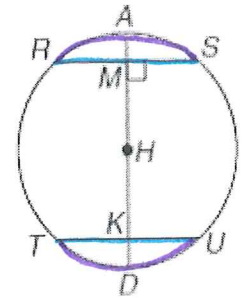


Name: _____

Hour: _____

10.3 Arcs and Chords Review

In Circle H, $m\widehat{RS} = 82$, $m\widehat{TU} = 82$, $RS = 46$, and $\overline{TU} \cong \overline{RS}$. Find each measure.



1. TU

46

2. TK

$$\frac{46}{2} = 23$$

3. MS

23

4. $m\angle HKU$

90°

5. $m\widehat{AS}$

$$\frac{82}{2} = 41$$

6. $m\widehat{AR}$

41

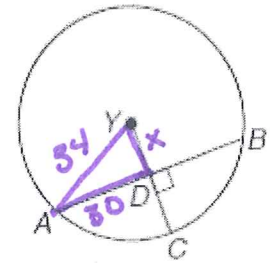
7. $m\widehat{TD}$

41

8. $m\widehat{DU}$

41

The radius of Circle Y is 34, $AB = 60$, and $m\widehat{AC} = 71$. Find each measure.



9. $m\widehat{BC}$

71

10. $m\widehat{AB}$

$$71 + 71 = 142$$

11. AD

$$\frac{60}{2} = 30$$

12. BD

30

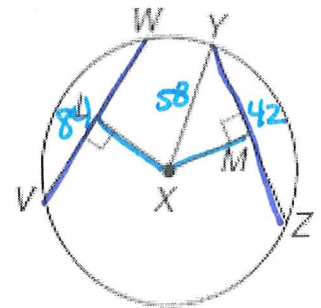
13. YD

$$\begin{aligned} x^2 + 30^2 &= 34^2 \\ x^2 &= 256 \\ x &= 16 \end{aligned}$$

14. DC

$$34 - 16 = 18$$

In Circle X, $LX = MX$, $XY = 58$, and $VW = 84$. Find each measure.



15. YZ

84

16. YM

$$\frac{84}{2} = 42$$

17. MX

$$\begin{aligned} 42^2 + x^2 &= 58^2 \\ x^2 &= 1600 \\ x &= 40 \end{aligned}$$

18. MZ

42

19. LV

42

20. LX

40

In Circle E, $m\widehat{HQ} = 48$, $HI = JK$, and $JR = 7.5$. Find each measure.

21. $m\widehat{HI}$

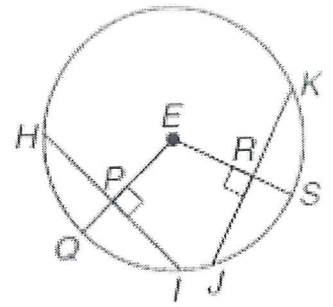
$$48 + 48 = 96$$

22. $m\widehat{QI}$

$$48$$

23. $m\widehat{JK}$

$$96$$



24. HI

$$7.5 + 7.5 = 15$$

25. PI

$$7.5$$

26. JK

$$15$$

The radius of Circle N is 18, $NK = 9$, and $m\widehat{DE} = 120$. Find each measure.

27. $m\widehat{GE}$

$$\frac{120}{2} = 60$$

28. $m\angle HNE$

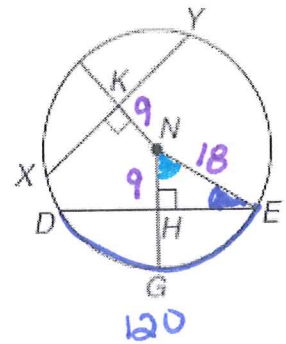
$$60^\circ$$

29. $m\angle HEN$

$$\sin^{-1}\left(\frac{9}{18}\right) = 30^\circ$$

30. HN

$$9$$



The radius of Circle O is 32, $\widehat{PQ} \cong \widehat{RS}$, and $PQ = 56$. Find each measure.

31. PB

$$\frac{56}{2} = 28$$

32. BQ

$$28$$

33. OB

$$28^2 + x^2 = 32^2$$

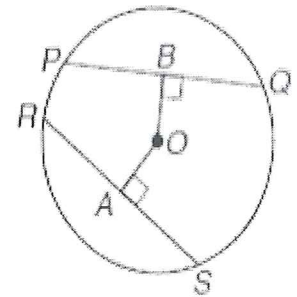
$$x = \sqrt{240}$$

$$x = \sqrt{16 \cdot 15}$$

$$x = 4\sqrt{15}$$

34. RS

$$56$$



35. The base figure in a mandala design is a nine-pointed star. Find the measure of each arc of the circle circumscribed about the star.

$$\frac{360}{9} = 40^\circ$$

