## Lesson 1-1 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Name each operation modeled.

1.

   _____

2.

   _____

▶ Definition Review

Write the vocabulary word that completes each sentence.

3. _____ are any numbers or quantities being added together.

4. _____ is an operation on two numbers that tells how many are left when some or all are taken away.

Identify the parts of each problem.

5. ▢▢▢▢ ＋ ▢▢ ＝ ▢▢▢▢▢▢
   ▢▢▢▢   ▢   ▢▢▢▢

   The addends are _____ and _____.
   The sum is _____.

6. ▢▢▢▢▢ － ▢▢ ＝ ▢▢▢
   ▢▢▢▢   ▢   ▢▢▢

   The difference is _____.
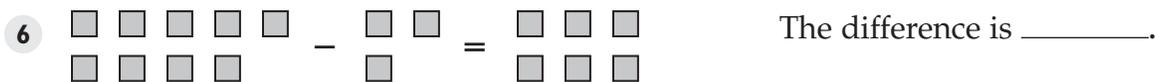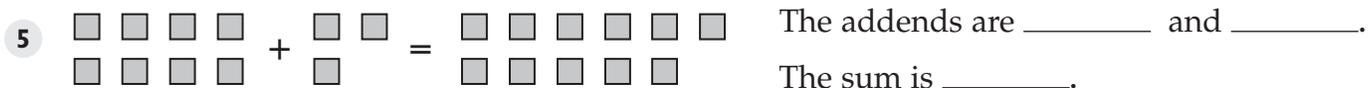
### ▶ Application

Follow the directions to play the game.

- Roll two number cubes. The two numbers are the addends.
- Use tiles to model the addition problem.
- Find the sum.
- Roll two number cubes. Subtract the lesser number from the greater number.
- Use tiles to model the subtraction problem.
- Find the difference.

Math Triumphs

Lesson 1-2

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Name each operation modeled and solve.

1 Dave drank 5 glasses of water each day for 3 days. How many total glasses did he drink?
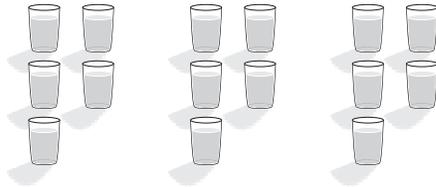
2 Four friends shared 12 crackers equally. How many did each friend have?

_____   _____
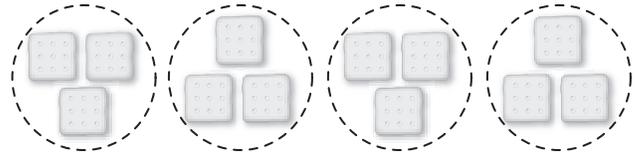
▶ Definition Review

3 The _____ is the answer to a multiplication problem.

4 The _____ is the answer to a division problem.

Identify the part of each problem.

5   □ □ □   ×   □   =   □ □ □
       □ □ □   □   □ □ □
                           □ □ □   The **product** is _____.

6   □ □ □ □   ÷   □ □   =   (□ □)(□ □)
       □ □ □ □   □ □   (□ □)(□ □)
       □ □ □ □   □ □   (□ □)(□ □)   The **quotient** is _____.
   □ □ □ □   □ □   (□ □)(□ □)

▶ Application

Solve.

• Suppose you want to hang 24 pictures on a wall with an equal number of pictures in each row and column.
• Use tiles to model all the different arrangements for the pictures.
• Draw a diagram of each model. (Hint: there are 8 different arrangements.)

Lesson 1-3

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Use the words *equal* or *unequal* to describe each picture.

