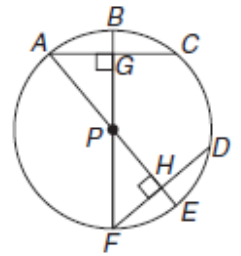


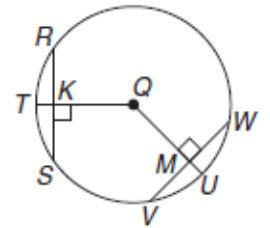
1. If  $\odot P$  has a diameter 40 centimeters long, and  $AC = FD = 24$  centimeters, find each measure.

- |         |         |
|---------|---------|
| a. $PA$ | b. $AG$ |
| c. $PE$ | d. $PH$ |
| e. $HE$ | f. $FG$ |

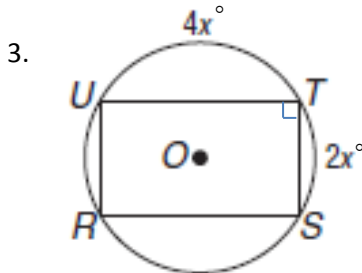


2. In  $\odot Q$ ,  $RS = VW$  and  $m\widehat{RS} = 70$ . Find each measure.

- |                    |                    |
|--------------------|--------------------|
| a. $m\widehat{RT}$ | b. $m\widehat{ST}$ |
| c. $m\widehat{VW}$ | d. $m\widehat{VU}$ |



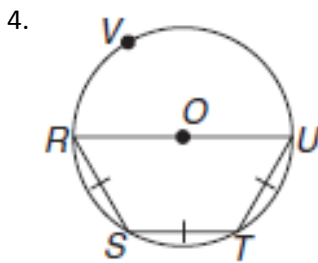
Determine the measure of each arc of the circle circumscribed about the polygon.



$m\widehat{UT} = \underline{\hspace{2cm}}$

$m\widehat{TS} = \underline{\hspace{2cm}}$

$m\widehat{URS} = \underline{\hspace{2cm}}$



$m\widehat{RS} = \underline{\hspace{2cm}}$

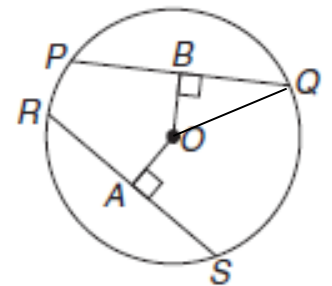
$m\widehat{ST} = \underline{\hspace{2cm}}$

$m\widehat{RV} = \underline{\hspace{2cm}}$

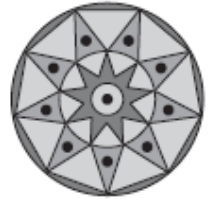
The radius of  $\odot O = 32$ ,  $\widehat{PQ} \cong \widehat{RS}$ , and  $PQ = 56$ . Find each measure.

- |         |         |
|---------|---------|
| 5. $PB$ | 6. $BQ$ |
|---------|---------|

- |         |         |
|---------|---------|
| 7. $OB$ | 8. $RS$ |
|---------|---------|



9. **MANDALAS** 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.



**10.1-10.2 Review**

10. In  $\odot P$ ,  $m\angle GPH = 38$ . Find each measure.

a.  $m\widehat{EF}$

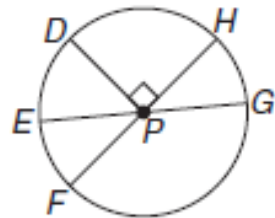
b.  $m\widehat{DE}$

c.  $m\widehat{FG}$

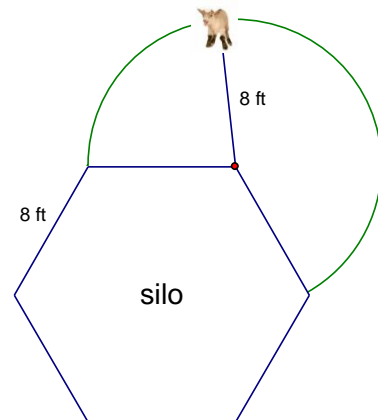
d.  $m\widehat{DHG}$

e.  $m\widehat{DFG}$

f.  $m\widehat{DGE}$

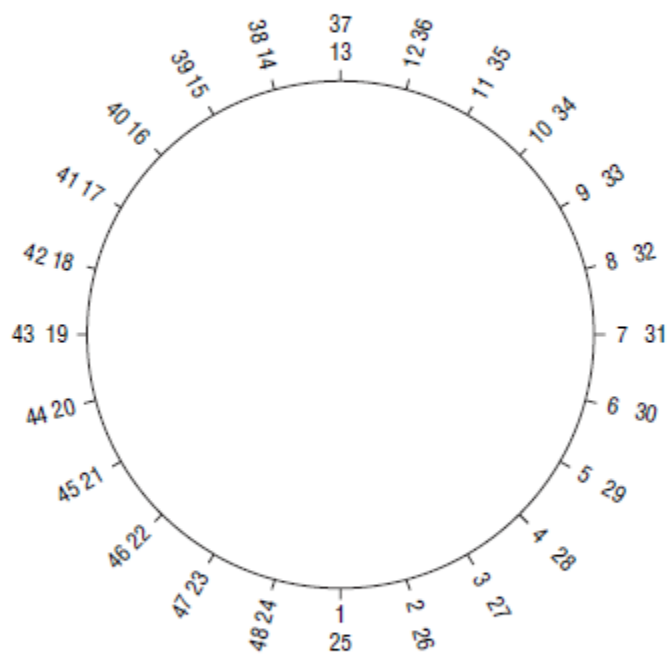


11. A farmer has a grain bin in the shape of a regular hexagon with 8 ft. sides. He attaches a goat to an 8 ft. rope for grazing and ties it to one of the corners of the silo. What is the distance the goat can walk along the outside of the circle?



## ***Patterns from Chords***

Some beautiful and interesting patterns result if you draw chords to connect evenly spaced points on a circle. On the circle shown below, 24 points have been marked to divide the circle into 24 equal parts. Numbers from 1 to 48 have been placed beside the points. Study the diagram to see exactly how this was done.



1. Use your ruler and pencil to draw chords to connect numbered points as follows: 1 to 2, 2 to 4, 3 to 6, 4 to 8, and so on. Keep doubling until you have gone all the way around the circle. What kind of pattern do you get?
2. Copy the original circle, points, and numbers. Try other patterns for connecting points. For example, you might try tripling the first number to get the number for the second endpoint of each chord. Keep special patterns for a possible class display.

