HERON'S FORMULA

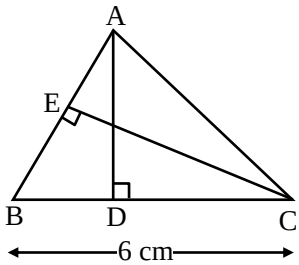
AREA OF TRIANGLE BY HERON'S FORMULA

EXERCISE

Q.1 If perimeter of an equilateral triangle is 96 cm, then find its each side.

Q.2 If one side from two equal sides of a Δ is 14 cm and semi perimeter is 22.5 cm then find the third side.

Q.3 Find the length of AD in given figure, if EC = 4 cm and AB = 5 cm.



Q.4 Using Heron's formula, find the area of an equilateral triangle of side a units.

Q.5 Find the area of an isosceles triangle each of whose equal sides is 13 cm and whose base is 24 cm.

Q.6 The perimeter of a triangular field is 450 m and its sides are in the ratio 13 : 12 : 5. Find the area of the triangle.

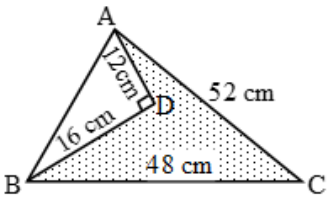
Q.7 Find the percentage increase in the area of a triangle if its each side is doubled.

Q.8 The lengths of the sides of a triangle are in the ratio 3 : 4 : 5 and its perimeter is 144 cm. Find

(i) the area of the triangle and

(ii) the height corresponding to the longest side.

Q.9 Find the area of the shaded region in figure :



Q.10 Find the area of an isosceles triangle of its sides are a cm, a cm and b cm.

Q.11 If the difference between the semi-perimeter and the sides of a ΔABC are 8 cm, 7 cm and 5 cm respectively. Then find the area of the triangle.

ANSWER KEY

1. $x = 32$ cm

2. $x = 17$ cm.

3. $AD = 3.33$cm

4. $\left(\frac{\sqrt{3}a^2}{4}\right)$

5. 60 cm^2

6. Area $= 6750\ m^2$.

7. 300%

8. (i) 864 cm^2. (ii) 28.8 cm.

9. 384 cm^2.

10. $\Delta = \frac{b}{4}\sqrt{4a^2 - b^2}$ square cm.

11. $20\sqrt{14} cm^2$