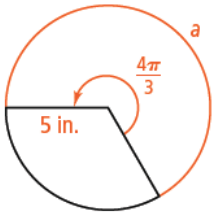
Name _____ Date _____ Period _____

RADIAN MEASURES

Lesson Check

Do you know HOW?

1. Find the radian measure of an angle of 300°.
2. Find the degree measure of an angle of $\frac{3\pi}{4}$ radians.
3. Find the length a.



Do you UNDERSTAND? MATHEMATICAL PRACTICES

4. **Vocabulary** The radius of a circle is 9 cm. A central angle intercepts an arc that is 9 cm. What is the measure of the central angle in radians?
5. **Reasoning** A certain baker believes that a perfect slice of pie has a central angle of 1 radian. How many "perfect" slices can he get out of one pie?

Write each measure in radians. Express your answer in terms of π and as a decimal rounded to the nearest hundredth.

6. $-300°$
7. $150°$
8. $-90°$
9. $-60°$
10. $160°$
11. $20°$

Write each measure in degrees. Round your answer to the nearest degree, if necessary.

12. 3π radians
13. $\frac{11\pi}{10}$ radians
14. $-\frac{2\pi}{3}$ radians
15. -3 radians
16. 1.57 radians
17. 4.71 radians

The measure θ of an angle in standard position is given. Find the exact values of $\cos\theta$ and $\sin\theta$ for each angle measure.

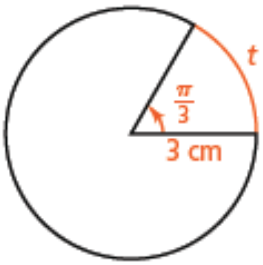
18. $\frac{\pi}{6}$ radians
19. $\frac{\pi}{3}$ radians
20. $\frac{\pi}{2}$ radians
21. $-\frac{\pi}{4}$ radians
22. $\frac{2\pi}{3}$ radians
23. $-\frac{\pi}{2}$ radians
24. $\frac{5\pi}{4}$ radians
25. $\frac{7\pi}{6}$ radians

Name _____ Date _____ Period _____

RADIAN MEASURES

Use each circle to find the length of the indicated arc. Round your answer to the nearest tenth.

26.



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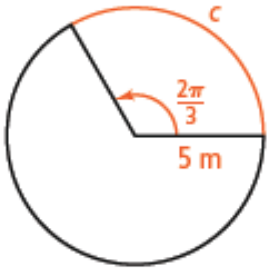

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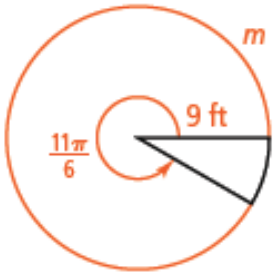

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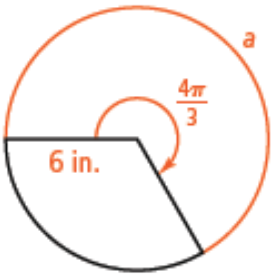

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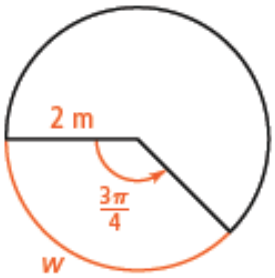

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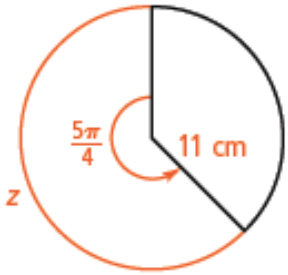

Find the length of each arc.

32.

33.