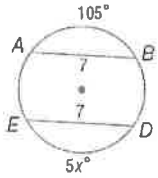
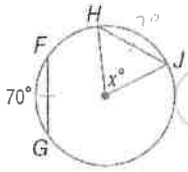
Name _____ Date _____

Find the value of x.

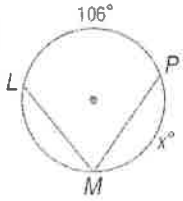
1) 

$5x = 105$

21

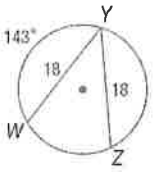
2) 

70

3) 

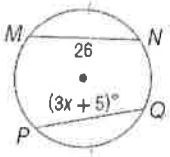
$360 - 106 = 254$

$254 / 2 = 127$

4) 

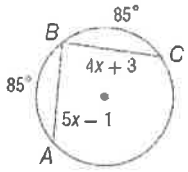
$2x - 1 = 143$

$x = 72$

5) 

$26 = 3x + 5$

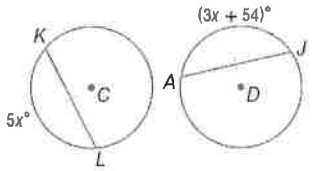
$7 = x$

6) 

$4x + 3 = 5x - 1$

$4 = x$

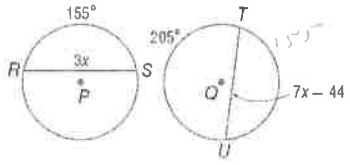
7) *Circle C ≅ Circle D*



$5x = 3x + 54$

$x = 27$

8) *Circle P ≅ Circle Q*

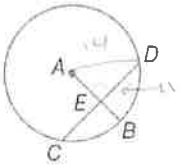


$3x = 7x - 44$

$x = 11$

9) In Circle A, the radius is 14 and CD=22.
Find CE and EB.
Round to the nearest tenth if nccessary.

$CE = 11$



$x^2 + 11^2 = 14^2$

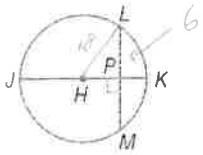
$x = 8.7 = AE$

$14 - 8.7 = EB$

5.3

10) In Circle H, the radius is 18, LM=12, and arc LM = 84^0.
Find the measurement of arc LK and segment HP.
Round to the nearest tenth if nccessary.

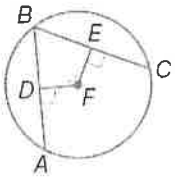
$m\widehat{LK} = 42$



$(HP)^2 + 6^2 = 18^2$

$HP = 17$

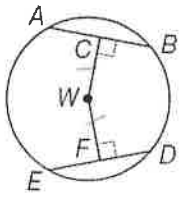
11) In e F, $\overline{AB} \cong \overline{BC}$, $DF = 3x-7$, and $FE = x+9$. Find x.



$3x - 7 = x + 9$

$x = 8$

12) If CW=WF, and ED=30, what is DF?



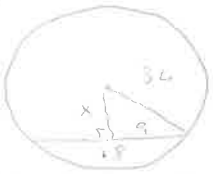
15

13. In a circle, a chord of 20 is located 9 units from the center. Find the radius.

$9^2 + 10^2 = r^2$

$r = 13.5$

14. In a circle with a radius of 32, there is a chord measuring 18. Find the distance from the center of the circle to the chord.



$x^2 + 9^2 = 32^2$

30.7

15. A chord is located 14 units from the center of a circle whose radius is 22. Find the length of the chord.

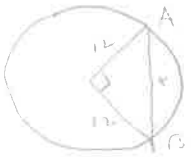
$x^2 + 14^2 = 22^2$

$x = 17 \quad x2 = 34$

16. A circle with a diameter of 30 has a chord located 8 units from the center. How long is the chord?

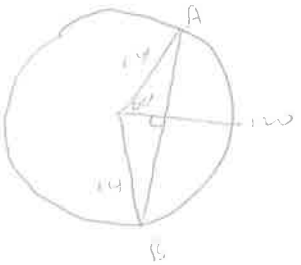
25.4

17. In a circle with a radius of 12, arc AB measures 90 degrees. How long is chord AB?



$AB = 17$

18. In a circle with a radius of 14, arc AB measures 120 degrees. How long is chord AB?



$\sin 60 = \frac{x}{14}$

$x = 12.1$

$AB = 24.2$