

# WORKING GEOMETRY WORD PROBLEMS

## Finding Information on Drawings

The drawing shows the cushion that Joseph needs to reupholster. What is the distance, in inches, around the cushion?

**How do you find the correct answer to this problem?**

You probably know that by adding up the lengths of each of the sides of the figure you'll get the total distance around, called the **perimeter** of the figure.

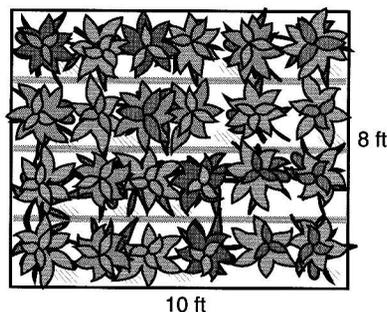
$$4 + 5 + 4 + 5 = 18 \text{ inches}$$

To get the correct answer, you simply use the numbers written on the drawing—these numbers represent length.

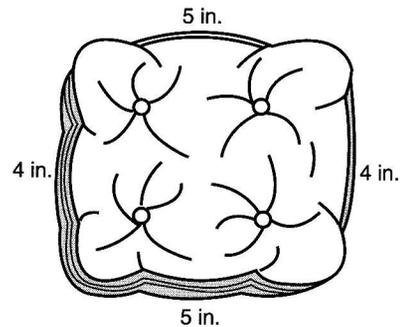
Now look at another way that information can be represented on a drawing.

According to the drawing, how many feet of barbed wire will a farmer need to surround the rectangular field?

- a. 8    b. 10    c. 18    d. 36    e. not enough information given



**What is the length of each side of the rectangle?  
How did you know?**



At first it may seem that some information is left off the drawing. There are four sides to the figure, but only two lengths are labeled. Is the answer **c. 18**? Or is it **e. not enough information given**?

To answer correctly, you need to reread the problem. It states that the figure in the drawing is a *rectangle*. Your knowledge of geometry should remind you that in a rectangle the opposite sides are equal in length.

$$(2 \times 8) + (2 \times 10) = 16 + 20 = 36$$

$\uparrow$                      $\uparrow$   
 2 widths    2 lengths

The correct answer is **d. 36**.

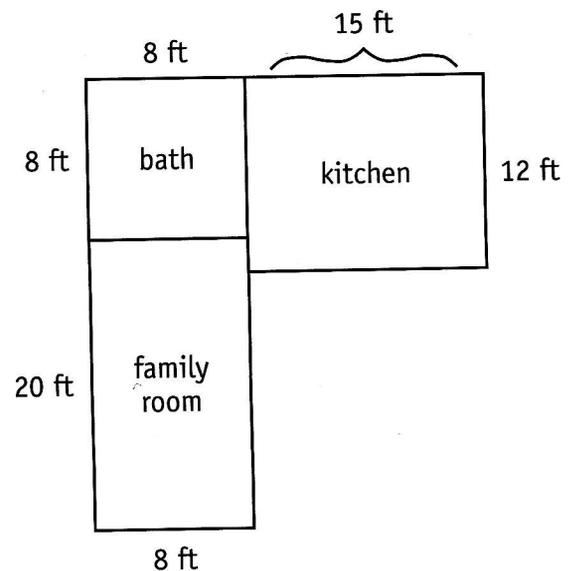
**TIP**  
 If you are having trouble with a geometry problem, reread the problem AND look at the drawing again. You may have overlooked some information.



Solve the following word problems using the information included in the drawings.

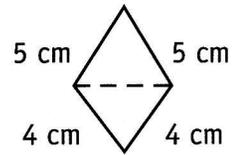
**GE 1.** A sketch of Mrs. Fein's floor plan is at the right. Her bathroom is square in shape, and both the kitchen and family room are rectangles. How many feet of baseboard does Mrs. Fein need to buy to go around the floors of the three rooms (without subtracting for doors)?

- a. 32
- b. 54
- c. 56
- d. 86
- e. 142



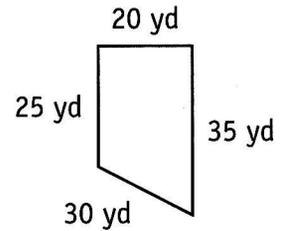
**GE** 2. What is the distance, in centimeters, around the figure at the right?

