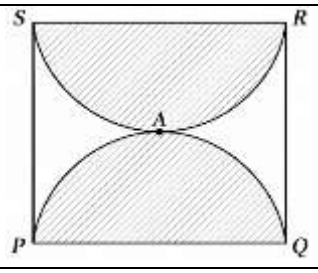
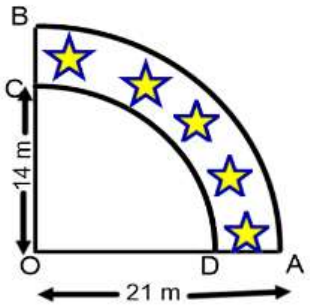
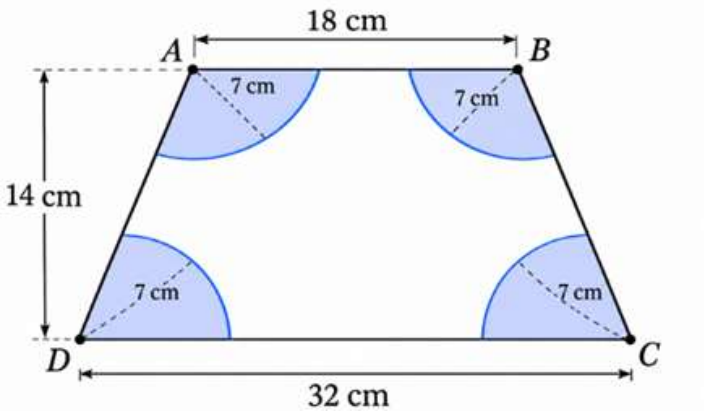
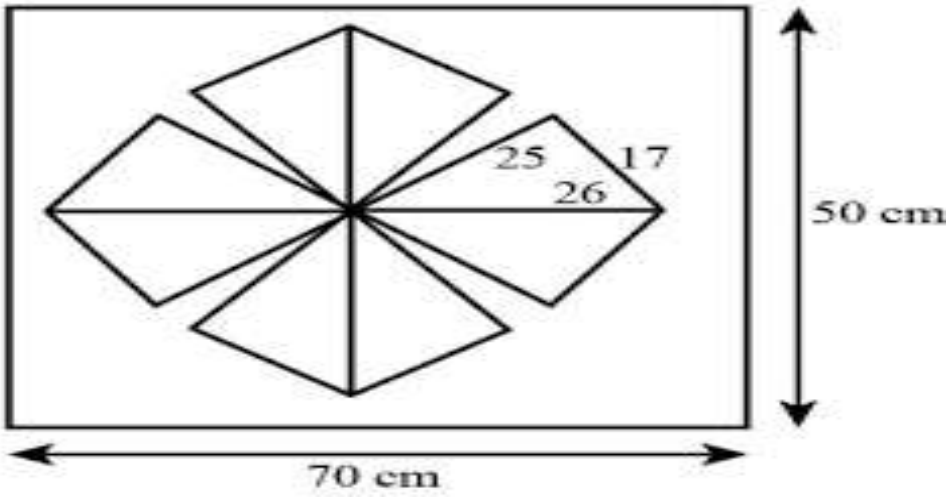
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Class IX, Mathematics

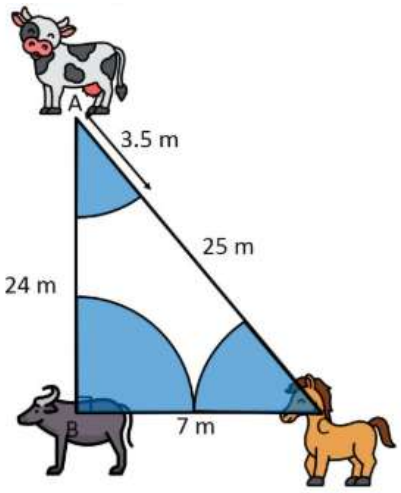
Worksheet- MEASURING SPACE: PERIMETER AND AREA-DTQ

