

# NCERT/CBSE MATHEMATICS CLASS 10 textbook(OPTIONAL EXERCISE)

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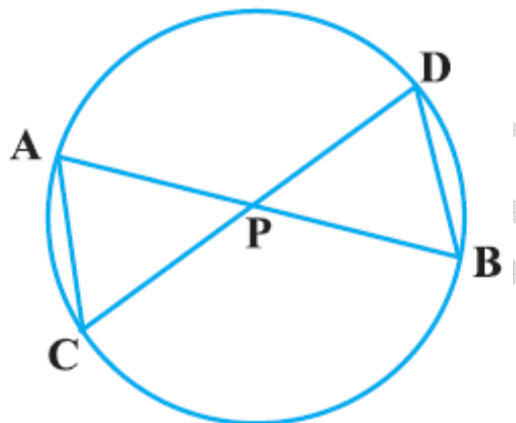
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Answers to NCERT/CBSE MATHEMATICS Class 10(Class XI)textbook OPTIONAL EXERCISE

CHAPTER SIX  
SIMILAR TRIANGLES  
EXERCISES

7. In the given Figure, two chords AB and CD intersect each other at the point P.  
Prove that :

- (i)  $\Delta APC \sim \Delta DPB$                       (ii)  $AP \cdot PB = CP \cdot DP$



**Given :** Two chords AB and CD, of a circle intersect each other at the point P

**Prove that :** i)  $\Delta APC \sim \Delta DPB$                       (ii)  $AP \cdot PB = CP \cdot DP$

**Proof:**

In  $\Delta APC$  and  $\Delta DPB$  , we have

$\angle APC = \angle DPB$  [Vertically opposite angles are equal]

$\angle CAP$  and  $\angle BDP$  are angles in the same segment of a circle therefore they are equal.

$\therefore \Delta APC \sim \Delta DPB$  [AA criterion]

(i)  $\Delta APC \sim \Delta DPB$  From (i)

(ii)  $\frac{AP}{DP} = \frac{CP}{PB}$

$\Rightarrow AP \times PB = CP \times DP$