

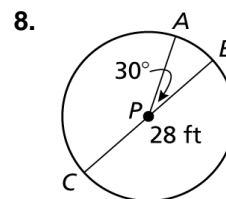
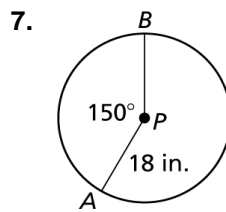
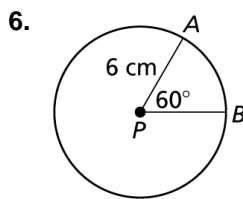
# 11.1

## Practice A

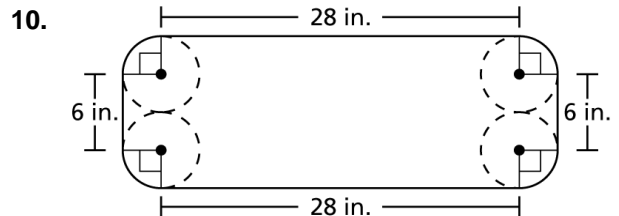
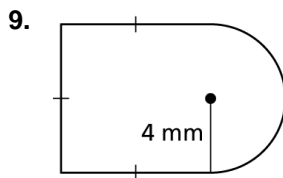
In Exercises 1–4, find the indicated measure.

- radius of a circle with a circumference of  $42\pi$  meters
- circumference of a circle with a radius of 27 feet
- circumference of a circle with a diameter of 15 inches
- diameter of a circle with circumference 39 centimeters
- Maple trees suitable for tapping for syrup should be at least 1.5 feet in diameter. You wrap a rope around a tree trunk, then measure the length of the rope needed to wrap one time around the trunk. This length is 4 feet 2 inches. Explain how you can use this length to determine whether the tree is suitable for tapping.

In Exercises 6–8, find the arc length of  $\widehat{AB}$ .

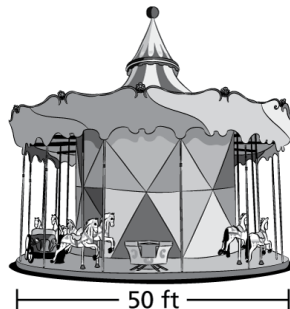


In Exercises 9 and 10, find the perimeter of the region.



In Exercises 11 and 12, convert the angle measure.

- Convert  $60^\circ$  to radians.
- Convert  $\frac{5\pi}{4}$  radians to degrees.
- A carousel has a diameter of 50 feet. To the nearest foot, how far does a child seated near the outer edge travel when the carousel makes 8 revolutions?



# 11.1

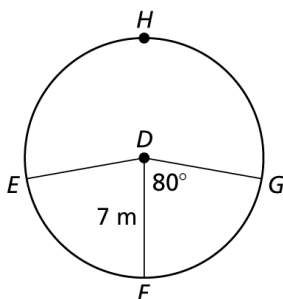
## Practice B

In Exercises 1 and 2, find the indicated measure.

- exact diameter of a circle with a circumference of 36 meters
- exact circumference of a circle with a radius of 5.4 feet
- Find the circumference of a circle inscribed in a square with a side length of 14 centimeters.

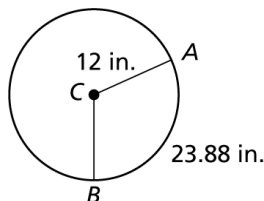
In Exercises 4–9, use the diagram of circle  $D$  with  $\angle EDF \cong \angle FDG$  to find the indicated measure.

- $m\angle EFG$
- $m\angle EHG$
- arc length of  $\overset{\frown}{EFG}$
- arc length of  $\overset{\frown}{EHG}$
- $m\overset{\frown}{EHF}$
- arc length of  $\overset{\frown}{FEG}$

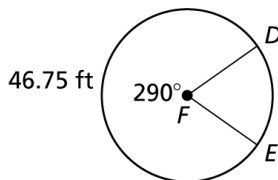


In Exercises 10–12, find the indicated measure.

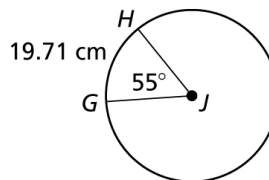
10.  $m\overset{\frown}{AB}$



11. circumference of  $e F$



12. radius of  $e J$



In Exercises 13 and 14, convert the angle measure.

13. Convert  $105^\circ$  to radians.

14. Convert  $\frac{5\pi}{6}$  radians to degrees.

15. The chain of a bicycle travels along the front and rear sprockets, as shown in the figure. The circumferences of the rear sprocket and the front sprocket are 12 inches and 20 inches, respectively.

- How long is the chain? Round your answer to the nearest tenth.
- On a chain, the teeth are spaced in  $\frac{1}{2}$ -inch intervals. About how many teeth are there on this chain?

