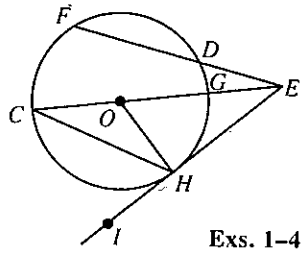
NAME _____ DATE _____ SCORE _____

Circles

For use after Chapter 9

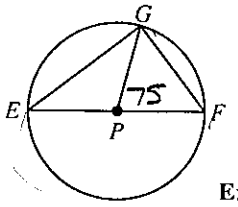
$\overleftrightarrow{EH}$ **is tangent to** $\odot O$. **Complete.**



Exs. 1–4

1. $m\angle OHI =$ 90
2. If $m\overset{\frown}{CH} = 130$, then $m\angle CHI =$ 65.
3. If $m\overset{\frown}{CH} = 120$, then $m\angle CEH =$ 30. $\frac{1}{2}(120-60)$
4. If $m\overset{\frown}{CF} = 80$ and $m\overset{\frown}{DG} = 20$, then $m\angle FEC =$ 30.

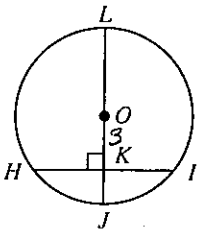
In $\odot P$, $m\angle FPG = 75$. **Complete.**



Exs. 5–8

5. $m\overset{\frown}{FG} =$ 75
6. $m\overset{\frown}{EGF} =$ 180
7. $m\overset{\frown}{GE} =$ 105
8. $m\overset{\frown}{EFG} =$ 255 $180+75$

In $\odot O$, $\overline{OJ} \perp \overline{HI}$ **and** $OK = 3$. **Complete.**

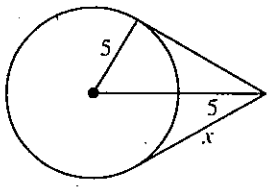


Exs. 9–11

9. If $HI = 8$, then $HK =$ 4.
10. If $KJ = 2$, then $LJ =$ 10.
11. If $m\overset{\frown}{HI} = 70$, then $m\overset{\frown}{HJ} =$ 35.

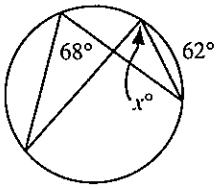
Chords, secants, and tangents are shown. Find the indicated values.

12.



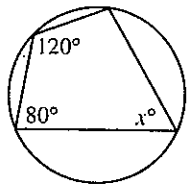
$x =$ $5\sqrt{3}$

13.



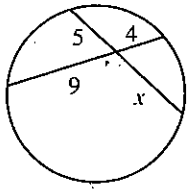
$x =$ 68

14.



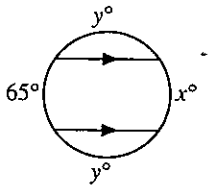
$x =$ 60

15.



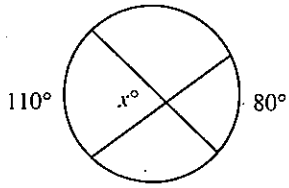
$x =$ 7.2

16.



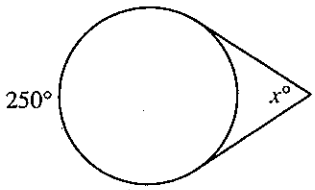
$x =$ 65; $y =$ 115

17.



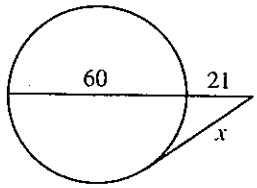
$x =$ 95

18.



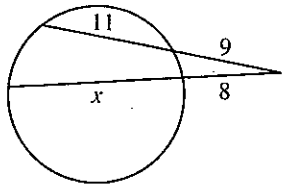
$x =$ 70

19.



$x =$ $9\sqrt{21}$

20.



$x =$ 14.5