

Unit 3 Practice

In the circle below, \overline{AC} is a diameter. $m\angle DAC = 50^\circ$, $m\angle BCD = 105^\circ$, $m\widehat{AD} = 80^\circ$, and $m\widehat{BC} = 50^\circ$. Find:

1) $m\angle ACD$

5) $m\angle BCA$

2) $m\angle BAC$

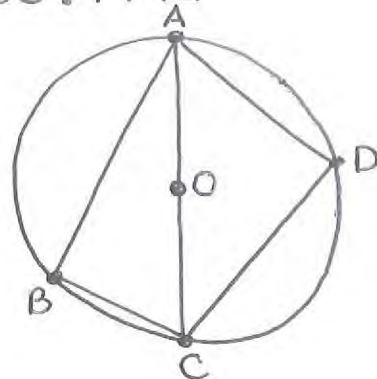
6) $m\widehat{CD}$

3) $m\widehat{ABC}$

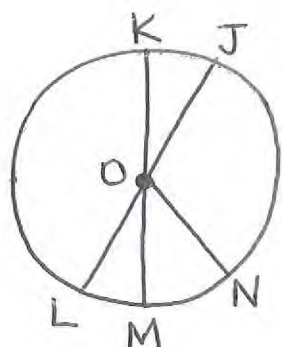
7) $m\angle ABC$

4) $m\angle CDA$

8) $m\widehat{BCD}$



In the circle below, $m\angle KOJ = 26^\circ$, $m\angle MON = 37^\circ$. Find:



9) $m\widehat{NM}$

13) $m\widehat{LM}$

10) $m\widehat{LKJ}$

14) $m\widehat{MJK}$

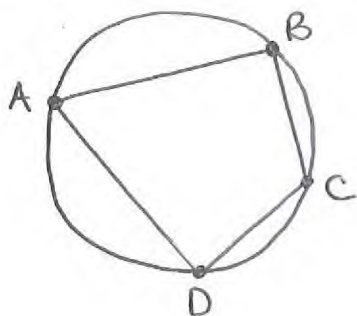
11) $m\widehat{KJ}$

15) $m\widehat{JN}$

12) $m\widehat{LKN}$

16) $m\widehat{MNJ}$

Use the figure below to answer the following questions.



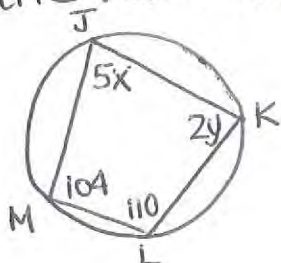
17) If $m\angle DAB = 75^\circ$, $m\angle BCD =$ _____

18) If $m\angle BCD = 100^\circ$, $m\angle DAB =$ _____

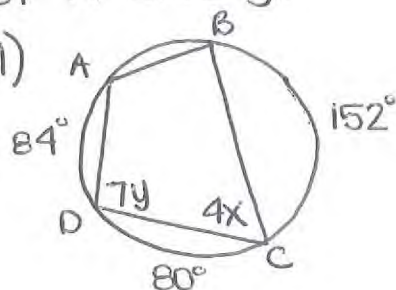
19) If $m\angle ABC = 112^\circ$, $m\angle ADC =$ _____

For the following, find the value of x and y .

20)

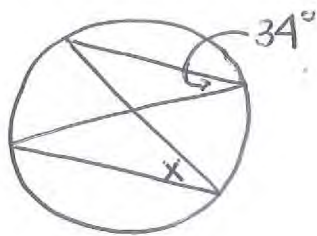


21)

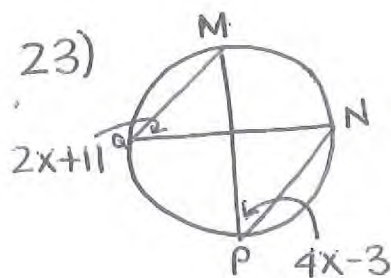


Find the indicated measure.

22)



23)



$x = \underline{\hspace{2cm}}$
 $m\widehat{NM} = \underline{\hspace{2cm}}$

Find the following. use the π button. Round to the nearest hundredth.

