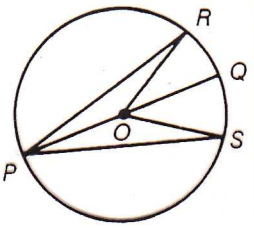
Name: _____ Date: _____ Row: _____ Period: _____

Assignment #: _____

Practice 35
Tangents, Arcs, and Chords

Lessons 9-1 through 9-4

Refer to circle O and complete the following.

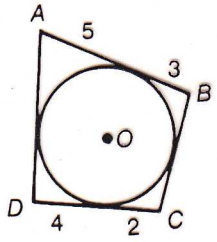


Exs. 1–7

1. If $PQ = 10$, then $OP =$ 5.
2. Three chords shown in the figure are $\overline{PR}$, $\overline{PQ}$, and $\overline{PS}$.
3. A line in the plane of $\odot O$ and perpendicular to $\overline{PQ}$ at P is a tangent of $\odot O$.
4. If points E, F, and G lie on $\odot O$, then $\triangle EFG$ is an (inscribed/circumscribed) triangle.
5. If $m\angle ROQ = 28$ and $m\angle QOS = 30$, then $m\overset{\frown}{RS} =$ 58.
6. If $\angle ROQ \cong \angle QOS$, then $\overset{\frown}{RQ}$ and $\overset{\frown}{QS}$ are congruent arcs. or $\overset{\frown}{RP}$ and $\overset{\frown}{PS}$
7. If $\angle ROP \cong \angle SOP$, then $\overline{RP}$ and $\overline{PS}$ are congruent chords.

In Exercises 8–10, find the indicated values. O is the center of each circle.

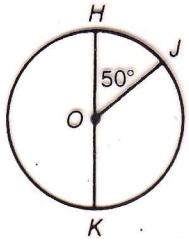
8.



$AD =$ 9

$BC =$ 5

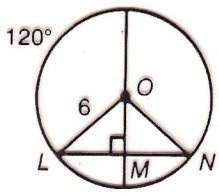
9.



$m\overset{\frown}{JK} =$ 130

$m\overset{\frown}{HKJ} =$ 310

10.



$LM =$ $3\sqrt{3}$

Name: _____ Date: _____ Row: _____ Period: _____

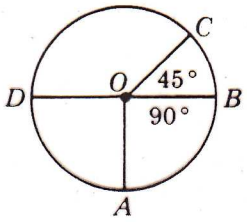
Assignment #: _____

Arcs, Central Angles, and Chords

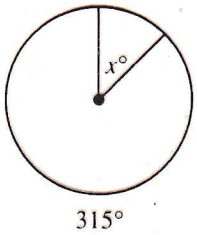
For use after Section 9–4

Exercises 1–4 refer to ⊙O. Find the measure of each arc.

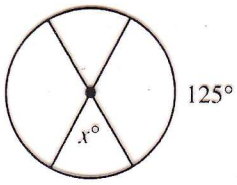
1. $\overset{\frown}{AB}$ 90
2. $\overset{\frown}{CD}$ 135
3. $\overset{\frown}{AC}$ 135
4. $\overset{\frown}{ADC}$ 225



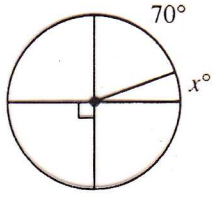
Find the value of x. Each angle shown is a central angle.

5. 

$x =$ 45

6. 

$x =$ 55

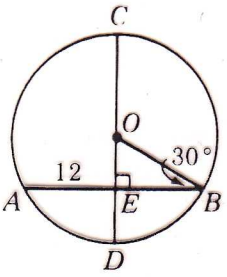
7. 

$x =$ 20

8. At ten o'clock the hands of a clock form an angle of 60 °.
9. At seven o'clock the hands of a clock form an angle of 150 °.
10. If the hands of a clock form an angle of 30°, the time is 11 or 1 o'clock.

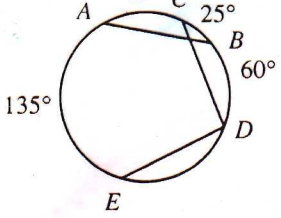
$\overline{CD}$ is a diameter of ⊙O. Complete.

11. $EB =$ 12
12. $OB =$ $8\sqrt{3}$
13. $m\overset{\frown}{DB} =$ 60
14. $m\overset{\frown}{AC} =$ 120
15. $m\overset{\frown}{AB} =$ 120
16. $DE =$ $4\sqrt{3}$

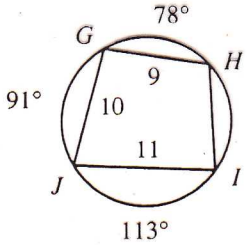


Exs. 11–16

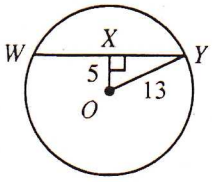
Complete. In Exercises 19 and 20, O is the center of the circle.

17. 

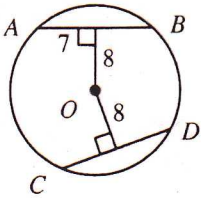
$AB = 8$, $CD = 9$, $ED =$ 9

18. 

$HI =$ 9

19. 

$WY =$ 24

20. 

$CD =$ 14