

5/11/2020
THURSDAY

MATHEMATICS

STD - X
CLASS - 54

Assignment

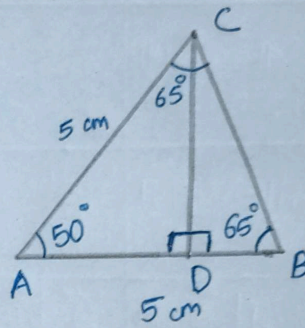
- 1) Angles of 50° and 65° are drawn at the ends of a 5 cm long line, to make a triangle. Calculate its area.

Ans)

In $\triangle ABC$, $\angle A = 50^\circ$, $\angle B = 65^\circ$

then $\angle C = 180 - (50 + 65) = 65^\circ$

Since two angles of this triangle are equal, sides opposite these sides are also equal.



$$\therefore AB = AC = 5 \text{ cm}$$

CD is the perpendicular from C to AB

$$\sin 50^\circ = \frac{CD}{AC} = \frac{CD}{5}$$

$$0.7660 = \frac{CD}{5}$$

$$\therefore CD = 0.7660 \times 5 = \underline{\underline{3.83}} \text{ cm}$$

$$\begin{aligned} \therefore \text{Area of the triangle} &= \frac{1}{2} \times 5 \times 3.83 \\ &= \underline{\underline{9.58}} \text{ cm}^2 \end{aligned}$$