

 **POWER BASICS** PLUS

# Geometry

Practice Pack

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**PRACTICE 1.1**  
**What Is Geometry?**

Circle the correct word or phrase to complete each sentence below.

1. The measure of length, width, or height is known as \_\_\_\_\_.
  - a. a dimension
  - b. a solid figure
  - c. a plane
  - d. an angle
2. The geometric element that is described only by its position is a(n) \_\_\_\_\_.
  - a. angle
  - b. point
  - c. line
  - d. plane
3. The third dimension in geometry is best shown by a(n) \_\_\_\_\_.
  - a. line
  - b. plane
  - c. solid figure
  - d. edge
4. The geometric element that has one dimension and continues forever in one direction only is a \_\_\_\_\_.
  - a. line
  - b. line segment
  - c. half plane
  - d. ray
5. A plane figure has length and \_\_\_\_\_.
  - a. area
  - b. width
  - c. shape
  - d. lines



## PRACTICE 1.2

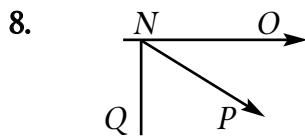
## What Is Geometry?



Draw a diagram that depicts each of the following.

1. Line  $l$  has a point  $A$  located on it. Point  $B$  does not lie on line  $l$ .
2. Line segment  $PQ$  and line segment  $QR$  do not form a straight line.
3. Line segment  $CD$  and ray  $CE$  do not form a straight line.
4. Line  $l$  contains points  $U$  and  $V$ .
5. A solid figure has a triangle as a base.
6. Line  $l$  is parallel to line  $m$ . Point  $A$  is not on either line.

Describe each diagram below.



## PRACTICE 37

## Word Problems with Rectangles and Triangles



Solve each word problem below. Write your answer on the line at the end of each problem. Draw and label a picture for each problem.

1. Anya wants to build a birdhouse. The base will be a 6-inch square. The front and back pieces will be five-sided figures, each consisting of a 6-inch by 5-inch rectangle topped by a regular triangle. The base of the triangle is 6 inches. The sides and roof of the birdhouse will be 6-inch by 5-inch rectangles. How many square inches of wood will Anya need? \_\_\_\_\_
2. Barry is building a tiled patio. The entire patio will measure seven by eighteen feet. However, Barry plans to include a planting bed in one corner of the patio, measuring three feet by four feet. The tiles Barry has chosen for the project are 1 foot square and cost \$22 each. How much will Barry need to spend on tiles? \_\_\_\_\_
3. David plans to put down sod in part of his yard, then fence the grassy part in. He has bought 1000 feet of fence to enclose the grassed-in area, and can use his neighbor's fence for one side of the enclosure. If David wants the grassy area to be twice as long as it is wide, how many square feet of sod will he need to buy? \_\_\_\_\_
4. Esther wants to dig up one corner of her rectangular lawn for a flower bed. She plans to create a right triangle in one corner of her lot. The two sides of the triangle are each 10 feet. If she is going to cover this entire area in mulch, how many square feet will she need to cover?  
\_\_\_\_\_



**PRACTICE 38****Word Problems with Circles**

Solve each problem below. Round your answers to two decimal places. Write your answer on the line that follows each problem. Show your work.

1. Sammy wants to create the Olympic symbol for his friend Seth. He needs to create 5 circles. He wants to make the circles out of copper pipe and figures the diameter of each circle should be 1 foot. How many feet of copper pipe should Sammy buy? \_\_\_\_\_
  
2. Mary's front lawn sprinkler is set to rotate back and forth in a  $180^\circ$  arc. The label says it will cover a 100-foot diameter. What is the area in square feet that the sprinkler will cover on Mary's front lawn? \_\_\_\_\_
  
3. If Mary changes the settings on her sprinkler from the problem above to rotate  $360^\circ$ , how much lawn will it water? \_\_\_\_\_
  
4. A circular playground has a circumference of 200 yards. What amount of sand should be ordered to cover the playground's area? \_\_\_\_\_
  
5. Lowell runs around a circular park 5 times during track practice. If the park has an area of .52 square miles, how far does Lowell run during practice? \_\_\_\_\_



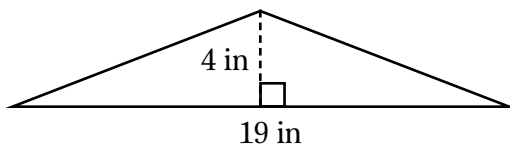
## UNIT 2 REVIEW

## Part 1

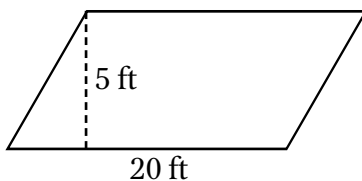


Circle the correct answer for each question below.

