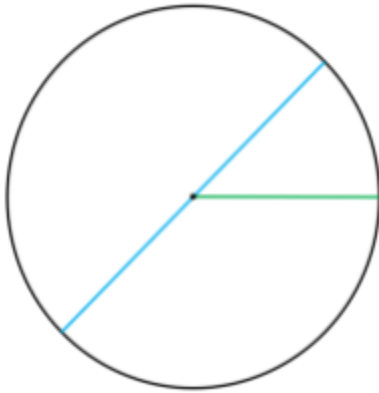


Circumference

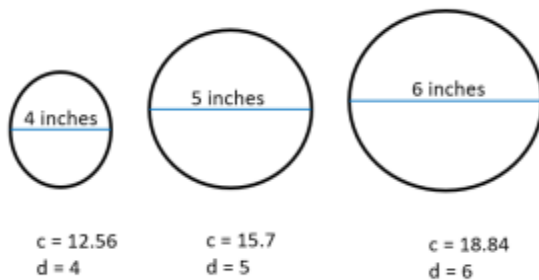
Notes	Video Links & Practice Space
<p>Vocabulary</p> <p>Circumference: the _____ around a circle.</p> <p>Constant of proportionality: the constant value of the _____ of two proportional quantities.</p> <p>Customary units: the units of _____ used in the United States: customary units for length include inches, feet, yards, and miles.</p> <p>Diameter: a line segment from any point on the circle passing through the _____ to another point on the circle.</p> <p>Metric units: the units of _____ used in most of the world; like the decimal system, the metric system uses the base 10: metric units for length include millimeters, centimeters, meters, and kilometers.</p> <p>Radius: a line segment extending from the _____ of a circle or sphere to a point on the circle or sphere.</p> <p>Proportional relationship: a collection of pairs of numbers that are in _____ ratios.</p> <p>Pi (π): the symbol designating the _____ of the circumference of a circle to its diameter; it is an irrational number; common approximations are 3.14, $\frac{22}{7}$, or $\frac{355}{113}$</p>	<p>Vocabulary (1:51)</p>

Parts of a Circle



[Parts of a Circle \(1:34\)](#)

Discovering Pi and Circumference



	Diameter (d)	Circumference (c)	$\frac{c}{d}$
Circle 1	4	12.56	
Circle 2	5	15.7	
Circle 3	6	18.84	

The circumference c , and the diameter, d , of a circle have a _____ relationship. The ratio of

$\frac{c}{d}$ (c to d) also known as the constant of proportionality of any circle is approximately 3.14 or Pi (π), pronounced pie.

[Discovering Pi and Circumference \(4:32\)](#)

Since $\frac{c}{d} = \pi$ we can solve for c (circumference)

$$\frac{c}{d} = \pi$$

$$(\quad) \frac{c}{d} = \pi (\quad)$$

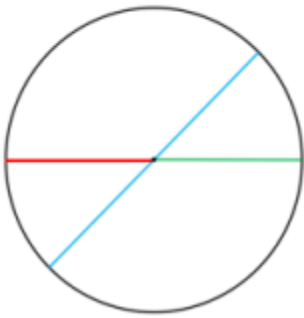
$$c = \pi (\quad)$$

Circumference of a Circle

$$C = \pi d$$

Where c is the _____, d is the _____.

Think 



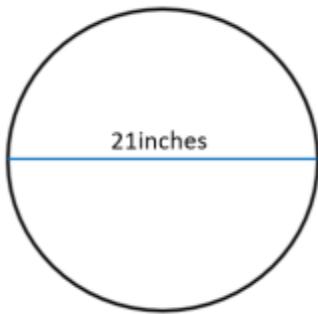
The radius is 2 times the diameter, so we can say that diameter = _____.

We can also then conclude that

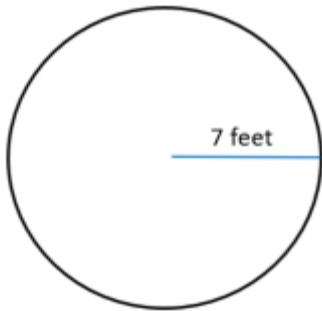
$$C = 2\pi r$$

Calculating Circumference

1. Find the circumference of the circle



2. Find the circumference of the circle



Other Approximations for pi:

$$\Pi = \underline{\hspace{2cm}}$$

$$\Pi = \underline{\hspace{2cm}}$$

$$\Pi = \underline{\hspace{2cm}}$$

3. The circumference of a circle is $\frac{244}{14}$ meters.
Find the radius of the circle using $\Pi = \frac{22}{7}$.

4. What is the circumference of a circle with a radius of 16 feet? Use $\Pi = \frac{22}{7}$.

Calculating Circumference (15:47)

5. I want to determine the length of the label on a soup can. If the radius of the soup can is $5\frac{2}{3}$ mm. What is the length of the label? Use $\pi = \frac{22}{7}$.

6. The circumference of a circle is 96.35 inches. What is the radius of the circle? Use 3.14 for π . Round to the nearest hundredth.

7. The diameter of a balloon is 6.78 cm. What is the distance around the balloon? Use 3.14 for π . Round to the nearest tenth.

Circumference and Conversions

1. The radius on the tire for a semi-truck is about $12\frac{1}{4}$ in. How far does the tire of the semi-truck travel in feet, after 1 rotation? Use 3.14 for π and round to the nearest hundredth. (12 inches = 1 foot)
2. Two bakery's offer customers pie using different measurements for diameter. If 1-inch = 2.54 centimeters, which baker has the better deal? Use 3.14 for π .

Bakery 1: 16-inch pie for \$16.99

Bakery 2: 42.86-centimeter pie for \$16.99

[Circumference and Conversions \(9:06\)](#)