Name: **Key**

7R

Date: _____

Circumference

Aim: How can we find the circumference of a circle given the radius or diameter?

Circumference:

- **Circumference** is the distance around a circle; it is like perimeter.

- The formula for circumference of a circle is: $C = 2\pi r$

  circumference ← → *radius*

The question can say...

Round your answer	use the π button
Leave in terms of π	DON'T use π button, leave in answer
Use 3.14 for π	Substitute (3.14) for π

Example 1: "Using the Pi Button"

Find the circumference of the circle to the right. Round your answer to the nearest *tenths* place.

What do you know?	What do you need to find?
$r = 2$	C

r = 2 in

Step 1: Write out the formula

F $C = 2\pi r$

Step 2: Substitute

S $C = 2\pi(2)$

Step 3: Do the math.

M $C = 12.5663...$ *always write 4 digits after decimal*

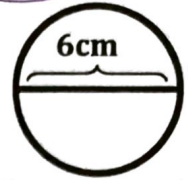**Step 4:** Round and label your answer

U $C = 12.6$ in

On your calculator:

2	x	π	x	2	=

Try It!

Find the circumference of the circle to the right. Round your answer to the nearest hundredths place.

What do you know?	What do you need to find?
$d = 6 \rightarrow r = 3$	C

6cm

Step 1: Write out the formula   F $C = 2\pi r$

Step 2: Substitute   S $C = 2\pi(3)$ ← type into calc.

Step 3: Do the math.   M $C = 18.8495...$

Step 4: Round and label your answer   U $C = 18.85 \text{ cm}$

Example 2: "Leaving in Terms of Pi"

Find the circumference of a circle whose radius is 10 yards. Leave your answer in terms of π.

$r = 10$

F $C = 2\pi r$

S $C = 2\pi(10)$ Type into calc

M $C = 20\pi$ *always put # infront of π *

U $C = 20\pi \text{ yd}$

Try It!

Find the circumference of a circle whose diameter is 8 inches. Leave your answer in terms of π. $d = 8$ $r = 4$

$C = 2\pi r$

$C = 2\pi(4)$

$C = 8\pi$

$C = 8\pi \text{ in}$

Example 3: "Using 3.14 for Pi"

A round table has a diameter of 35 inches Find the **circumference** of the table. Use 3.14 for π. $d = 35$ $r = 17.5$

F $C = 2\pi r$

S $C = 2(3.14)(17.5)$

M $C = 109.9$

U $C = 109.9 \text{ in}$

Try It!

A wheel has a diameter of 28 inches. What is the approximate distance around the outside of the wheel? Use 3.14 for π. $d = 28$ $r = 14$

$C = 2\pi r$

$C = 2(3.14)(14)$

$C = 87.92$

$C = 87.92 \text{ in}$