

Geometry - Lesson 5

Circumference

The **center** is the point in the middle of a circle.

The **diameter, d** , is the distance across a circle through its center.

The **radius, r** , is the distance from the center to any point on a circle.

The **circumference, C** , is the distance around a circle.

The diameter of a circle is twice its radius.
 The radius is half the diameter.
 The circumference of a circle is equal to π times its diameter or π times twice its radius.

$$d = 2r$$

$$r = \frac{d}{2}$$

$$C = \pi d$$

$$C = 2\pi r$$

Example 1

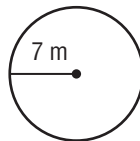
The radius of a circle is 7 meters. Find the diameter.

$$d = 2r$$

$$d = 2 \cdot 7 \quad \text{Replace } r \text{ with } 7.$$

$$d = 14 \quad \text{Multiply.}$$

The diameter is 14 meters.



Example 2

Find the circumference of a circle with a radius that is 13 inches. Use 3.14 for π . Round to the nearest tenth.

$$C = 2\pi r \quad \text{Write the formula.}$$

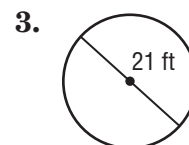
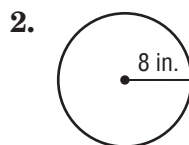
$$C \approx 2 \times 3.14 \times 13 \quad \text{Replace } r \text{ with } 13 \text{ and } \pi \text{ with } 3.14.$$

$$C \approx 81.64 \quad \text{Multiply.}$$

Rounded to the nearest tenth, the circumference is about 81.6 inches.

Exercises

Find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π . Round to the nearest tenth if necessary.



Geometry - Lesson 5 Skills Practice

Circumference

Find the radius or diameter of each circle with the given dimensions.

1. $r = 13$ cm

2. $d = 4$ ft

3. $r = 10$ mm

4. $d = 16$ in.

5. $r = 7$ mi

6. $d = 22$ yd

Find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π . Round to the nearest tenth if necessary.

