Lesson 1: Circumference

Objective:

Find the circumference of circles

By Miss **Aaesha Bani Shemaili**

Vocabulary Start-Up

A **circle** is the set of all points in a plane that are the same distance from a point, called the **center**. The **circumference** is the distance around a circle. The **diameter** is the distance across a circle through its center. The **radius** is the distance from the center to any point on the circle.

Fill in each box with one of the following terms: *center*, *diameter*, and *radius*.

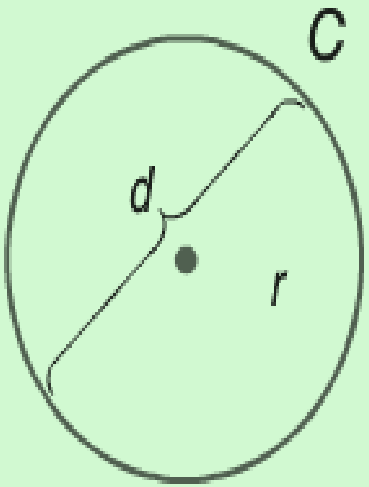
Center	Circumference
Diameter (d)	Radius (r)

Circumference

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

Symbols $C = \pi d$ or $C = 2\pi r$

Model



In the Inquiry Lab, you learned that $\frac{C}{d} \approx 3$. The exact ratio is represented by the Greek letter **π (pi)**. The value of π is 3.1415926... . The decimal never ends, but it is often approximated as 3.14.

Another approximation for π is $\frac{22}{7}$. Use this value when the radius or diameter is a multiple of 7 or has a multiple of 7 in its numerator if the radius is a fraction.

Examples

1. **The diameter of a circle is 14 inches. Find the radius.**

$r = \frac{d}{2}$ Radius of circle

$r = \frac{14}{2}$ Replace d with 14.

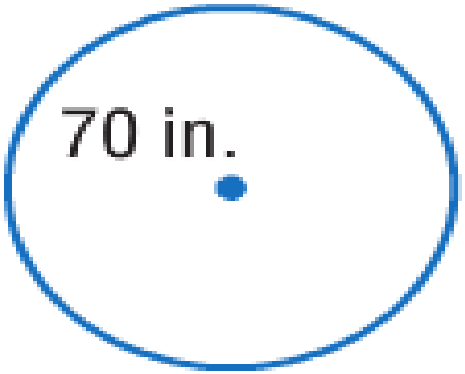
$r = 7$ Divide.

The radius is 7 inches.

Got It? Do these problems to find out.

Find the circumference of each circle. Use $\frac{22}{7}$ for π.

e.



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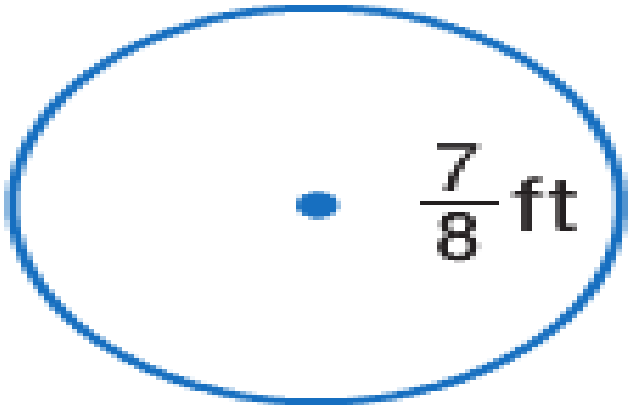

Independent Practice

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

(Examples 1 and 2)

1. $d = 5$ mm _____

2. $d = 24$ ft _____

3. $r = 17$ cm _____

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Independent Practice

Find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π. Round to the nearest tenth if necessary. (Example 3)

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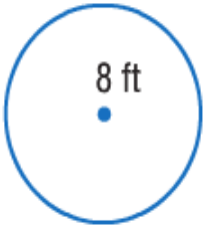

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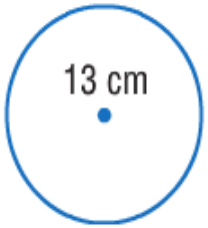

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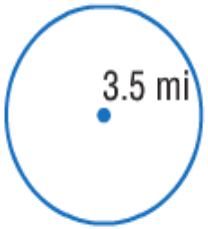

My Radius….My Circumference

r=…….

Find diameter and circumference:

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