



LESSON 8.4b  
**Getting Real**

Objective Solving Equations to Solve Problems

**Warm-Up**



Determine each quotient using long division.

1.  $860 \div 23$

2.  $611 \div 25$



3. Amit's school is an unusual school. It has 1677 students in grades 3–6. There are twice as many fifth graders as sixth graders and three times as many fourth graders as fifth graders. Finally, there are five times as many third graders as fourth graders. How many fifth graders are in Amit's school?

4. There are two routes Jasmine can take when she bikes home from school—the long way and the short way. The long way is  $1\frac{1}{2}$  times as far as the short way. During one week, she biked a total of 30 miles from school to home. She took the short way three times.

a. What is the distance of the short way?

b. What is the distance of the long way?



In division problems, the remainder can mean different things in different situations. Sometimes the remainder can be ignored, and sometimes the remainder is the answer to the problem. Sometimes the answer is the number without the remainder, and sometimes you need to use the next whole number up from the correct answer.

2. The Carnegie Middle School is hosting a picnic for any fifth grader who will be attending school next year as a sixth grader. The hospitality committee is planning the picnic for 125 students. Each fifth grader will get a sandwich, a drink, and a dessert.

- a. The hospitality committee is ordering large sandwiches that each serve 8 people. If 125 fifth graders are coming to the picnic, how many sandwiches should the committee buy?
  
  
  
  
  
  
  
  
  
  
- b. The committee is planning to have frozen fruit bars for dessert. If frozen fruit bars come in boxes of 12, how many boxes of frozen fruit bars should they order?
  
  
  
  
  
  
  
  
  
  
- c. They will be serving bottles of water. Bottled water comes in cases of 24. How many cases of water will they need? Will there be any extra bottles of water? If so, how many?
  
  
  
  
  
  
  
  
  
  
- d. The fifth graders will take a bus from the elementary school to the middle school on the afternoon of the picnic. If each bus seats 32 passengers, how many buses will be needed to transport the students? How many seats will be empty?

**Show You  
KNOW**

Write Your Own

1. Write your own word problem that can be solved by writing and solving the equation

$$2.4 + x = 5.$$

2. Write your own word problem that can be solved by writing and solving the equation  $4x = 8$ .

**LESSON 8.4b**  
**Getting Real**

Objective

**Solving Equations to Solve Problems****Practice**

1. Solve each two-step inequality and graph the solution set on a number line.

a.  $-17 < 3 - 5x$

b.  $21 - 9x \geq 26$

c.  $-500 \leq 11x - 60$

d.  $-x + 38 < 59$

2. Solve each equation. Show your work.

a.  $3y = 18$

b.  $m + 12 = 29$

c.  $3g = 6.3$

d.  $5x = 12 + 18$