1

2

6 lb 0 oz   6 lb 0 oz

_____   _____
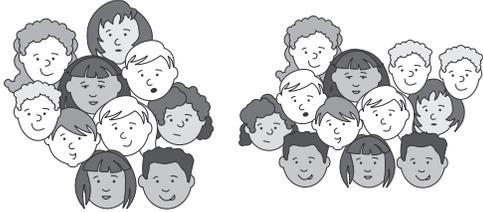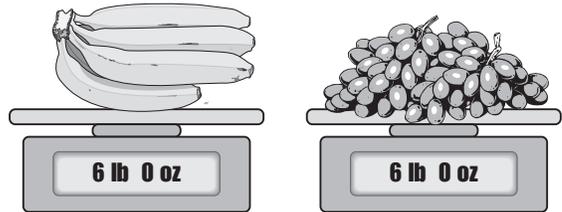
▶ Definition Review

Write the vocabulary word that completes each sentence.

3 The _____ lets you add the same amount to both sides of an equation, keeping the equation balanced.

4 The _____ lets you multiply both sides of an equation by the same amount, keeping the equation balanced.

Name the property used in each model.

5   □ □ □ □ + ■   =   ■ + □ □ □ □   The property modeled is the
     □ □ □ □   ■   ■   □ □ □ □
                                          _____.

6   □ □ × □   =   □ □   The property modeled is the
              □   □ □
              □   □ □
                                _____.

▶ Application

Follow the directions to complete the activity.

- Each pair of students will need a coin, 2 dry-wipe boards, and markers.
- Student #1 writes an expression using either addition or multiplication.
- Student #2 looks at the expression and writes an equivalent expression.
- Students put the expressions together with an equal sign to create an equation. Solve. Student #2 rewrites his or her expression if both sides are not equal.
- Students switch jobs and continue as time allows.

Math Triumphs

Lesson 1-4 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Solve.

1 **SAVINGS** Felipe has $12 and wants to buy a skateboard. How much more does Felipe need to save?

$55.00

2 **SNACKS** Millie bought 3 of the same granola bar. The total cost was $1.95. Write the price of each granola bar on the price tags.

Oats n Honey Granola bar $ *Oats n Honey Granola bar* $ *Oats n Honey Granola bar* $

▶ Definition Review

3 A _____ is a letter or symbol used to represent an unknown quantity.

4 _____ **operations** are operations that undo each other.

Name the variable in each equation.

5 $2 + n = 6$ _____

6 $44 - y = 4$ _____

7 $2 \times a = 50$ _____

8 $\dfrac{\square}{12} = 2$ _____

▶ Application

Solve.

- Find the value of y in each equation.
- Use the key to determine what letters the different values of y represent.
- Write the letter that y represents above the question number.
- Use the key to answer the following question.

What area of math deals with representing numbers with letters and solving for the unknown?

____ ____ ____ ____ ____ ____ ____
5.   3.   1.   6.   2.   4.   5.

KEY:

A = 50	B = 16	C = 24	E = 82	F = 21	G = 28	I = 32	L = 25
M = 41	O = 85	R = 22	T = 13	V = 61	W = 35	Z = 10	

1. $36 - y = 8$

$y =$ _____

2. $\dfrac{y}{4} = 4$

$y =$ _____

3. $\dfrac{y}{5} = 5$

$y =$ _____

4. $y + 20 = 42$

$y =$ _____

5. $5 \times y = 250$

$y =$ _____

6. $y - 80 = 2$

$y =$ _____

Lesson 2-1 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Complete the diagrams to show the Commutative Properties for the equations below.

1 ☐ ☐
☐ ☐ + _____ = ☐ + _____
☐ ☐   ☐

2 ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ = _____
☐ ☐ ☐ ☐

▶ Definition Review

The **Commutative Property of Addition** states that the order in which two numbers are added does not change the sum.

The **Commutative Property of Multiplication** states that the order in which two numbers are multiplied does not change the product.

3 Choose two numbers. Write an equation to demonstrate the **Commutative Property of Addition** with your numbers.

_____ + _____ = _____ + _____

_____ = _____

Next, try to write an equation using the Commutative Property for subtraction with your numbers.

_____ − _____ = _____ − _____

_____ = _____

Is this a true equation? _____

There is no Commutative Property of Subtraction.

▶ Application

Complete the graphic organizer.

Commutative Property of Addition		Commutative Property of Multiplication	
Examples	Non-Examples	Examples	Non-Examples

Math Triumphs

Lesson 2-2

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Solve.