- a. 23    b. 22    c. 20    d. 18    e. not enough information given

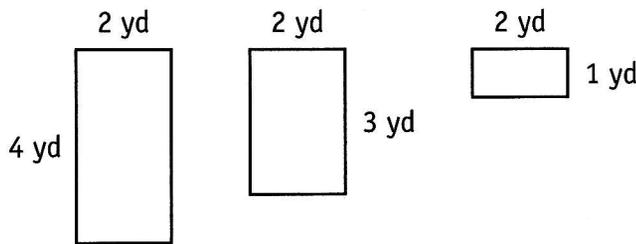


**GE** 3. How many bricks would a contractor need to buy to surround the yard pictured at the right?

- a. 25    b. 35    c. 110    d. 220    e. not enough information given



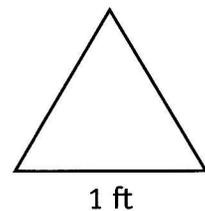
**GE** 4. If fabric costs \$4.99 per square yard, approximately how much will Nina need to pay to cover just the front of the three frames shown below? (**Remember:** Area = length  $\times$  width.)



- a. \$5    b. \$6    c. \$16    d. \$80    e. \$90

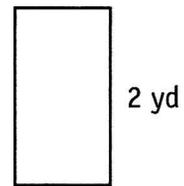
**GE** 5. A teacher cut out 20 triangles from a piece of posterboard. Each triangle had three equal sides as shown at the right. What was the perimeter, in feet, of each triangle?

- a. 1    b. 3    c. 20    d. 60    e. not enough information given



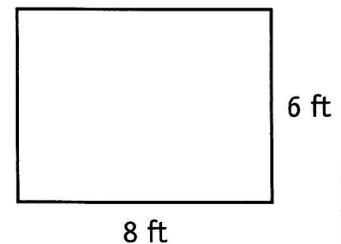
**GE** 6. How many yards of trim does Mr. Roscoe need to completely cover the perimeter of the rectangular window at the right?

- a. 2    b. 4    c. 6    d. 8    e. not enough information given



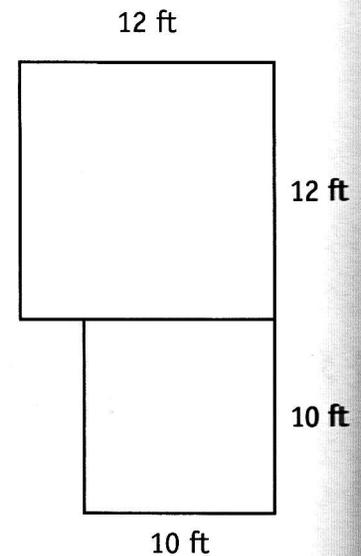
**GE** 7. Harry is ordering tile for the bathroom at the right. How many square feet does he need to order?

- a. 14    b. 28    c. 48    d. 22    e. 20

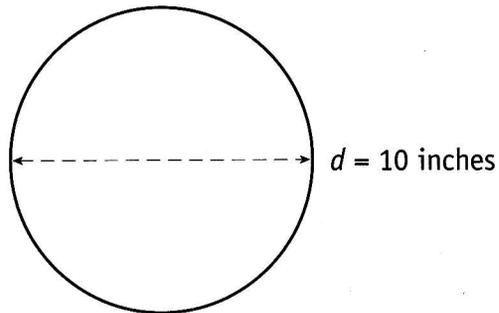


**GE** 8. Marissa wants to put a decorative border around her bedroom and her sitting room. How many feet of border should she buy (without subtracting for the doors)?

- a. 88    b. 244    c. 44    d. 66    e. 56



- GE** 1. An artist begins a sculpture by forming circumferences for three wire circles of the size shown below. Which expression shows the number of inches of wire he will need?

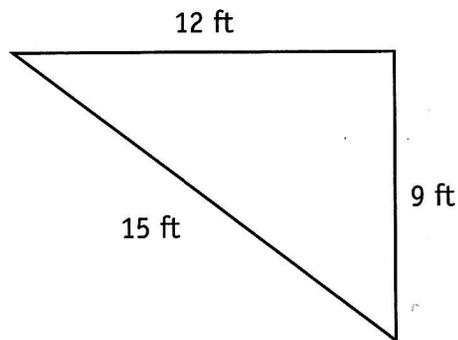


- a.  $3.14 \times 10$                       d.  $3(10 \times 10 \times 3.14)$   
 b.  $3(3.14 \times 10)$                 e. not enough information given  
 c.  $3.14 \times 10 \times 10$

**Formula:**

**Answer:**

- GE** 2. Using the measurements shown below, how many *yards* of fencing will a dog owner need to surround the perimeter of a dog pen?



- a. 54    b. 36    c. 6    d. 12    e. not enough information given

**Formula:**

**Answer:**

