

Online Class - X - 24

16 / 08 / 2021

○ 2 . Circles - Class 12 ○

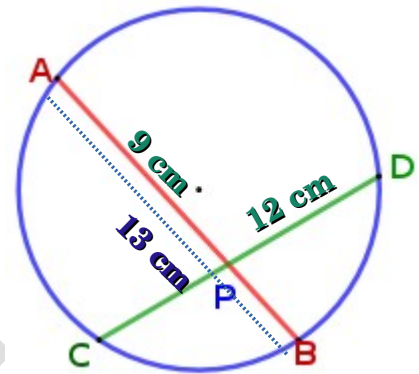
To view class

Assignment Answer

$$\begin{aligned} \text{Given } PA &= 9 \text{ cm ,} \\ \text{So } PB &= AB - PA \\ &= 13 - 9 \\ &= 4 \text{ cm} \end{aligned}$$

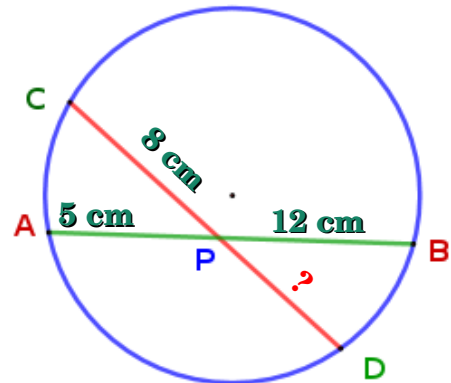
$$\begin{aligned} PA \times PB &= PC \times PD \\ 9 \times 4 &= PC \times 12 \\ PC &= \frac{9 \times 4}{12} = \frac{36}{12} = 3 \text{ cm} \end{aligned}$$

$$\begin{aligned} CD &= PC + PD \\ &= 3 + 12 = 15 \text{ cm} \end{aligned}$$



Q) In the figure two chords AB and CD intersect at a point P .

PA = 5cm, PB = 12 cm , PC = 8 cm .
Find the length of PD .



$$\begin{aligned} \text{Ans) } PA \times PB &= PC \times PD \\ 5 \times 12 &= 8 \times PD \\ PD &= \frac{5 \times 12}{8} \\ &= \frac{60}{8} \\ &= 7.5 \text{ cm} \end{aligned}$$

Construction 3

Q1) Draw a rectangle of width 5 centimetres and height 3 centimetres.

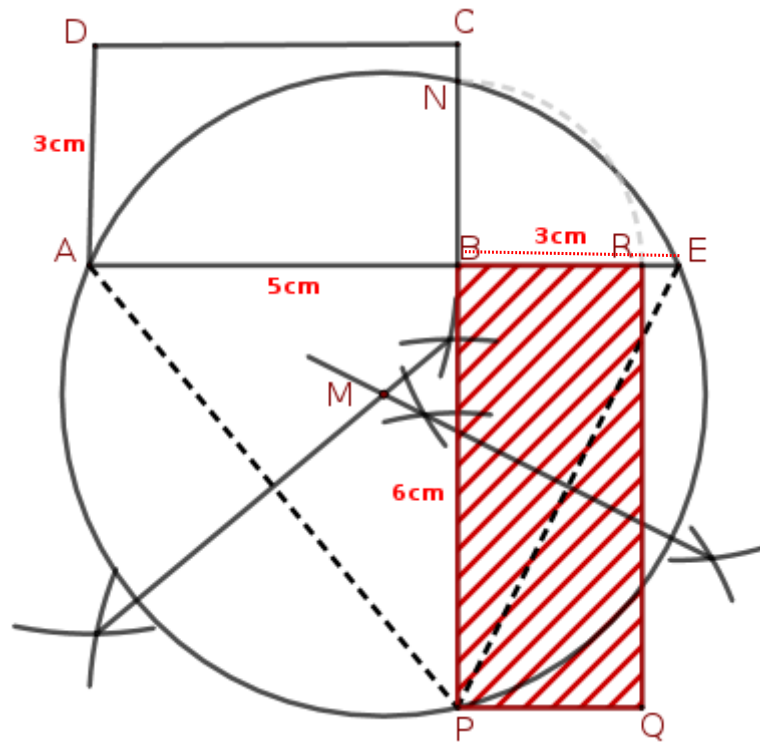
Draw a rectangle of the same area with width 6 centimetres.

Ans)

Steps :

- 1. Draw a rectangle of width 5 cm and height 3 cm .**
- 2. Let the name of the rectangle be ABCD .**
- 3. Extend AB to E such that BE = 3cm .**
- 4. Since given length of new rectangle is 6 cm ,extend CB to P such that BP = 6cm .**
- 5. Join AP & EP to get $\triangle AEP$.**
- 6. Draw perpendicular bisectors of AP & EP, they intersect at a point say M. With M as centre draw a circle which passes through A, E & P.**
- 7. Let this circle intersect BC at N .**
- 8. Now we get two chords AE & PN .**
On the compass measure BN , mark this measurement on BE as BR.
- 9. With PB & BR as length and breadth complete the rectangle BRQP .**

Now area of rectangle ABCD & area of rectangle BRQP are same.



Assignment

- Q2) Draw a rectangle of length 4 centimetres and width 3 centimetres .**
Draw another rectangle of the same area with one side 5 centimetres .