1 Jorge opened a savings account. The spreadsheet shows how much money he saved each month. Find the balances in February and March.

Jorge's Savings Account		
Date	**Amount Deposited**	**Balance**
January	$25	**$25**
February	$20	$_____
March	$12	$_____

▶ Definition Review

The **Associative Property of Addition** states that the grouping of the **addends** does not change the sum.

The **Associative Property of Multiplication** states that the grouping of the **factors** does not change the product.

Name the property shown in each equation.

2 =

_____
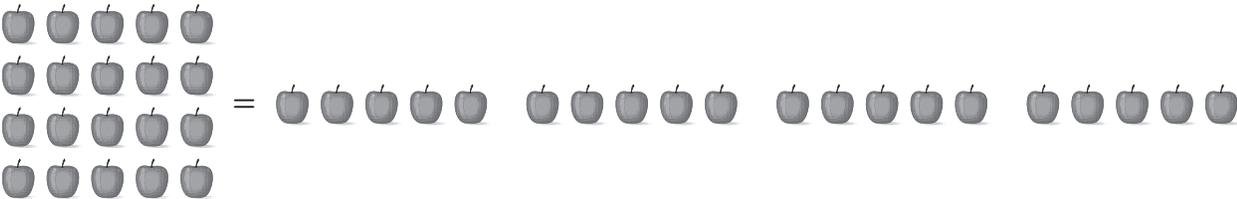
3

_____
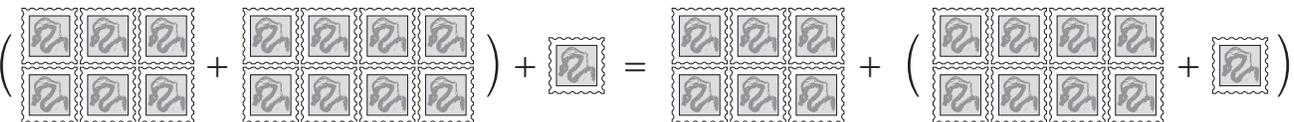
▶ Application

Complete the graphic organizer.

Associative Property of Addition		Associative Property of Multiplication	
Examples	Non-Examples	Examples	Non-Examples

Math Triumphs

Lesson 2-3 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

1 A model for the expression $5(10 + 3)$ is shown below. Label each number below as a sum, addend, or factor.

10   3

_____   _____

5

_____

13
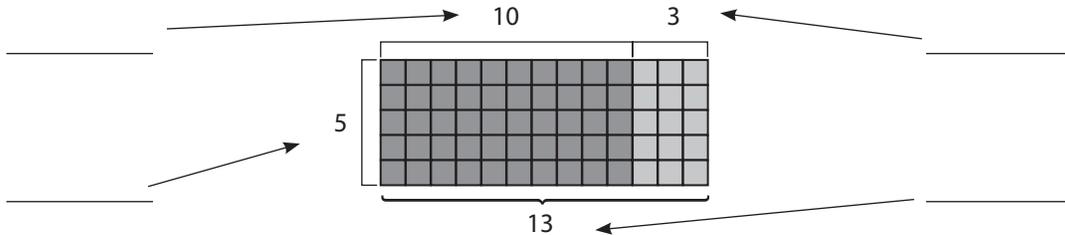
▶ Definition Review

The **Distributive Property of Multiplication** states that to **multiply** a **sum** by a number, you can **multiply** each addend by the same number and add the products.

2 Shown below is demonstration of the Distributive Property.

$$16 \cdot (6 + 2) = 128$$

$$16 \cdot 6 + 16 \cdot 2 = 128$$

Using the same numbers, try to write an equation that demonstrates the Distributive Property for ddivision.

$$16 \div (6 + 2) = \text{\_\_\_\_\_}$$

$$16 \div 6 + 16 \div 2 = \text{\_\_\_\_\_}$$

Does the Distributive Property hold true for division? _____

There is no Distributive Property of Division.

