

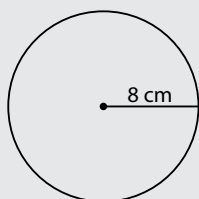
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Circumference & Area of Circles

M.2.A M.2.G M.3.C M.3.E

Example

What is the approximate circumference of this circle? Use 3.14 for π .



- A. 25.12 cm B. 50.24 cm
C. 100.48 cm D. 200.96 cm

Example

A circle has a diameter of 12 inches. What is its approximate area? Use 3.14 for π .

- A. 37.68 in.²
B. 75.36 in.²
C. 113.04 in.²
D. 452.16 in.²

Thinking It Through

Solve To find the approximate circumference of a circle given the radius, use the formula $C = 2\pi r$, where r represents the radius. Use 3.14 to approximate π .

$$\begin{aligned} C &= 2\pi r \\ C &\approx 2 \times 3.14 \times 8 \text{ cm} \\ C &\approx 50.24 \text{ cm} \end{aligned}$$

The approximate circumference of the circle is *50.24 cm*, answer B.

Thinking It Through

Solve To find the approximate area of a circle, use the formula $A = \pi r^2$.

The length of the radius is $\frac{1}{2}$ that of the diameter.

$$\begin{aligned} A &= \pi r^2 \\ A &\approx 3.14 \times 6 \text{ in.} \times 6 \text{ in.} \\ A &\approx 113.04 \text{ in.}^2, \text{ answer C.} \end{aligned}$$

Review

- **Circumference** measures the distance *around* a **circle**. To find the circumference of a circle, use the formula $C = 2\pi r$ if given the **radius**, and $C = \pi d$ if given the **diameter**.
- **π (pi)** is the ratio of the circumference of any circle to its diameter. The exact value of π has not been determined, but it can be approximated as either 3.14 or $3\frac{1}{7}$. The symbol \approx means approximately. It is used if π is approximated.
- To find the area of a circle, use the formula $A = \pi r^2$. To find the area of a **sector** of the circle, multiply the area of the circle by the fraction of the circle that the sector encompasses. For example, to find the area of a half circle, use the formula $A = \frac{1}{2}\pi r^2$.

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Directions: Carefully read each question. Circle the letter of the correct answer.

1. If the diameter of a circle is 5 inches, what is the approximate circumference? Use 3.14 for π .

A. 1.59 in.
 B. 5.7 in.
 C. 15.7 in.
 D. 31.4 in.

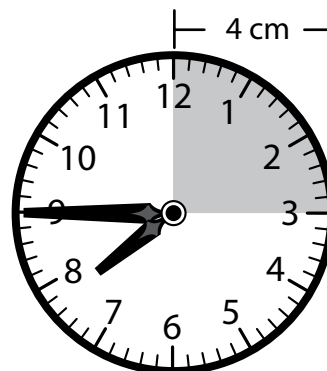
2. A circular rose garden has a diameter of 24 feet. What is the approximate area of the rose garden? Use 3.14 for π .

A. 75.36 ft²
 B. 150.72 ft²
 C. 226.08 ft²
 D. 452.16 ft²



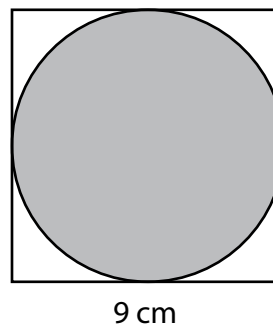
The length of the diameter is 2 times the length of the radius.

3. What is the approximate area of the part of the clock that is shaded?



A. 12.56 cm² B. 25.12 cm²
 C. 37.68 cm² D. 50.24 cm²

4. What is the approximate area of the part of the square that is not covered by the circle? Use 3.14 for π .



A. 17.415 cm² B. 24.48 cm²
 C. 52.74 cm² D. 66.87 cm²