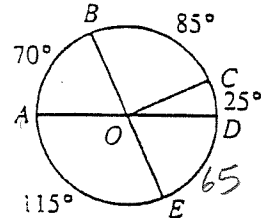


KEY

Find each measure.

1.  $m\widehat{AC}$  155
3.  $m\widehat{AE}$  115
5.  $m\widehat{ADC}$  205

2.  $m\widehat{BC}$  85
4.  $m\widehat{DE}$  65
6.  $m\angle BOC$  85

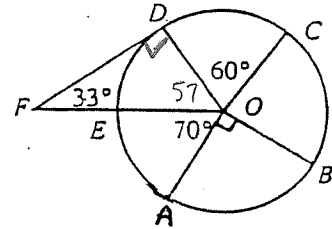


$\overline{DF}$  is tangent to  $\odot O$  from the external point  $F$  and  $m\angle OFD = 33$ .

Find each measure.

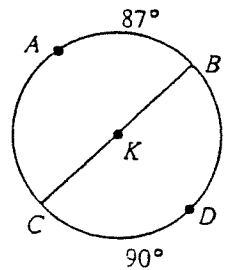
7.  $m\widehat{AB}$  90
9.  $m\angle DOF$  57
11.  $m\widehat{AD}$  127
13.  $m\widehat{BC}$  83

8.  $m\widehat{AE}$  70
10.  $m\widehat{DE}$  57
12.  $m\widehat{CD}$  60
14.  $m\widehat{AC}$  173



$\overline{CB}$  is a diameter of  $\odot K$ .

15. Name an arc that has no points in common with  $\widehat{AB}$ .  $\widehat{CD}$
16. Name two arcs that have measures of  $180^\circ$ .  $\widehat{AC}$   $\widehat{AB}$
17.  $m\widehat{AC} =$  93
18.  $m\widehat{BD} =$  90
19.  $m\widehat{ACD} =$  183
20.  $m\widehat{AEC} =$  267
21.  $m\widehat{AC} + m\widehat{ABC} =$  360



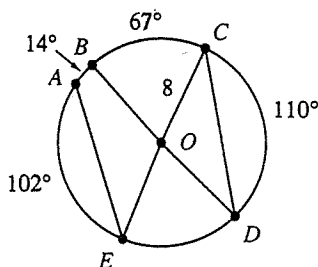
KEY

Geometry (H)

Section 9.3 - Problems

Short Answer

1. What is the radius of  $\odot O$ ?
2. Name a minor arc.
3. Name a major arc.
5. Name two congruent arcs.
6. Name the central angle of  $\widehat{CD}$ .
7. Name two arcs with endpoint E.



Sample Exercises

8. Find  $m\widehat{BC}$ .
9. Find  $m\widehat{CD}$ .
10. Find  $m\widehat{AC}$ .
11. Find  $m\widehat{ACD}$ .
12. Find  $m\widehat{AEC}$ .
13. Find  $m\widehat{ADB}$ .
14. Explain why  $\overline{BD}$  is not a diameter.

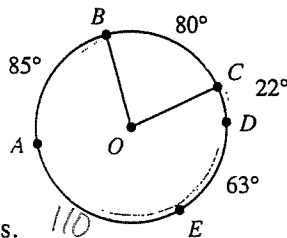
- ① 8
- ②  $\widehat{AB}, \widehat{BC}, \widehat{CD}, \widehat{DE}, \widehat{EA}$
- ③  $\widehat{AFB}, \widehat{ACE}, \widehat{EBD}, \widehat{DAC}, \widehat{BEC}$ , more possible answers.
- ⑤  $\widehat{BC} \cong \widehat{ED}$
- ⑥  $\angle COD$
- ⑦  $\widehat{ABE}, \widehat{AE}, \widehat{ECD}, \widehat{DE}$
- ⑧  $m\widehat{BC} = 67$
- ⑨  $110^\circ$
- ⑩  $81^\circ$
- ⑪  $191^\circ$
- ⑫  $279^\circ$
- ⑬  $346^\circ$
- ⑭ b/c  $m\widehat{BC} = 177^\circ$ , not  $180^\circ$ .

Exercises

A

Find each measure.

1.  $m\widehat{BC}$
2.  $m\widehat{AC}$
3.  $m\widehat{BAD}$
4.  $m\widehat{ADC}$
5.  $m\angle BOC$
6.  $m\widehat{AE}$



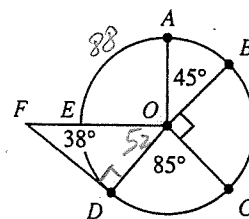
7. Name a pair of congruent arcs.

- ① 80
- ② 165
- ③ 258
- ④ 195
- ⑤ 80
- ⑥ 110
- ⑦  $\widehat{AB} \cong \widehat{CE}$

$\overline{DF}$  is a tangent to  $\odot O$  from the external point F and  $m\angle OFD = 38^\circ$ . Find each measure.

8.  $m\widehat{AB}$
9.  $m\widehat{AD}$
10.  $m\widehat{AC}$
11.  $m\widehat{BC}$
12.  $m\widehat{ADC}$
13.  $m\widehat{ACD}$
14.  $m\angle DOF$
15.  $m\widehat{ED}$
16.  $m\widehat{AE}$

52      52      88

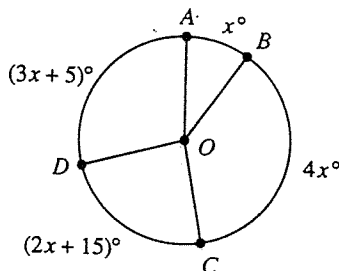


- ⑧ 45
- ⑨ 140
- ⑩ 135
- ⑪ 90
- ⑫ 225
- ⑬ 220

B

Find each measure.

17.  $m\angle AOB$
18.  $m\angle BOC$
19.  $m\angle COD$
20.  $m\angle AOD$



$$\begin{array}{r} 3x+5 \\ 2x+15 \\ \hline 5x \\ 10x+15=360 \\ 10x=345 \\ x=34.5 \end{array}$$

- ⑰ 34.5
- ⑱ 84
- ⑲ 84
- ⑳ 108.5