▶ Application

- Gather 30 counters, 10 in one color and 20 in another color.
- Using the Distributive Property, arrange the counters on your desk to demonstrate the following expressions. You can use each color to represent each addend.

• $2 \cdot (7 + 1)$	• $4 \cdot (4 + 2)$
• $3 \cdot (2 + 4)$	• $3 \cdot (6 + 3)$
• $5 \cdot (2 + 4)$	• $6 \cdot (1 + 2)$

Lesson 2-4

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

The expressions below are written in expanded form. Rewrite each expression using an exponent. Identify the base and the exponent for each expression.

1. $6 \cdot 6 \cdot 6$ _____   base: _____   exponent: _____

2. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$ _____   base: _____   exponent: _____

3. $5 \cdot 5 \cdot 5$ _____   base: _____   exponent: _____

4. $8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8$ _____   base: _____   exponent: _____

▶ Definition Review

The order of operations are the rules that tell what order to use when evaluating expressions.

5. There is a saying you can use to help you remember the **order of operations.** What is this

   saying? _____

6. Use 1st, 2nd, 3rd, and 4th to put the steps in the correct order.

   _____ Multiply and divide left to right.

   _____ Find the value within grouping symbols (parentheses).

   _____ Add and subtract left to right.

   _____ Simplify terms with **exponents.**

▶ Application

- Work in pairs. Each student chooses a number from 1 to 6 and writes it on an index card.
- Choose 1 card to become a **base** and 1 card to become an **exponent.**
- Place the cards on the desk with the exponent card above and to the right of the base card. Write down and simplify this exponential expression.
- Now, switch the base and the exponent cards to create a new exponential expression. Write down and simplify this expression.
- Write a statement comparing the two exponential expressions using $<$, $>$, or $=$.
- Continue the exercise until each student has chosen 4 numbers.

Lesson 3-1

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

List the parts of each item.

1 List five necessary parts of a car.

_____

2 List five necessary parts of a dog.

_____

3 List five necessary parts of a house.

_____

▶ Definition Review

A **constant** is a value that does not change.

An **algebraic expression** is a combination of numbers, **variables**, and at least one operation.

4 **Label each part of the expression.**
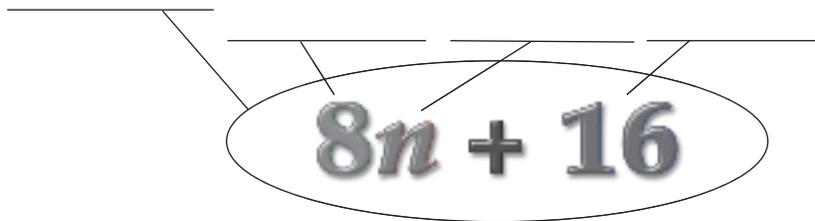
$$8n + 16$$

▶ Application

Follow the directions for the activity.

- Divide into groups of 2 or 3 students.
- Each student will write his or her own expression.
- Students will then trade expressions within their group.
- Students should identify the expression, terms, coefficient, variable, and constant of the expression created by their group members.
- Share two expressions with the rest of the class.
- Write those expressions on the board.
- Review the different parts of each expression.

Lesson 3-2

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Write *increased* or *decreased* to indicate the change in each item.

1

_____

2

_____

3

_____
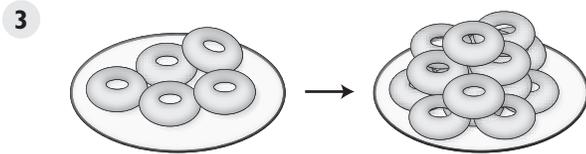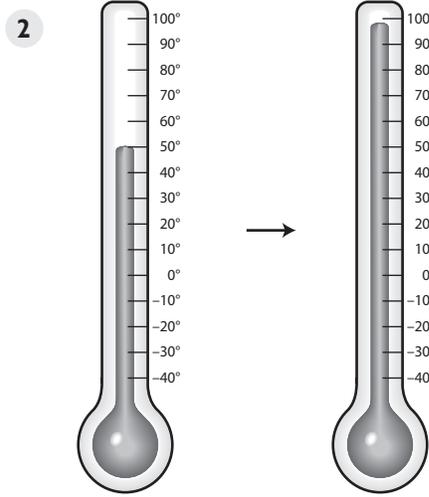
▶ Definition Review

Circle each phrase which indicates addition. Draw a rectangle around each phrase that indicates subtraction. Put an X through each phrase that indicates multiplication. Underline each phrase that indicates division.

| decreased by | separate into groups | times | quotient |

| product | plus | increased by | twice | divided by |

| sum | less than | more than | difference | minus |

▶ Application

Follow the directions for the activity.

