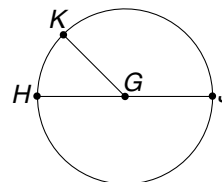


LESSON
9-8 **Practice A**
Circles and Circumference

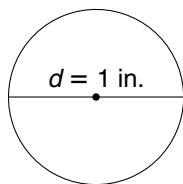
Point G is the center of the circle. Use it to answer each question.

1. Name the circle. _____
2. Name the diameter. _____
3. Name three radii. _____



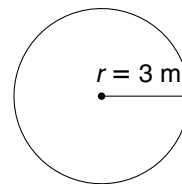
Find each missing value to the nearest hundredth. Use 3.14 for π .

4.



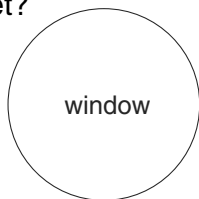
$C =$ _____

5.



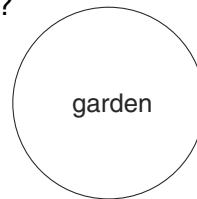
$C =$ _____

6. A builder is putting in a circular window. Find the circumference by rounding π to 3. What is the circumference if the diameter is 10 feet?



$C \approx$ _____

7. A builder is putting in a circular garden. Find the circumference by rounding π to 3. What is the circumference if the radius is 5 yards?



$C \approx$ _____

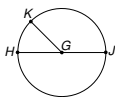
8. Students in England created the world's largest yo-yo. Its diameter is about 10 feet long! What is the circumference of the yo-yo?

9. The Mayall Telescope at Kitt Peak National Observatory in Arizona has a lens with a 2-meter radius. This glass lens is covered with a thin sheet of reflective aluminum. What is the circumference of the aluminum sheet?

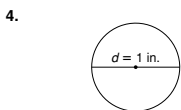
LESSON Practice A
9-3 Circles and Circumference

Point G is the center of the circle. Use it to answer each question.

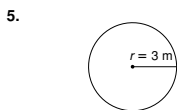
- Name the circle. circle G
- Name the diameter. HJ
- Name three radii. GH, GK, GJ



Find each missing value to the nearest hundredth. Use 3.14 for π .



$C =$ 3.14 in.



$C =$ 18.84 m

6. A builder is putting in a circular window. Find the circumference by rounding π to 3. What is the circumference if the diameter is 10 feet?



$C \approx$ 30 feet

7. A builder is putting in a circular garden. Find the circumference by rounding π to 3. What is the circumference if the radius is 5 yards?



$C \approx$ 30 yards

8. Students in England created the world's largest yo-yo. Its diameter is about 10 feet long! What is the circumference of the yo-yo?

about 31.4 feet

9. The Mayall Telescope at Kitt Peak National Observatory in Arizona has a lens with a 2-meter radius. This glass lens is covered with a thin sheet of reflective aluminum. What is the circumference of the aluminum sheet?

12.56 meters

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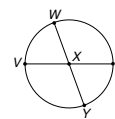
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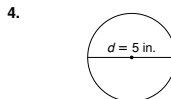
LESSON Practice B
9-3 Circles and Circumference

Use the circle to answer each question.

- Name the circle. circle X
- Name two diameters. YW and VZ
- Name four radii. XV, XW, XZ, and XY



Find each missing value to the nearest hundredth. Use 3.14 for π .



$C =$ 15.7 in.



$C =$ 75.36 m

A gardener is putting in a circular garden. The inner circle is a vegetable garden, and the outer circle is a flower garden. Find the circumference by rounding π to 3.



6. If the diameter of the vegetable garden is 6 feet, what is its circumference?

$C \approx$ 18 feet

7. If the radius of the flower garden is 8 feet, what is its circumference?

$C \approx$ 48 feet

8. The first Ferris wheel was built in 1893 in Chicago. Its diameter was 250 feet. How many feet did the Ferris wheel rotate with each complete turn? Use 3.14 for π .

785 feet

9. Stonehenge, a circle of large carved stones in England, was built more than 1,000 years ago. The circle of stones has a diameter of 108 feet. What is the circumference of Stonehenge?

339.12 feet

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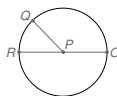
60

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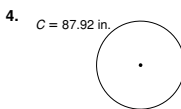
LESSON Practice C
9-3 Circles and Circumference

Use the circle to answer each question.

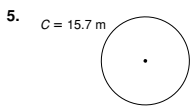
- Label the center of the circle P.
- Draw and label its diameter \overline{RO} .
- Label point Q on the circle. Then name three radii. PQ, PR, and PO



Find each missing value to the nearest hundredth. Use 3.14 for π .

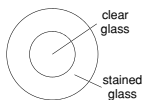


$d =$ 28 in.



$r =$ 2.5 m

A builder is putting in a circular window. The inner circle is clear glass, and the outer circle is stained glass. Find the circumference by rounding π to 3.



6. If the diameter of the clear glass is 4 feet, what is its circumference?

$C \approx$ 12 feet

7. If the radius of the stained glass is 6 feet, what is its circumference?

$C \approx$ 36 feet

8. The diameter of a sandwich cookie is 1.75 inches. To the nearest tenth, what is the combined area of the two wafer parts of the sandwich cookie? Use 3.14 for π .

4.8 in²

9. A circle of 50 flags surrounds the Washington Monument in Washington, D.C. The diameter of the circle is about 238 feet. What is the circumference of the circle of flags?

747.32 feet

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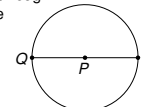
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LESSON Reteach
9-8 Circles and Circumference

A circle is the set of all points in a plane that are the same distance from a given point, called the center.

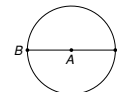
A line segment with an endpoint at the center and an endpoint at the circle is called the radius r . A line segment that passes through the center and has both endpoints on the circle is called the diameter d . The length of the diameter is twice the radius.

This is circle P.
 \overline{QR} is a diameter.
 \overline{PQ} and \overline{PR} are radii.



Identify each part of the circle below.

- circle A
- diameter BC
- two radii AB and AC



The distance around a circle is called the circumference. The ratio of the circumference of a circle to its diameter is always the same. This relationship is called π and is represented by the Greek letter π .

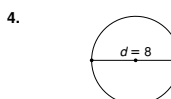
π is a decimal number that has no end and never repeats. 3.14 or $\frac{22}{7}$ is used to estimate π .

To find the circumference C of a circle, use a formula.



$$\begin{aligned} C &= \pi d \\ &\approx 3.14 \cdot 6 \\ &\approx 18.84 \\ \text{The circumference is about 18.84 units.} \end{aligned}$$

Find the circumference. Use 3.14 for π .



$C \approx$ 25.12 units



$C \approx$ 12.56 units

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