Name:_____ M3L18 Date:_____

Accordino-Math 7 Period:_____

Lesson 18: Pi, Area, and Circumference of a Circle Bellringer

1) (2 points) Find the perimeter and area of the rectangle below:

12ft

3ft

Name:_____ M3L18 Date:_____

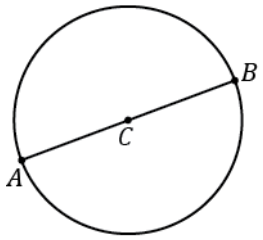
Accordino-Math 7 Period:_____

Lesson 18: Pi, Area, and Circumference of a Circle Notes

Let's Think:

C is the *center* of the circle.

Radius:



Diameter:

Circumference:

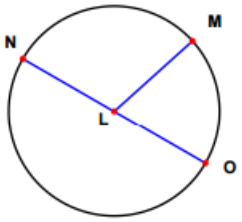
Area:

Pi:

The ratio of the circumference to its diameter is always the same for any circle. The value of this ratio, $\frac{\text{Circumference}}{\text{Diameter}}$, is called the number *pi* and is represented by the symbol π.

Determine the radius or diameter of each circle below using the information given:

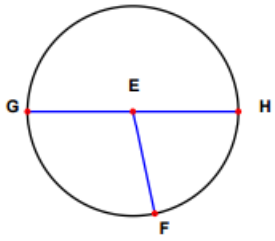
1)



Radius: _____

Diameter: 20 inches

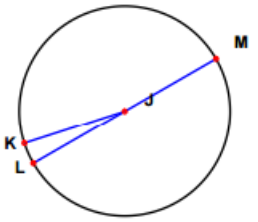
2)



Radius: _____

Diameter: 28 inches

3)



Radius: 18 inches

Diameter: _____

Name:_____ M3L18 Date:_____

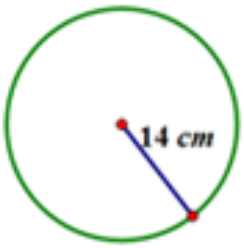
Accordino-Math 7 Period:_____

Finding Circumference:

a. Give an exact answer in terms of π.

b. Use the π button on your calculator and express your answer to the nearest hundredth.

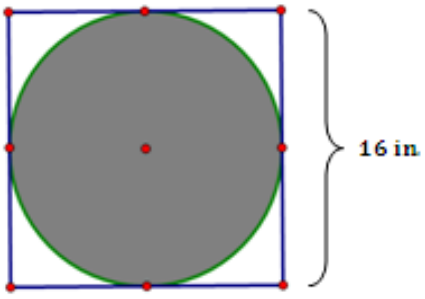
Finding Area of a Circle:



a. Give an exact answer in terms of π.

b. Use the π button on your calculator and express your answer to the nearest hundredth.

Example 1) Find the circumference and area of the circle below:

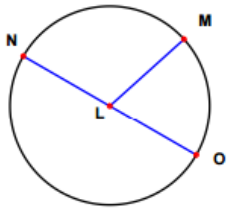


Name:_____ M3L18 Date:_____

Accordino-Math 7 Period:_____

You Try!

1)



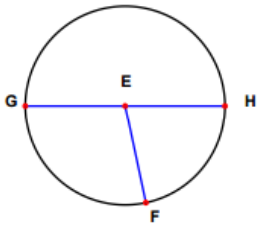
Radius: _____

Diameter: 20 inches

Circumference: _____

Area: _____

2)



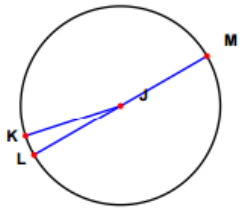
Radius: _____

Diameter: 28 inches

Circumference: _____

Area: _____

3)



Radius: 18 inches

Diameter: _____

Circumference: _____

Area: _____

Finding Radius and Diameter given Circumference and Area:

Example 2) The area of a circle is determined to be 36π cm^2 . Determine the radius of the circle.

Example 3) The circumference of a circle is 24π cm. What is the exact area of the circle?

Draw a diagram to assist you in solving the problem.

a. Find the exact area.

b. Find the area to the nearest tenth of a centimeter.

Name:_____ M3L18 Date:_____

Accordino-Math 7 Period:_____

Homework:

1. The circumference of a circle is found to be 50π cm. What is the radius of this circle? Draw a picture to assist you if needed.

2. A circle has a radius of 7 cm.
   a. Find the exact area of the circular region.
   b. Find the area of the circle using the area formula to the nearest tenths.
   c. What is the circumference of the circle?

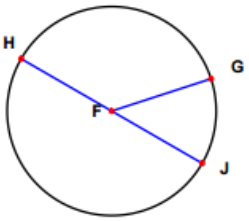
3. A sprinkler rotates in a circular pattern and sprays water over a distance of 12 feet. What is the area of the circular region covered by the sprinkler? Express your answer to the nearest square foot.

Name:_____ M3L18 Date:_____

Accordino-Math 7 Period:_____

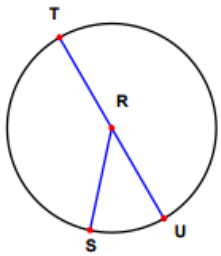
Determine the missing elements of each circle below:

4)



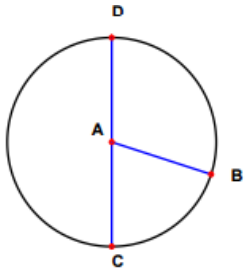
Radius: 8 inches
Diameter: _____
Circumference: _____
Area: _____

5)



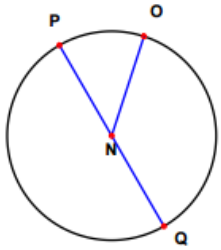
Radius: 4 inches
Diameter: _____
Circumference: _____
Area: _____

6)



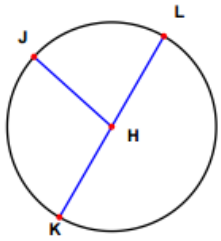
Radius: _____
Diameter: 12 inches
Circumference: _____
Area: _____

7)



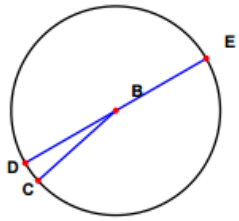
Radius: _____
Diameter: 38 inches
Circumference: _____
Area: _____

8)



Radius: 20 inches
Diameter: _____
Circumference: _____
Area: _____

9)



Radius: _____
Diameter: 6 inches
Circumference: _____
Area: _____

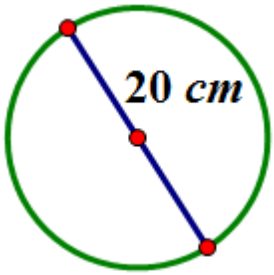
Name:_____ M3L18 Date:_____

Accordino-Math 7 Period:_____

Lesson 18: Pi, Area, and Circumference of a Circle
Exit Ticket

(2 points)

Given the circle below, determine both the area and circumference. Show work to justify your answer and leave your answer in terms of π.



Circumference: _____

Area:_____