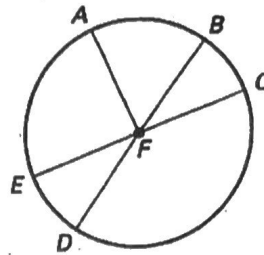


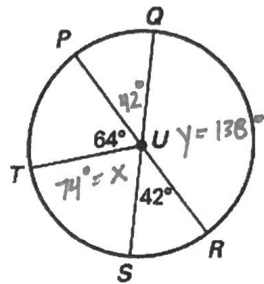
In $\odot F$, determine whether the given arc is a *minor arc*, *major arc*, or *semicircle*.

1. \widehat{AB} minor
2. \widehat{AE} Minor
3. \widehat{EAC} semicircle
4. \widehat{ACD} Major
5. \widehat{CAD} Major
6. \widehat{DEB} Semicircle
7. \widehat{BAE} Minor
8. \widehat{DEC} Major



In the figure, \overline{PR} and \overline{QS} are diameters of $\odot U$. Find the measure of the indicated arc.

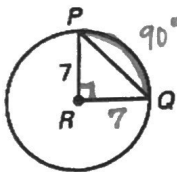
9. $m\widehat{PQ}$ 42°
10. $m\widehat{ST}$ 74°
11. $m\widehat{TPS}$ 286°
12. $m\widehat{RT}$ 116°
13. $m\widehat{RQS}$ 318°
14. $m\widehat{QR}$ 138°
15. $m\widehat{PQS}$ 222°
16. $m\widehat{TQR}$ 244°
17. $m\widehat{PS}$ 138°
18. $m\widehat{PTR}$ 180°



$$\begin{aligned}
 X &= 180 - 64 - 42 \\
 X &= 74 \\
 Y &= 180 - 42 \\
 Y &= 138
 \end{aligned}$$

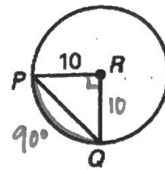
\widehat{PQ} has a measure of 90° in $\odot R$. Find the length of \overline{PQ} .

19.



$$\begin{aligned}
 7^2 + 7^2 &= PQ^2 \\
 98 &= PQ^2 \\
 \sqrt{98} &= PQ \\
 9.9 &\approx PQ
 \end{aligned}$$

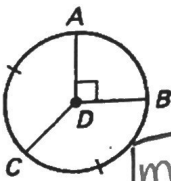
20.



$$\begin{aligned}
 10^2 + 10^2 &= PQ^2 \\
 200 &= PQ^2 \\
 \sqrt{200} &= PQ \\
 14.14 &\approx PQ
 \end{aligned}$$

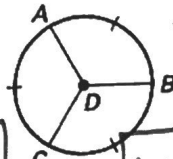
Find the indicated arc measure.

21. $m\widehat{AC}$



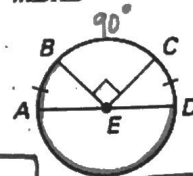
$$m\widehat{AC} = 135^\circ$$

22. $m\widehat{ACB}$



$$m\widehat{ACB} = 240^\circ$$

23. $m\widehat{DAB}$



$$m\widehat{DAB} = 225^\circ$$

Two diameters of $\odot T$ are \overline{PQ} and \overline{RS} . Find the given arc measure if $m\widehat{PR} = 35^\circ$.

24. $m\widehat{PS}$

$$145^\circ$$

25. $m\widehat{PSR}$

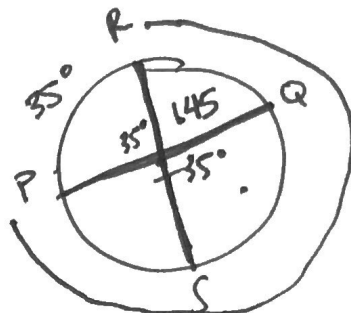
$$325^\circ$$

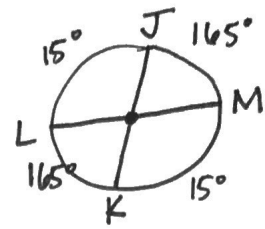
26. $m\widehat{PRQ}$

$$180^\circ$$

27. $m\widehat{PRS}$

$$215^\circ$$





Two diameters of $\odot N$ are \overline{JK} and \overline{LM} . Find the given arc measure if $m\widehat{JM} = 165^\circ$.

28. $m\widehat{JL}$
15

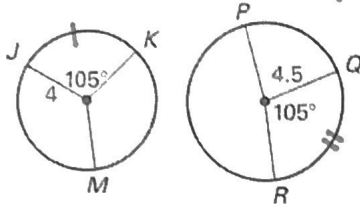
29. $m\widehat{JK}$
180

30. $m\widehat{JLM}$
195

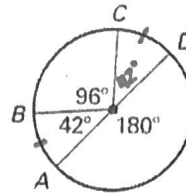
31. $m\widehat{KLM}$
345

Tell whether the given arcs are congruent.

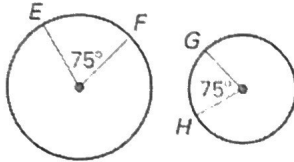
32. \widehat{JK} and \widehat{QR} Not congruent!



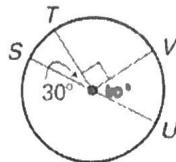
33. \widehat{AB} and \widehat{CD}



34. \widehat{EF} and \widehat{GH} Not enough info.!



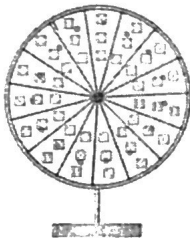
35. \widehat{STV} and \widehat{UVT}



Not congruent!

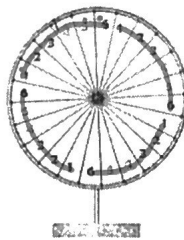
Game Shows Each game show wheel shown is divided into congruent sections. Find the measure of each arc.

36.



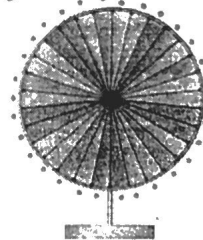
$$\frac{360}{15} = 24^\circ$$

37.



$$\frac{360}{24} = 15^\circ$$

38.



$$\frac{360}{30} = 12^\circ$$

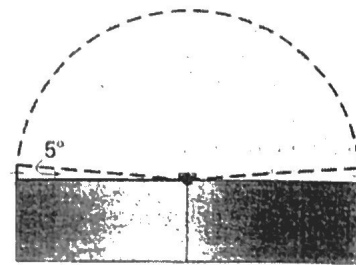
In Exercises 39 and 40, use the following information.

Sprinkler A water sprinkler covers the shaded area shown in the figure. It moves through the covered area at a rate of about 5° per second.

39. What is the measure of the arc covered by the sprinkler? 170

40. If the sprinkler starts at the far left position, how long will it take for the sprinkler to reach the far right position?

$$\frac{170^\circ}{5^\circ} = 34 \text{ seconds}$$



← assuming this is a straight angle (180°)