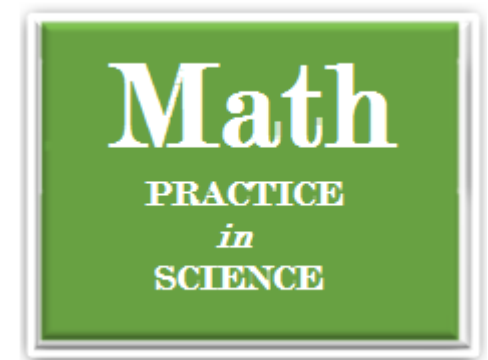


087 Math Practice

Circumference of a Circle



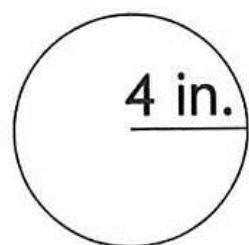
The distance around a circle is called the *circumference*. When you find the circumference of a circle, you are finding out how far it is around the circle. The *diameter* of a circle is the distance across the circle at its widest point. One-half the diameter is called the *radius*. If you divide the circumference by the diameter, you will always get a number that is a little greater than 3. This ratio is known by the Greek letter π , which is pronounced like *pie*. The value of π is approximately 3.14.

Radius = r

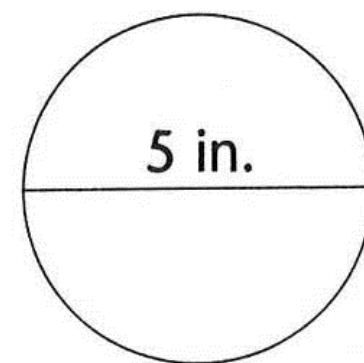
Diameter = D

Circumference = $2 \pi r$

Example: Use the formula $C = 2 \pi r$ to find the circumference of these circles.
Remember: $\pi = 3.14$.



$$\begin{aligned} C &= 2 \pi r \\ C &= 2 \times 3.14 \times 4 \\ C &= 25.12 \text{ inches} \end{aligned}$$



$$\begin{aligned} \text{Since } d &= 5 \text{ in.}, r = 2.5 \\ C &= 2 \pi r \\ C &= 2 \times 3.14 \times 2.5 \\ C &= 15.7 \text{ inches} \end{aligned}$$

Use the formula $C = 2 \pi r$ to find the circumference of these circles.
Remember: $\pi = 3.14$.

1. $r = 5$ inches
 $C = \underline{\hspace{2cm}}$

2. $r = 8$ cm
 $C = \underline{\hspace{2cm}}$

3. $D = 6$ cm
 $C = \underline{\hspace{2cm}}$

4. $D = 9$ mm
 $C = \underline{\hspace{2cm}}$

5. $D = 7$ inches
 $C = \underline{\hspace{2cm}}$

6. $D = 2$ m
 $C = \underline{\hspace{2cm}}$

7. $r = 13$ mm
 $C = \underline{\hspace{2cm}}$

8. $D = 20$ mm
 $C = \underline{\hspace{2cm}}$

9.
 $C = \underline{\hspace{2cm}}$

10.
 $C = \underline{\hspace{2cm}}$

11.
 $C = \underline{\hspace{2cm}}$

12.
 $C = \underline{\hspace{2cm}}$

13.
 $C = \underline{\hspace{2cm}}$

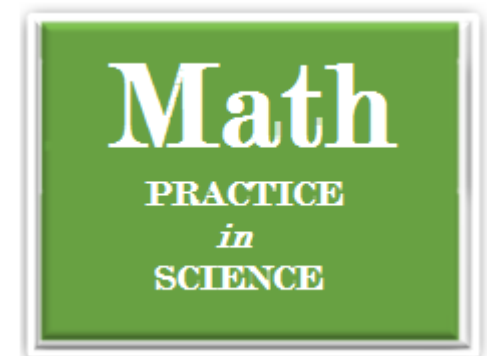
14.
 $C = \underline{\hspace{2cm}}$

15.
 $C = \underline{\hspace{2cm}}$

16.
 $C = \underline{\hspace{2cm}}$

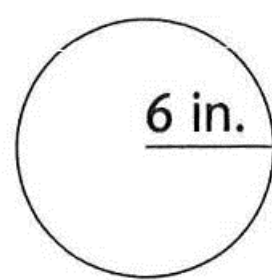
088 Math Practice

Area of a Circle

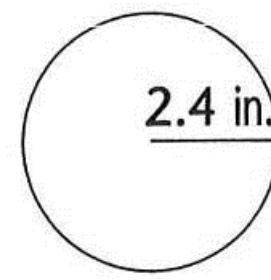


The *area* of a circle is the measure of how much surface is inside the circle. Area is given in square units. Find the area of a circle by multiplying π times the radius times the radius, or $\text{area} = \pi r^2$. π can be expressed as either 3.14 or as $\frac{22}{7}$.

