on the land and produce different crops. She divided the land in two equal parts. If the perimeter of the land is 400 m and one of the diagonals is 160 m, how much area each of them will get for their crops?

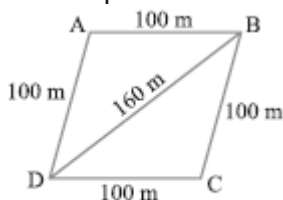
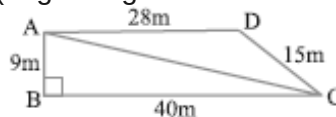


Fig. 12.13

Advanced Learners

Students of a school staged a rally for cleanliness campaign. They walked through the lanes in two groups. One group walked through the lanes AB, BC and CA; while the other through AC, CD and DA (see Fig. 12.12). Then they cleaned the area enclosed within their lanes. If $AB = 9$ m, $BC = 40$ m, $CD = 15$ m, $DA = 28$ m and angle $B = 90^\circ$, which group cleaned more area and by how much? Find the total area cleaned by the students (neglecting the width of the lanes).



Materials needed/Resources: Chalk, blackboard, duster. NCERT exemplar and text book.

Common Misconceptions:
None

Addressing the Misconceptions:
None

HOME ASSIGNMENTS: Complete Q 8 and 9 of Ex – 12.2 of NCERT Text Book Class 9