HERON'S FORMULA

CM091001

Multiple Choice Questions : **1 mark each**

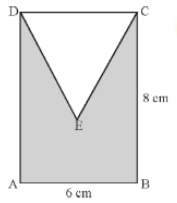
1. The sides of a triangular flower bed are 5 m, 8 m and 11 m. The area of the flower bed is :

   (a) $4\sqrt{21}\ m^2$ (b) $21\sqrt{4}\ m^2$ (c) $\sqrt{330}\ m^2$ (d) $\sqrt{300}\ m^2$

2. If the perimeter of an isosceles triangle of Base 12 cm is 30 cm, then its area is :

   (a) $18\ cm^2$ (b) $18\sqrt{5}\ cm^2$ (c) $36\sqrt{5}\ cm^2$ (d) $5\sqrt{18}\ cm^2$

3. In the figure, ABCD is a rectangle and DEC is an equilateral triangle. Area of ΔDEC is :



   (a) $36\sqrt{3}\ cm^2$ (b) $48\ cm^2$ (c) $12\sqrt{3}\ cm^2$ (d) $9\sqrt{3}\ cm^2$

4. If the altitude of an equilateral triangle is $\sqrt{12}$ cm, then its area is equal to :

   (a) $2\sqrt{3}\ cm^2$ (b) $3\sqrt{3}\ cm^2$ (c) $4\sqrt{3}\ cm^2$ (d) $5\sqrt{3}\ cm^2$

5. Each equal side of an isosceles triangle is 13 cm and its base is 24 cm. Area of the triangle is :

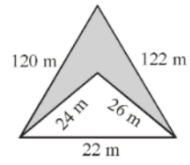
   (a) $50\sqrt{3}\ cm^2$ (b) $40\sqrt{3}\ cm^2$ (c) $25\sqrt{3}\ cm^2$ (d) $60\ cm^2$

Very Short Answer Type Questions : **2 marks each**

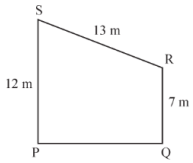
6. The perimeter of a right triangle is 450 cm. If its sides are in the ratio 13:12:5, find the area of the triangle.
7. Find the area of a regular hexagon of side a.
8. Find the cost of levelling the ground in the form of a triangle having the sides 51 m, 37 m and 20 m at the rate of Rs 3/m^2.

Short Answer Type Questions : **3 marks each**

9. In the figure, find the area of the shaded region.



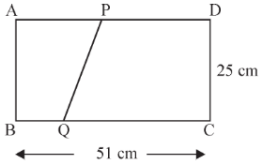
10. In the figure, find the area of the trapezium PQRS with height PQ.



11. The lengths of the two sides of a right triangle containing the right angle differ by 2 cm. If the area of the triangle is 24 cm^2, find the perimeter of the triangle.

Long Answer Type Questions : **5 marks each**

12. In the figure, the dimensions of the rectangle ABCD are 51 cm × 25 cm. A trapezium PQCD with its parallel sides QC and PD in the ratio 9:8 is cut off from the rectangle. If the area of the trapezium PQCD is $\frac{5}{6}th$ part of the rectangle, find QC and PD.



13. In the figure, ABC has sides AB=7.5 cm, AC=6.5 cm and BC = 7 cm. On base BC a parallelogram DBCE of same area as that of ABC is constructed. Find the height DF of the parallelogram.