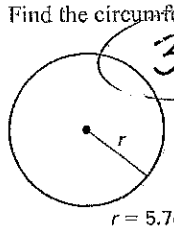
Name Key Date

LESSON 11.4 **Practice C**
For use with pages 746–752

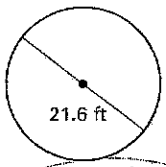
Use the diagram to find the indicated measure.

1. Find the circumference.



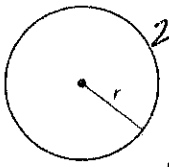
35.8cm

2. Find the circumference.



67.9ft

3. Find the radius.



$\frac{94}{2\pi} = \frac{2\pi r}{2\pi}$

$r = 14.96$

$r = 15.0$ in

Find the indicated measure.

4. The exact radius of a circle with circumference 74 centimeters

$74 = 2\pi r$

$r = \frac{37}{\pi}$ cm

5. The exact diameter of a circle with circumference 58 feet

$58 = \pi d$

$d = \frac{58}{\pi}$ ft

6. The exact circumference of a circle with diameter 26.3 inches

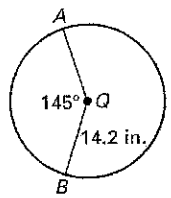
26.3π in.

7. The exact circumference of a circle with radius 31.9 meters

$2(31.9)\pi = 63.8\pi$ m

Find the length of $\overset{\frown}{AB}$.

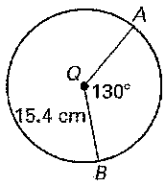
8.



$\frac{145}{360} \cdot 2\pi(14.2)$

$= 35.9$ in

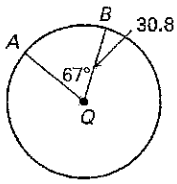
9.



$\frac{130}{360} \cdot 2\pi(15.4)$

$= 34.9$ cm

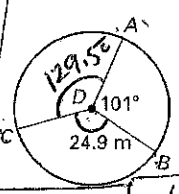
10.



$\frac{67}{360} 2\pi(30.8)$

$= 36.0$ m

In $\odot D$ shown below, $\angle ADC \cong \angle BDC$. Find the indicated measure.



$\angle ADC = \angle BDC = 129.5°$

$C = 2\pi(24.9) = 156.45$ m

11. $m\overset{\frown}{ACB}$ $259°$

12. $m\overset{\frown}{CB}$ $129.5°$

13. Length of $\overset{\frown}{ACB}$ $\left(\frac{259}{360}\right)(156.45) = 112.6$ m

14. Length of $\overset{\frown}{CB}$ $\frac{129.5}{360}(156.45)$

$= 56.3$ m

15. $m\overset{\frown}{ABC}$ $129.5 + 101 = 230.5°$

16. Length of $\overset{\frown}{BAC}$ $\frac{230.5}{360}(156.45)$

$= 100.2$

17. $\frac{12\text{cm}}{85^\circ} = \frac{x}{360^\circ}$ $x = 50.8\text{cm}$

18. $\frac{14.2\text{in}}{132^\circ} = \frac{x}{360^\circ}$ $x = 38.7\text{in}$

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LESSON 11.4

LESSON 11.4 **Practice C** *continued*

For use with pages 746–752

$38.7 = 2\pi r$

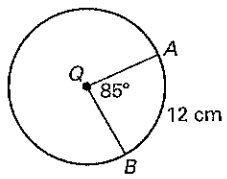
$r = 6.2\text{in}$

19. $C = 2\pi(17.6)$
$= 35.2\pi$
$= 110.58\text{ft}$

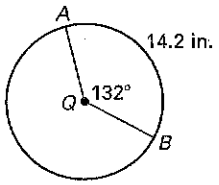
$\frac{118^\circ}{360^\circ}(110.58) = 36.26$

Find the indicated measure.

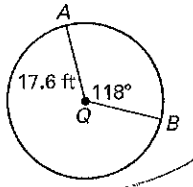
17. Circumference of $\odot Q$



18. Radius of $\odot Q$

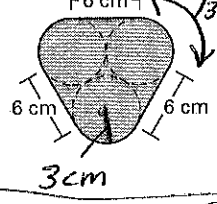


19. Length of $\overset{\frown}{AB}$



Find the perimeter of the region. $C = 2\pi(7) = 14\pi = 43.98$

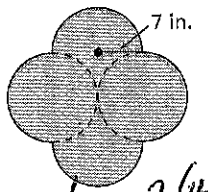
20.



$C = 2\pi 3$
$= 6\pi\text{ cm} = 18.8$

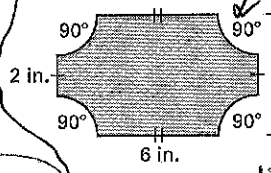
Perimeter =
$18 + 18.8 =$
36.8cm

21.



Perimeter $= 2(43.98) = 88.0$ in

22.



1/4 ⊙
$r = 2$

$C = 2\pi(2)$
$= 12.57$ in

Perimeter =
$12.57 + 16 = 28.6$ in

23. In the table below, $\overset{\frown}{AB}$ refers to the arc of a circle. Complete the table.

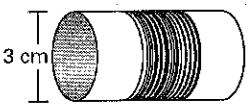
Radius	6.7	11.4	17.1	13.6	25.8	19.3
***m*AB**	103°	79°	25°	261°	143°	332°
Length of $\overset{\frown}{AB}$	12.0	15.72	7.46	61.95	64.39	111.8

25. Inside: $10\pi + 40 =$
71.4m

24. Thread A spool of thread contains 150 revolutions of thread. The diameter of the spool is 3 centimeters. Find the length of the thread to the nearest centimeter.

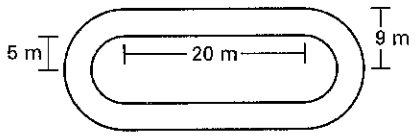
$C = 2\pi\frac{3}{2} = 3\pi$

$150(3\pi) = 450\pi$
or 1414cm



25. Go-Cart Track Find the distance around the track on the inside lane and on the outside lane.

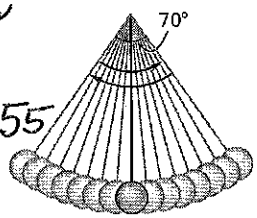
Outside: $18\pi + 40 =$
96.5m



26. Pendulum Find the distance traveled in one back and forth swing by the weight of a 16 inch pendulum that swings through a 70° angle.

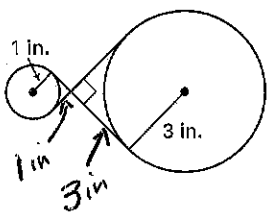
$2\pi 16 = 32\pi$

$32\pi\left(\frac{70}{360}\right) = 19.55$



$(19.55)2 = 39.1$ in.

27. Turntable Two belt-driven gears for a turntable are shown. What is the total length of the belt?



$2\pi(3)\left(\frac{3}{4}\right) + 2\pi(1)\left(\frac{3}{4}\right)$

$+ 3 + 3 + 1 + 1 =$

$\frac{9}{2}\pi + \frac{3}{2}\pi + 8 = 26.8$ in.