

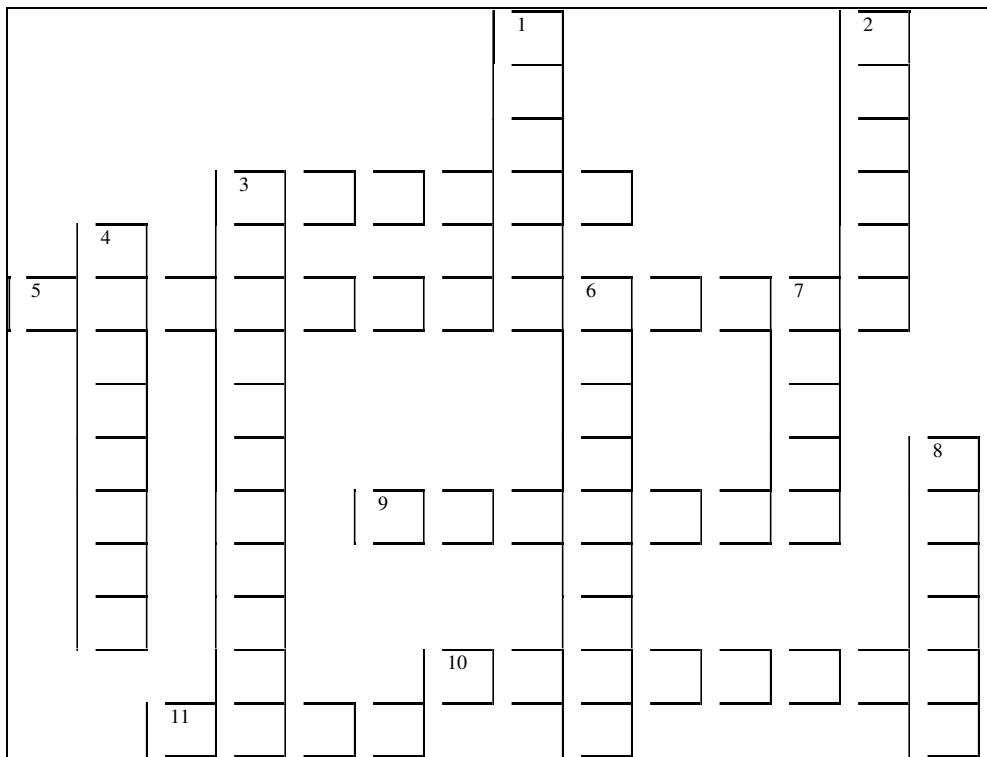


## Diagnostic Activity

Complete the crossword puzzle.

<b>Area</b>	<b>Circle</b>	<b>Circumference</b>	<b>Cubed</b>
<b>Cylinder</b>	<b>Diameter</b>	<b>Radius</b>	<b>Rectangle</b>
<b>Rectangular</b> _____	<b>Square</b>	<b>Squared</b>	<b>Volume</b>

## Vocabulary



### ACROSS

- 3** Distance from the centre of a circle to its edge
- 5** Perimeter of a circle
- 9** To the exponent 2; measurement for area
- 10** Three-dimensional like a prism but with circular ends
- 11** The space covered by a two-dimensional shape; measured in square units

### DOWN

- 1** The amount of space occupied by a three-dimensional object
- 2** A round geometric shape
- 3** \_\_\_\_\_ Prism, a mathematical name for a box shape
- 4** Distance across a circle measured through its centre
- 6** A geometric shape with four sides, with opposite sides of same length
- 7** To the exponent 3; measurement for volume
- 8** A geometric shape with four equal sides



## The Circle

Suggested Time: 45 minutes

### What's important in this lesson:

In this lesson, you will learn how to identify the parts of a circle; solve problems involving the circumference of a circle; estimate and calculate the areas of circles and fractions of circles; calculate the areas of figures made up of half- or quarter-circles.

### Complete these steps:

1. Read through the lesson portion of the package on your own.
2. Complete the exercises.
3. Check your answers with the Answer Key that your teacher has.
4. Seek assistance from the teacher as needed.
5. Complete the Evaluation and hand it in. Be sure to ask for assistance if you need it.