- Divide into groups of 2 or 3 students.
- Each group must solve the following problem.
    Rex has $5. On Sunday, he got 10 times that amount from his grandmother for his birthday. He used half of the gift money to pay back his mother for money he borrowed last month. On Monday, he spent $20 on a new DVD. On Tuesday, he earned $12 for cutting the grass. On Wednesday, he found $6 in his jacket pocket. On Thursday, he gave $1 to his little sister for her piggy bank. How much money did Rex have on Friday?
- Use play money to solve if needed.
- Discuss the problem and strategies for solving with the class.

Chapter 3

Math Triumphs

Lesson 3-3 Practice: Vocabulary and English Language Development

Chapter 3

▶ Activate Prior Knowledge

Determine whether the items are similar.

1

2

3

_____   _____   _____
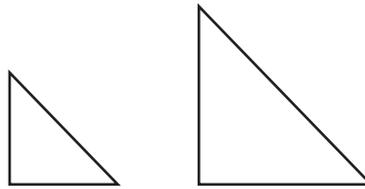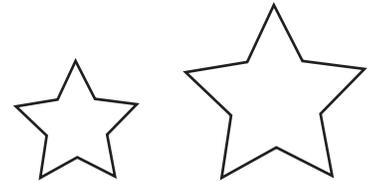
▶ Definition Review

Draw a line to connect the like terms.

4	**5x**	**23**
5	**3y^2**	**n**
6	**14**	**19x**
7	**−8y**	**−10x^2**
8	**6n**	**4y^2**
9	**x^2**	**15y**

▶ Application

Follow the directions for the activity.

- Divide into groups of 5 or 6 students.
- Each student will make up a term.
- Students should limit the variables to x and x^2.
- Each group should create an expression using all of the terms created by its members.
- Students then simplify their expressions by combining all of the like terms.
- Share your group's expressions with the rest of the class.
- Did any groups have an expression that was simplified down to 1 term?
- Did any groups have an expression that could not be simplified?
- If time allows, combine and simplify the expressions from all of the groups.

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Circle the activities that need to be done in a specific order.

1 spackle and paint

2 drive a mile and turn on the radio

3 shower and dry hair

4 read a book and write a book report

5 put on the left shoe and put on the right shoe

6 open the garage door and drive the car out of the garage

7 mix the ingredients and bake a cake

▶ Definition Review

Simplify the expressions following the order of operations.

8 $12 + 8 \div 2$ _____

9 $5 \times 8 + 3$ _____

10 $2 + 7 \times 4$ _____

11 $9 \div 3 - 1 + 6$ _____

▶ Application

Follow the directions for the activity.

- Students will solve the following problems using the rules of the order of operations.
  1. $30 - 10 \div 2 + 14 - 3 \times 2$
  2. $7 \times 6 + 9 \div 3 + 10$
  3. $14 + 21 \div 7 + 8 \times 5$
- Then students will go back and solve the problems from left to right regardless of the order of operation rules.
- Ask what the solutions were for each method.
- Did the solutions differ?
- Discuss the importance of the order of operations.
- Are the rules for the order of operations just a set of agreed-upon rules or is there a logic to the rules?

Chapter 3

Lesson 4-1

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Owen, Dan, and Amos each have a bag of marbles. Describe the relationship between any two bags using each of the following operations.