	Questions of 2 marks each
Q.1	The sides of a triangle have lengths 7 cm, 24 cm, 25 cm. Find the area of the triangle.
Q.2	The sides of a triangle are in the ratio 2:3:4, and its perimeter is 36 cm. Find its area.
Q.3	The area of a right-angled triangle is 54 sq. cm. One of its legs has length 12 cm. Find its perimeter.
Q.4	An isosceles triangle has base 10 cm, and its area is 60 cm^2. What are the lengths of the equal sides?
Q.5	Find the area of a quadrilateral that is inscribed in a circle if it has side lengths 8 cm, 9 cm, 12 cm and 13 cm.
	Questions of 3 marks each
Q.6	The perimeter of an isosceles triangle is 60 cm. Its base is 18 cm. Find its area and the altitude drawn to the base.
Q.7	An isosceles triangle has equal sides of 10 cm each and a perimeter of 24 cm. Find its area. If the base is increased by 4 cm while the equal sides remain unchanged, determine the new area.
Q.8	The sides of a triangular field are 41 m, 40 m and 9 m. How many rose beds can be prepared in the field if each rose bed requires 900 cm^2 of space?
Q9.	The triangular side walls of a flyover have been used for advertisements. The sides of the walls are 13 m, 14 m and 15 m. The advertisements yield an earnings of ₹ 2000 per m^2 a year. A company hired one of its walls for 6 months. How much rent did it pay?
Q10.	PQRS is a square land of side 28 m. Two semi-circular grass-covered portions are made on two of its opposite sides. Find the area of the square that is left uncovered. 
Q11.	To warn ships for underwater rocks, a lighthouse spreads a red coloured light over a sector of angle 80° to a distance of 16.5 km. Find the area of the sea over which the ships are warned. (Use Π = 3.14)
Q12.	Find the difference of the areas of a sector of angle 120° and its corresponding major sector of a circle of radius 21 cm.

Questions of 5 marks each	
Q13.	In the given figure, ABCD is a flower bed. If OA = 21 m and OC = 14 m, find the area of the flower bed. $\left[take\ \pi = \frac{22}{7}\right]$ 
Q14.	In the given figure, ABCD is a trapezium with AB//DC, AB = 18 cm, DC = 32 cm and distance between AB and DC = 14 cm. if arcs of equal radii 7 cm with centres A, B, C and D have been drawn, then find the area of the unshaded region of the figure. 
Q15.	Find the area of a triangular field whose sides are 275 m, 660 m and 715 m. What is the cost of cultivating the field at the rate of ₹200 per hectare? $[1\ hectare = 10000m^2]$
Q16.	A design is made on a rectangular tile of dimensions 50 cm × 70 cm as shown in the figure. The design shows 8 triangles, each of sides 26 cm, 17 cm and 25 cm. Find the total area of the design and the remaining area of the tile. 

Case Study Question:

A buffalo, a cow and a horse are tethered to pegs at the corners of a right triangular field of sides 24 m, 7 m and 25 m by means of a 3.5 m lond rope as shown in the figure.



Based on the above information, answer the following questions:

Q17. Find the area of the right triangular grass field.

Q18. Find the combined angle made by the grazing area of horse and cow.

Q19. Find the area available of that part of the field in which buffalo can graze.

Q20. Calculate the decrease in the grazing area of buffalo, if the ropes were 3m instead of 3.5m.

Answers

Answers								
	1	84 cm^2	2	$12\sqrt{15}\ cm^2$	3.	36 cm	4	13 cm
	5	$12\sqrt{78}\ cm^2$	6	$54\sqrt{10}\ cm^2$, $6\sqrt{10}\ cm$	7	$8\sqrt{6}\ cm^2$, $8\sqrt{21}\ cm^2$	8	2000
	9	₹84,000	10	168 m^2	11	189.97 km^2	12	462 cm^2
	13	192.5 m^2	14	196 cm^2	15	90750m^2, ₹1,815	16	3500cm^2, 1868cm^2
	17	84 m^2	18	90°	19	9.625 m^2	20	2.554 m^2