

○ 2 . Circles - Class 12 ○

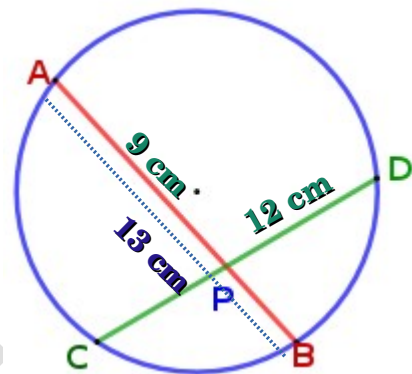
To view class

**Assignment Answer**

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

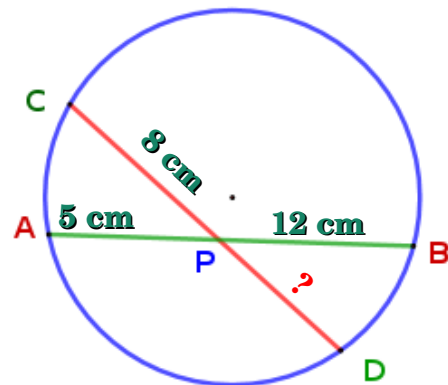
$$\begin{aligned} PA \times PB &= PC \times PD \\ 9 \times 4 &= PC \times 12 \\ PC &= \frac{9 \times 4}{12} = \frac{36}{12} = 3 \text{ cm} \end{aligned}$$

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



**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 .**



**Ans)  $PA \times PB = PC \times PD$**

$$\begin{aligned} 5 \times 12 &= 8 \times PD \\ PD &= \frac{5 \times 12}{8} \\ &= \frac{60}{8} \\ &= 7.5 \text{ cm} \end{aligned}$$

**Construction 3**

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

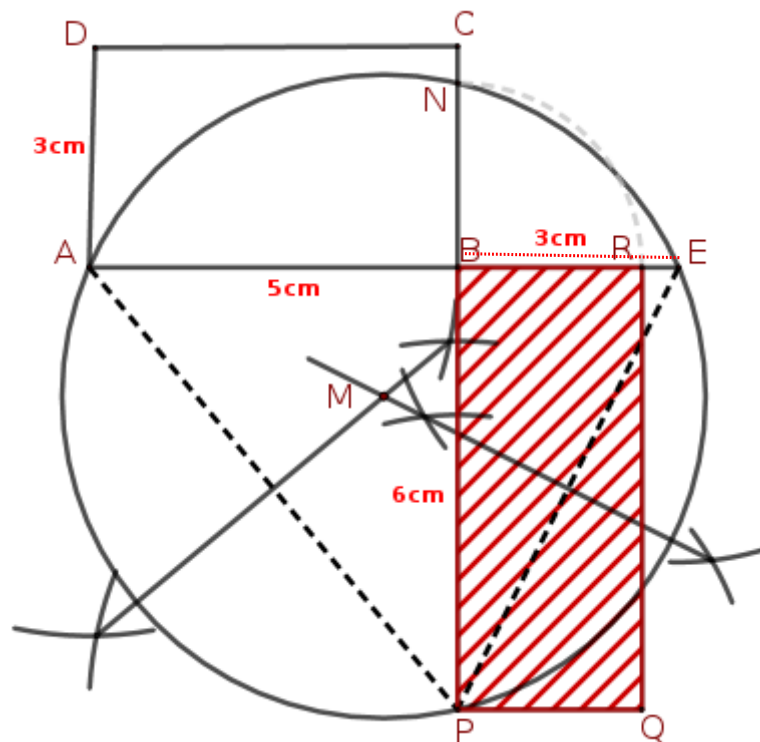
**Draw a rectangle of the same area with width 6 centimetres.**

**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 .**