24) $r = 16$, Area = $\underline{\hspace{2cm}}$

25) $d = 5$, Circumference = $\underline{\hspace{2cm}}$

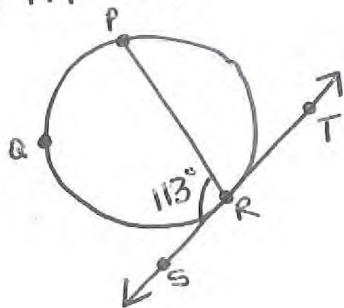
26) Circumference = 50.89, $d = \underline{\hspace{2cm}}$

27) Area = 5.31, $r = \underline{\hspace{2cm}}$

28) Area = 966.52, Circumference = $\underline{\hspace{2cm}}$

Find the indicated measure.

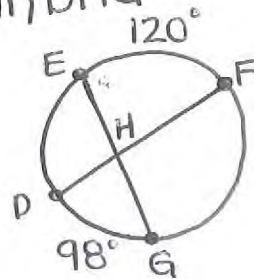
29) $m\widehat{PQR}$



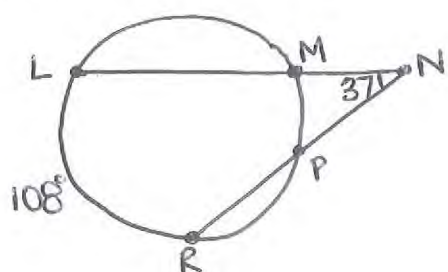
30) $m\angle PQT$



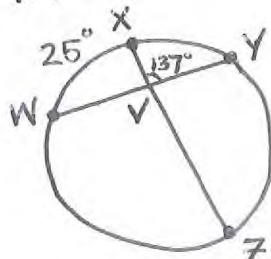
31) $m\angle DHG$



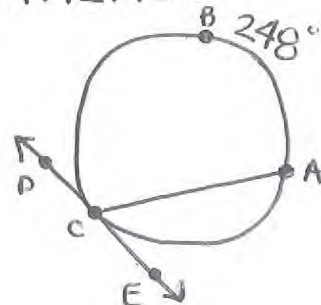
32) $m\widehat{MP}$



33) $m\widehat{YZ}$



34) $m\angle ACE$



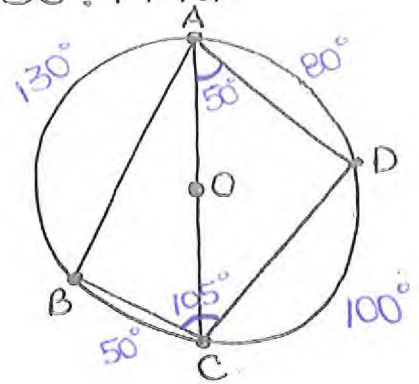
Unit 3 Practice

Key

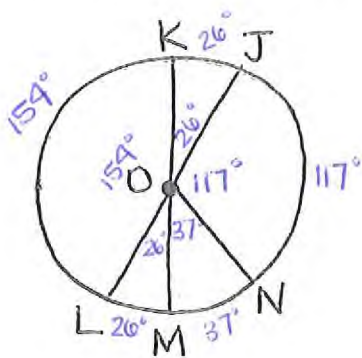
#18

In the circle below, \overline{AC} is a diameter. $m\angle DAC = 50^\circ$, $m\angle BCD = 105^\circ$, $m\widehat{AD} = 80^\circ$, and $m\widehat{BC} = 50^\circ$. Find:

- 1) $m\angle ACD$ 40°
- 2) $m\angle BAC$ 25°
- 3) $m\widehat{ABC}$ 180°
- 4) $m\angle CDA$ 90°
- 5) $m\angle BCA$ 65°
- 6) $m\widehat{CD}$ 100°
- 7) $m\angle ABC$ 90°
- 8) $m\widehat{BCD}$ 150°