Owen   Dan   Amos
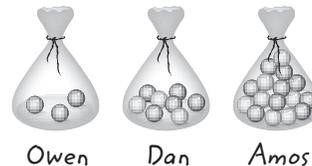
1 addition _____

2 subtraction _____

3 multiplication _____

4 division _____

▶ Definition Review

Write the vocabulary word that completes each sentence.

5 A _____ is two or more equations with two different unknowns.

6 The _____ of a system of equations is an ordered pair that satisfies each equation.

▶ Application

Complete the crossword puzzle.

Across

  1 the operation whose symbol is ·
  4 a combination of constants, variables, and operation symbols
  5 the result of a subtraction problem
  8 the result of a division problem
  11 complete: 10 ____ by 2 is 12
  13 complete: 14 ____ 2 is 12

Down

  1 addition is indicated with "____ than"
  2 subtraction is indicated with "____ than"
  3 the result of a multiplication problem
  6 division is indicated by ____ groups
  7 a mathematical sentence with an = sign
  9 two times a number is ____ the number
  10 complete: 3 ____ 4 is 12
  12 the result of an addition problem

Chapter 4
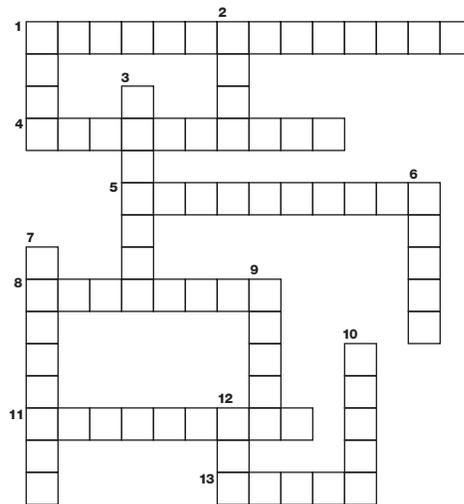
Lesson 4-2 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Write and solve an equation to find the indicated value.

1 Sue owes Nabol money. If Sue repays $8, she owes $7 more. What was the amount, d, of the original debt?

2 Sue owes Nabol money. The original debt was $15. After repaying some, Sue still owes $7. What is the amount, r, that was repaid?

▶ Definition Review

Match the vocabulary word to its description.

3 Addition Property of Equality   _____   a. mathematical sentence with an equal sign

4 equation   _____   b. way to keep an equation true by adding the same amount to each side

5 inverse operation   _____   c. letter that represents an unknown value

6 variable   _____   d. operation that can undo another operation

▶ Application

Follow the directions to solve equations with a physical model.

- Students work in pairs.
- The first student creates an equation with numbers only.
- This student replaces one of the numbers on the left side of the equation with a variable. Rewrite the equation with the variable.
- The first student then represents the equation on a balance scale with blocks. Place a paper bag over the variable on the left side of the scale. (Bag weight may require scale adjustment.)
- The second student begins to solve the equation by removing one block at a time from each side of the scale, keeping the scale balanced.
- This student continues removing blocks until only the bag and its contents remain on the left side of the scale.
- The balanced scale indicates that the blocks on the right must equal those under the bag. This is the solution. Uncover to check.
- Repeat, switching student roles. *(Refer to the example shown.)*

$2 + 4 = 6$ $x + 4 = 6$

Math Triumphs

Chapter 4
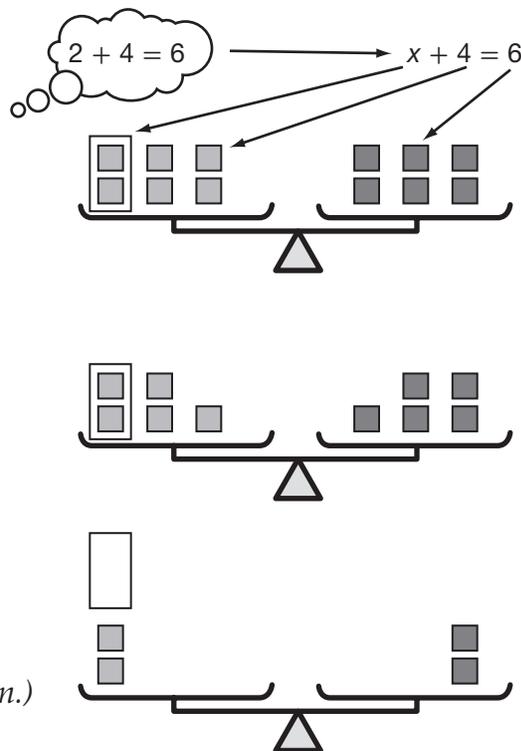
Lesson 4-3 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Show how to check the answer to each equation using inverse operations.

