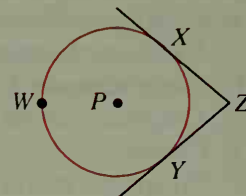


Lines  $\overleftrightarrow{ZX}$  and  $\overleftrightarrow{ZY}$  are tangent to  $\odot P$ .

6.  $\overline{PX}$ , if drawn, would be  $\underline{\hspace{1cm}}$  to  $\overleftrightarrow{XZ}$ .
7. If the radius of  $\odot P$  is 6 and  $XZ = 8$ , then  $PZ = \underline{\hspace{1cm}}$ .
8. If  $m\angle Z = 90$  and  $XZ = 13$ , then  $XY = \underline{\hspace{1cm}}$ .
9. If  $m\angle XPY = 100$ , then  $m\widehat{XY} = \underline{\hspace{1cm}}$ .
10. If  $m\widehat{XW} = 135$  and  $m\widehat{WY} = 125$ , then  $m\widehat{XWY} = \underline{\hspace{1cm}}$ .
11. If  $\widehat{XW} \cong \widehat{WY}$ , then  $\angle XPW \cong \underline{\hspace{1cm}}$ .

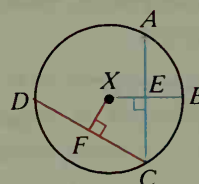


9-2

9-3

In  $\odot X$ ,  $m\widehat{AC} = 120$ .

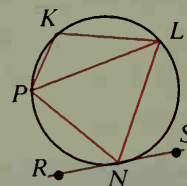
12.  $m\widehat{AB} = \underline{\hspace{1cm}}$
13. If  $\widehat{AC} \cong \widehat{CD}$ , then  $m\widehat{CD} = \underline{\hspace{1cm}}$ .
14. If  $XE = 5$  and  $AC = 24$ , then the radius =  $\underline{\hspace{1cm}}$ .
15. If  $\widehat{AC} \cong \widehat{DC}$ , state the theorem that allows you to deduce that  $XE = XF$ .



9-4

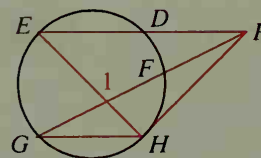
$\overleftrightarrow{RS}$  is tangent to the circle at  $N$ .

16. If  $m\angle K = 105$ , then  $m\angle PNL = \underline{\hspace{1cm}}$ .
17. If  $m\widehat{PN} = 100$ , then  $m\angle PLN = \underline{\hspace{1cm}}$  and  $m\angle PNR = \underline{\hspace{1cm}}$ .
18. If  $m\angle K = 110$ , then  $m\widehat{PNL} = \underline{\hspace{1cm}}$  and  $m\widehat{PL} = \underline{\hspace{1cm}}$ .



9-5

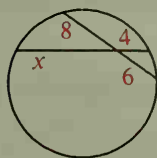
19. If  $m\widehat{EF} = 120$  and  $m\widehat{GH} = 90$ , then  $m\angle 1 = \underline{\hspace{1cm}}$ .
20. If  $m\widehat{EG} = 100$  and  $m\widehat{DF} = 40$ , then  $m\angle EPG = \underline{\hspace{1cm}}$ .
21. If  $\overline{PH}$  is a tangent,  $m\widehat{GH} = 90$  and  $m\angle GPH = 25$ , then  $m\widehat{FH} = \underline{\hspace{1cm}}$ .



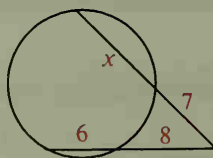
9-6

Chords, secants, and a tangent are shown. Find the value of  $x$ .

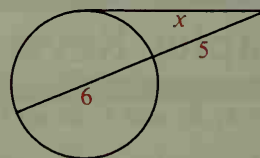
22.



23.



24.



9-7