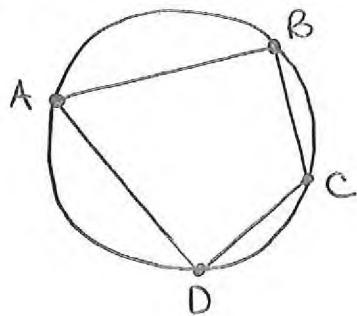


In the circle below, $m\angle KOJ = 26^\circ$, $m\angle MON = 37^\circ$. Find:



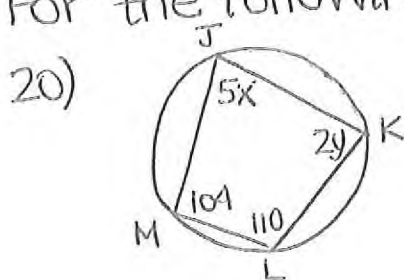
- 9) $m\widehat{NM}$ 37°
- 10) $m\widehat{LKJ}$ 180°
- 11) $m\widehat{KJ}$ 26°
- 12) $m\widehat{LKN}$ 297°
- 13) $m\widehat{LM}$ 26°
- 14) $m\widehat{MJK}$ 180°
- 15) $m\widehat{JN}$ 117°
- 16) $m\widehat{MNJ}$ 154°

Use the figure below to answer the following questions.

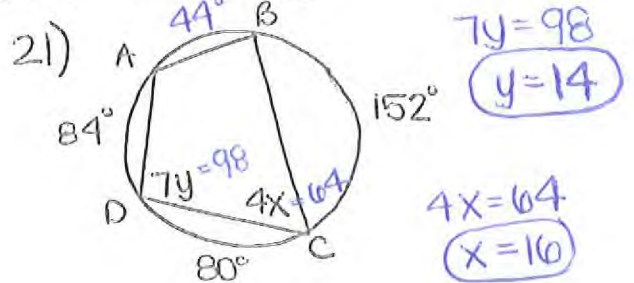


- 17) If $m\angle DAB = 75^\circ$, $m\angle BCD = \underline{105^\circ}$
- 18) If $m\angle BCD = 100^\circ$, $m\angle DAB = \underline{80^\circ}$
- 19) If $m\angle ABC = 112^\circ$, $m\angle ADC = \underline{68^\circ}$

For the following, find the value of x and y .



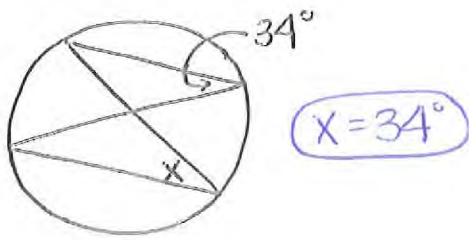
$$\begin{aligned} \angle J + \angle L &= 180 \\ 5x + 110 &= 180 \\ 5x &= 70 \\ \mathbf{x} &= \mathbf{14} \\ \angle M + \angle K &= 180 \\ 104 + 2y &= 180 \\ 2y &= 76 \\ \mathbf{y} &= \mathbf{38} \end{aligned}$$



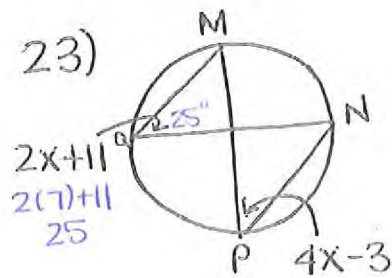
$$\begin{aligned} 7y &= 98 \\ \mathbf{y} &= \mathbf{14} \\ 4x &= 64 \\ \mathbf{x} &= \mathbf{16} \end{aligned}$$

Find the indicated measure.

22)



23)



$$X = 7$$

$$m\widehat{NM} = 50^\circ$$

$$2x+11 = 4x-3$$

$$14 = 2x$$

$$7 = x$$

Find the following. use the π button. Round to the nearest hundredth.

