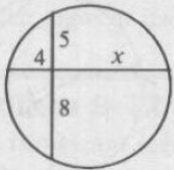


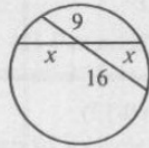
Written Exercises

Chords, secants, and tangents are shown. Find the value of x .

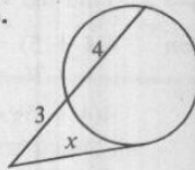
1.



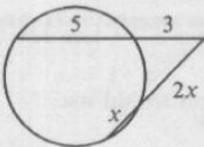
2.



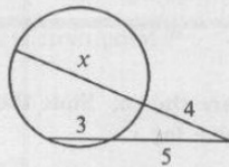
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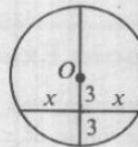
4.



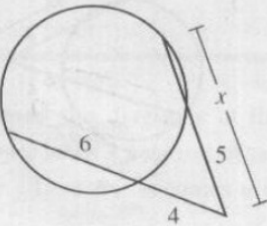
5.



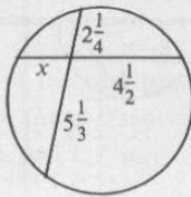
6.



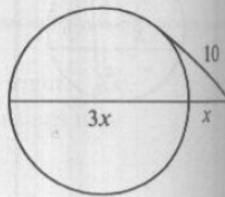
7.



8.



9.



HW 12.7(9.7)

■ Pg. 364 (WE):

#1-9, 13-20

Chords \overline{AB} and \overline{CD} intersect at P . Find the lengths indicated.

Example $AP = 5; BP = 4; CD = 12; CP = \underline{\quad?}$

Solution Let $CP = x$. Then $DP = 12 - x$.

$$x(12 - x) = 5 \cdot 4$$

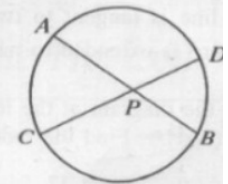
$$12x - x^2 = 20$$

$$x^2 - 12x + 20 = 0$$

$$(x - 2)(x - 10) = 0$$

$$x = 2 \text{ or } x = 10$$

$$CP = 2 \text{ or } 10$$



13. $AP = 6; BP = 8; CD = 16; DP = \underline{\quad?}$

14. $CD = 10; CP = 6; AB = 11; AP = \underline{\quad?}$

15. $AB = 12; CP = 9; DP = 4; BP = \underline{\quad?}$

16. $AP = 6; BP = 5; CP = 3 \cdot DP; DP = \underline{\quad?}$

\overline{PT} is tangent to the circle. Find the lengths indicated.

17. $PT = 6; PB = 3; AB = \underline{\quad?}$

18. $PT = 12; CD = 18; PC = \underline{\quad?}$

19. $PD = 5; CD = 7; AB = 11; PB = \underline{\quad?}$

20. $PB = AB = 5; PD = 4; PT = \underline{\quad?}$ and $PC = \underline{\quad?}$