### Hand in the following:

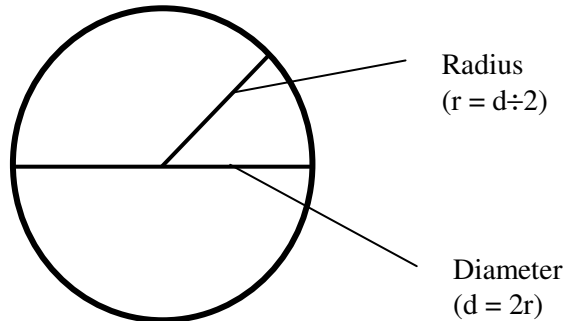
1. Diagnostic Activity
2. Practice Problems
3. The Circle Evaluation

### Questions for the teacher:



## Circles and Angles

### Parts of a Circle



**Circumference** = the distance around a circle

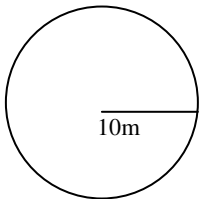
For a Circle:

<b>Circumference:</b> $C = 2\pi r$	where $\pi = 3.14$
<b>Area:</b> $A = \pi r^2$	

### Example

Determine the circumference and area of each circle:

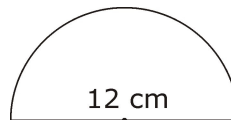
1.



$$\begin{aligned} r &= 10 \text{ m} \\ C &= 2\pi r \\ &= 2 \times 3.14 \times 10 \\ &= 62.8 \text{ m} \end{aligned}$$

$$\begin{aligned} A &= \pi r^2 \\ &= 3.14 \times 10^2 \\ &= 314 \text{ m}^2 \end{aligned}$$

2.



$$\begin{aligned} r &= d \div 2 \\ &= 12 \div 2 \\ &= 6 \text{ cm} \end{aligned}$$

$$\begin{aligned} C &= 2\pi r \\ &= 2 \times 3.14 \times 6 \\ &= 37.68 \end{aligned}$$

*half a circle!*

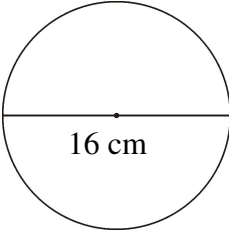
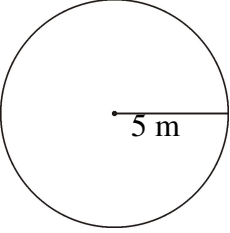
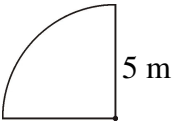
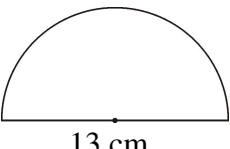
$$\begin{aligned} P &= C \div 2 + d \\ &= 37.68 \div 2 + 12 \\ &= 30.84 \text{ cm} \end{aligned}$$

$$\begin{aligned} A &= \pi r^2 \\ &= 3.14 \times 6^2 \\ &= 11304 \end{aligned}$$

$$\begin{aligned} A &= A_c \div 2 \\ &= 11304 \div 2 \\ &= 5652 \text{ cm}^2 \end{aligned}$$



Practice

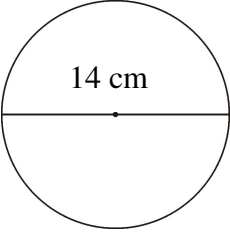
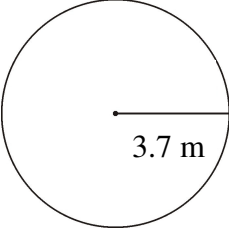
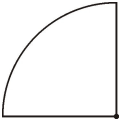
Figure	Circumference (Perimeter)	Area
1. 		
2. 		
3. 		
4. 		



### The Circle Evaluation

Complete the chart.

[20]

Figure	Circumference (Perimeter)	Area
1.  /4		
2.  /4		
3.  /6		
4. 