1. What is the perimeter of a rectangle that is 12 inches long and 5 inches wide?
  - a. 17 inches
  - b. 34 inches
  - c. 60 inches
2. What is the area of a rectangle with a length of 19.1 cm and width of 4 cm?
  - a. 764 cm
  - b.  $76.4 \text{ cm}^2$
  - c. 76.4 cm
3. What is the area of a 4.6-inch square?
  - a.  $16.6 \text{ in}^2$
  - b. 21.16 in
  - c.  $21.16 \text{ in}^2$
4. What is the perimeter of a 12-cm square?
  - a. 48 cm
  - b. 36 cm
  - c. 24 cm
5. What is the circumference of a circle whose radius is 5 cm?
  - a. 10.41 cm
  - b. 25.14 cm
  - c. 31.42 cm
6. What is the circumference of a circle whose diameter is 5 cm?
  - a. 10.14 cm
  - b. 15.71 cm
  - c. 25 cm
7. What is the area of a circle whose radius is 6 inches?
  - a.  $113.10 \text{ in}^2$
  - b. 36 in
  - c.  $36 \text{ in}^2$
8. What is the area of a circle whose diameter is 24 m?
  - a.  $1809.56 \text{ m}^2$
  - b.  $37.70 \text{ m}^2$
  - c.  $452.39 \text{ m}^2$
9. What is the area of the triangle below?
  - a.  $76 \text{ in}^2$
  - b.  $38 \text{ in}^2$
  - c.  $23 \text{ in}^2$



10. What is the area of the parallelogram below?
  - a. 50 ft
  - b. 100 ft
  - c.  $100 \text{ ft}^2$

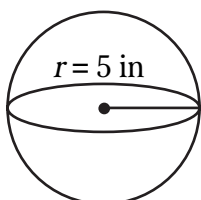


**PRACTICE 43****Finding the Volume of a Sphere**

The formula for the volume of a sphere is  $V = \frac{4}{3}\pi r^3$ .

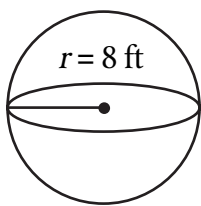
Use this formula to find the volume of each sphere below. Write your answer on the line. Remember to write your answer in cubic units.

1.



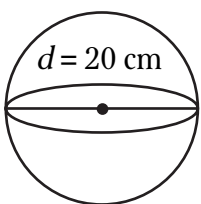
\_\_\_\_\_

2.



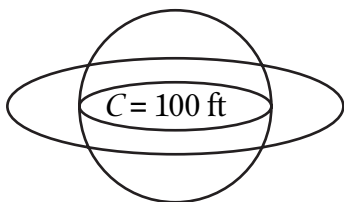
\_\_\_\_\_

3.



\_\_\_\_\_

4.



\_\_\_\_\_

## PRACTICE 48

## Vertical Number Lines



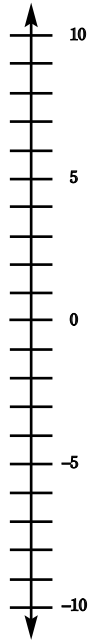
Graph the numbers from problems 1 to 4 on the first vertical number line. Plot the numbers from problems 5 to 9 on the second vertical number line. Place the dot in the appropriate location and label the point with the value.

1. 2

2.  $-8$

3. 5.1

4.  $7\frac{1}{8}$



5.  $-6\frac{7}{8}$

6.  $\frac{1}{2}$

7.  $-\frac{3}{4}$

8.  $-1.1$