Examples: Find the area for each circle. Use 3.14 for π .

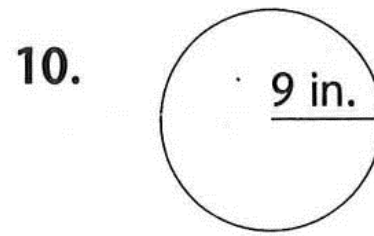
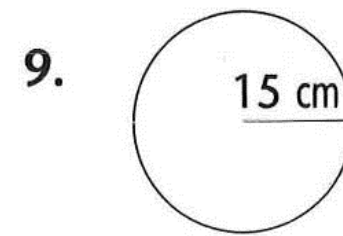
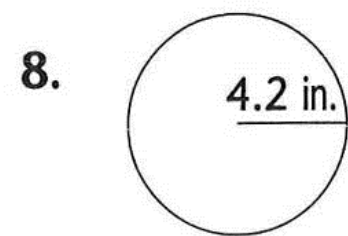
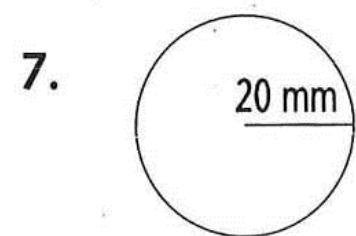
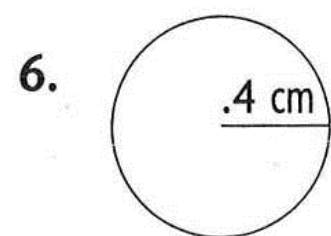
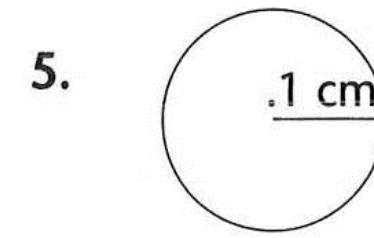
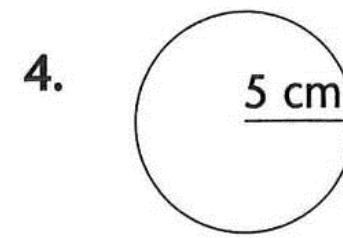
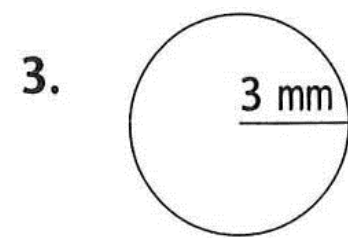
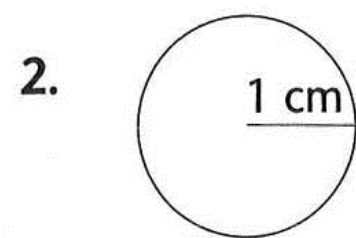
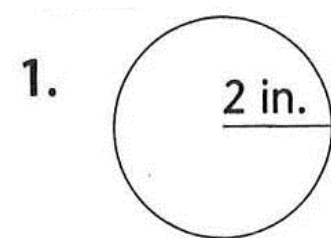


$$\begin{aligned} \text{Area} &= \pi r^2 \\ \text{Area} &= 3.14 \times 6 \times 6 \\ \text{Area} &= 113.04 \text{ sq. in.} \end{aligned}$$

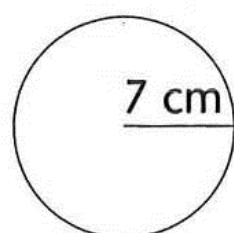


$$\begin{aligned} A &= \pi r^2 \\ A &= 3.14 \times 2.4 \times 2.4 \\ A &= 18.0864 \text{ sq. in.} \end{aligned}$$

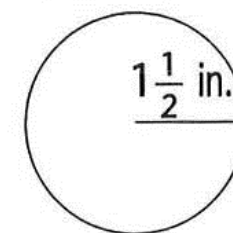
Find the areas of these circles. Use $\pi = 3.14$.



Examples: Find the area for each circle. Use $\frac{22}{7}$ for π .



$$\begin{aligned} A &= \pi r^2 \\ A &= \frac{22}{7} \times 7 \times 7 \\ A &= 22 \times 7 \\ A &= 154 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} A &= \pi r^2 \\ A &= \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \\ A &= \frac{198}{28} \text{ or } 7\frac{1}{14} \text{ sq. in.} \end{aligned}$$

Use $\pi = \frac{22}{7}$ to find the area of these circles.

