

19/10/2020
MONDAY

MATHEMATICS

STD - 8
class - 46

Assignment

- 1) A rod 28 cm long is to be bent to make a rectangle
• How about a rectangle of diagonal 14 cm?

Ans) If the diagonal is 14 cm.

$$x^2 + (14-x)^2 = 14^2$$

$$x^2 + 196 - 28x + x^2 = 196$$

$$2x^2 - 28x = 0$$

$$\therefore x^2 - 14x = 0$$

Adding 49 to both sides.

$$x^2 - 14x + 49 = 49$$

$$(x-7)^2 = 7^2$$

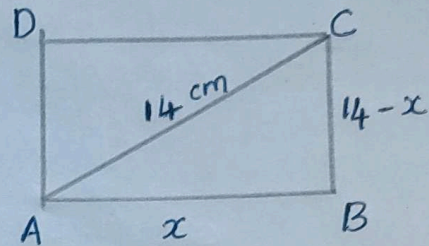
$$x-7 = +7 \text{ or } -7$$

$$\text{If } x-7 = 7$$

$$x = 7 + 7 = 14$$

$$\text{If } x-7 = -7$$

$$x = -7 + 7 = 0$$



\therefore Rectangle with diagonal 14 cm cannot be made. The length of the rectangle should be 8 cm or more, but less than 14 cm.