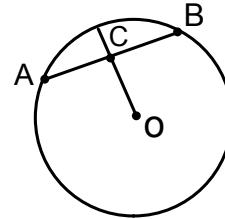


Sec 8.2 Properties of Chords in a Circle

Sec 8.2: Properties of Chords in a Circle

Perpendicular means there is a 90° angle.
Bisector means it is divided into 2 equal parts.

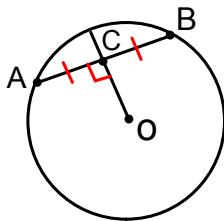
In any circle with center O and chord AB:



↳ If OC bisects AB, then $OC \perp AB$

↳ If $OC \perp AB$, then $AC = CB$

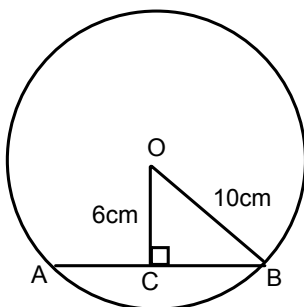
↳ The perpendicular bisector of AB goes through the center O



If $AC = 10\text{cm}$, then $BC = 10\text{cm}$

Example 1

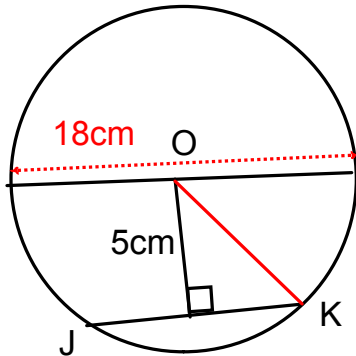
O is the center of the circle. Find the length of chord AB.



Sec 8.2 Properties of Chords in a Circle

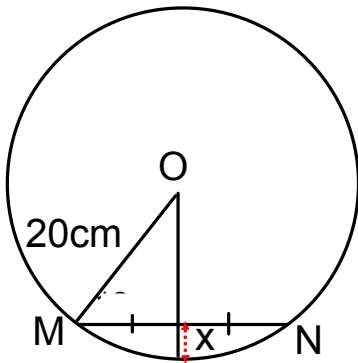
Example 2

The diameter of a circle is 18cm. A chord JK is 5cm from the center. Find the length of the chord.



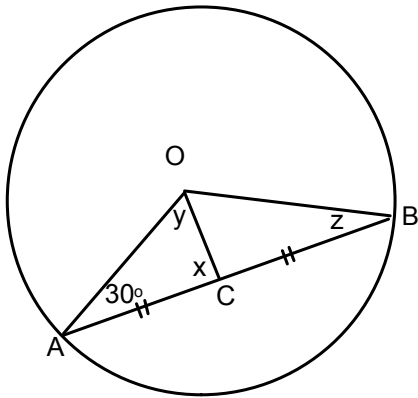
Example 3

A chord MN is 24cm. The radius of a circle is 20cm. Determine the length of x in the diagram below.



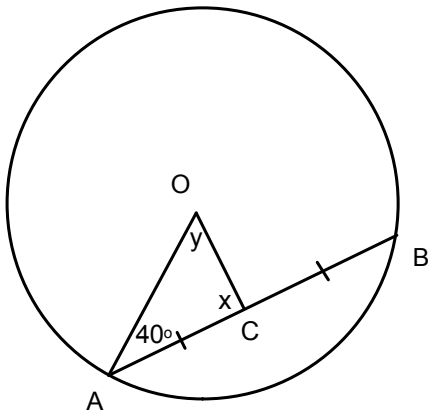
Sec 8.2 Properties of Chords in a Circle

Example 4 Determine angle x , y and z .



Your Turn Find the missing angles.

a)



b)