24) $r = 10$, Area = 804.25

(24) $A = \pi \cdot 10^2 = 804.25$

25) $d = 5$, Circumference = 15.71

(25) $C = \pi d = \pi \cdot 5 = 15.71$

26) Circumference = 50.89, $d =$ 16.20

(26) $\frac{50.89}{\pi} = \frac{\pi d}{\pi} \rightarrow 16.20 = d$

27) Area = 5.31, $r =$ 1.3

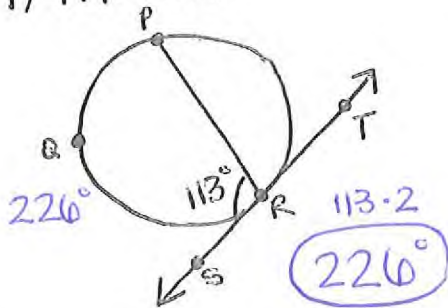
(27) $\frac{5.31}{\pi} = \frac{\pi r^2}{\pi}$
 $1.69 = r^2$
 $1.3 = r$

28) Area = 966.52, Circumference = 110.21

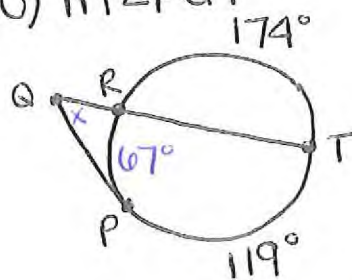
(28) $\frac{966.52}{\pi} = \frac{\pi r^2}{\pi}$
 $C = 2\pi \cdot 17.54 = 110.21$
 $307.65 = r^2$
 $17.54 = r$

Find the indicated measure.

29) $m\widehat{PQR}$



30) $m\angle PQT$

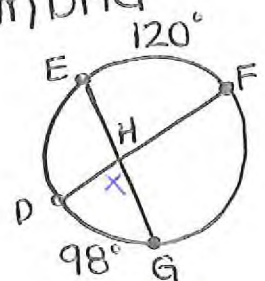


$$\angle = \frac{1}{2}(119 - 67)$$

$$= \frac{1}{2}(52)$$

$$= 26^\circ$$

31) $m\angle DHG$

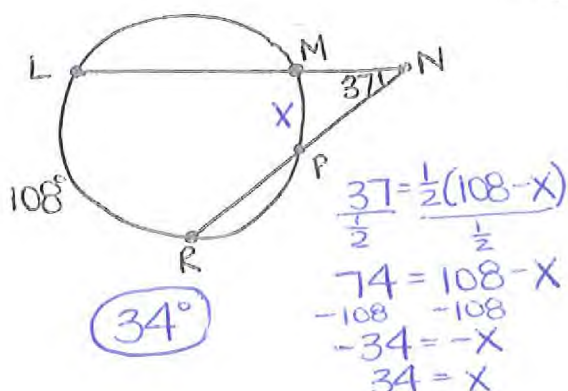


$$\angle = \frac{1}{2}(120 + 98)$$

$$= \frac{1}{2}(218)$$

$$= 109^\circ$$

32) $m\widehat{MP}$



$$\frac{37}{2} = \frac{1}{2}(108 - X)$$

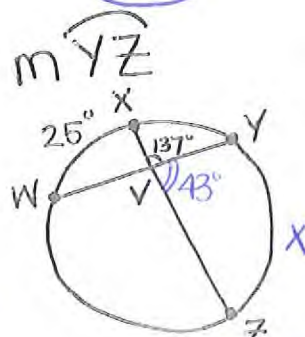
$$74 = 108 - X$$

$$-108 \quad -108$$

$$-34 = -X$$

$$34 = X$$

33) $m\widehat{YZ}$

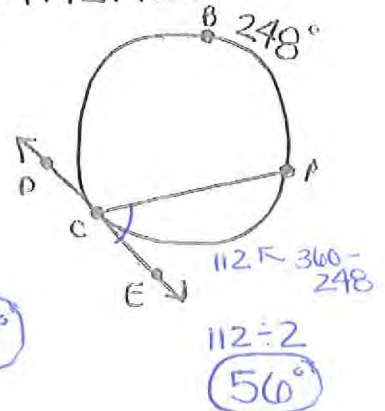


$$43 = \frac{1}{2}(25 + X)$$

$$86 = 25 + X$$

$$61 = X$$

34) $m\angle ACE$



$$112 \div 2 = 56^\circ$$