1 $2a = 18; a = 9$

2 $7n = 42; n = 6$

3 $f \div 5 = 9; f = 45$

4 $t \div 6 = 4; t = 24$

▶ Definition Review

Inverse operations are operations that undo each other.

Write the inverse operation for each operation.

5 Addition _____

6 Multiplication _____

7 Division _____

8 Subtraction _____

Identify the parts of each equation's solution.

Place a ① beside any step that shows the Addition Property of Equality, a ② beside any step that shows the Multiplication Property of Equality, and a ③ beside the solution to each equation.

9
$$4q - 9 = 35$$
$$4q - 9 + 9 = 35 + 9$$
$$4q = 44$$
$$4q \div 4 = 44 \div 4$$
$$q = 11$$

10
$$\frac{n}{2} + 1 = 9$$
$$\frac{n}{2} + 1 - 1 = 9 - 1$$
$$\frac{n}{2} = 8$$
$$\frac{n}{2} \cdot 2 = 8 \cdot 2$$
$$n = 16$$

▶ Application

Write four equations using the given multiplication fact. Represent the product with a variable.

$$8 \times 9 = 72$$

Math Triumphs

Chapter 4

Lesson 4-4 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Use the receipt to find the price of a single juice.

1 Write an equation to solve for the variable. _____

2 Solve the equation. Show all steps.

> Juice x 4
> tax $ 0.31
> TOTAL $ 4.11

3 What is the solution? _____

▶ Definition Review

To solve a multi-step equation, you can use **inverse operations** to get the variable alone on one side of the equal sign.

Identify the parts of an equation and its solution.

4 Put a box around an example of each vocabulary term listed below. Place the corresponding circled number beside the box.

① Addition Property of Equality
② Multiplication Property of Equality
③ solution
④ variable
⑤ zero pair

$$\frac{x}{4} + 3 = 9$$

$$\frac{x}{4} + 3 = 9$$

$$\underline{\quad -3 \quad -3 \quad}$$

$$\frac{x}{4} = 6$$

$$\frac{x}{4} \times 4 = 6 \times 4$$

$$x = 24$$

▶ Application

Follow the directions for this activity.

- Students work in groups of 4.
- One student creates an equation in the form $ax + b = c$.
  Example: $5x + 2 = 17$.
- Each of the 3 other students creates a word problem that this equation could represent. (Look at the Problem Solving page for examples).
- Players share and check word problems.
- The first student gives the solution to his or her equation.
- Each of the other 3 students gives the solution in terms of his or her problem. Example: solution of $x = 3$ might represent $3 in a problem.
- Continue until all 4 students have a turn creating an equation.

Math Triumphs

Chapter 4

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Draw items on the empty side of each scale to balance the scale.

$\square = \bigcirc\bigcirc\bigcirc$

$\bigcirc\bigcirc = \triangle\triangle\triangle$

1

2
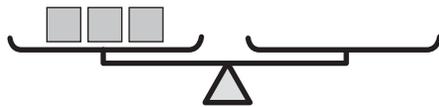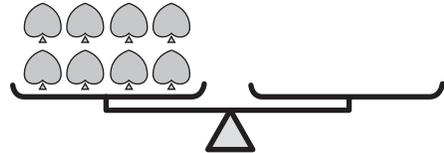
▶ Definition Review

A **decimal** is a number that represents whole numbers and fractions.

Write each fraction as a decimal.

3 $\dfrac{1}{5}$ _____

4 $\dfrac{2}{4}$ _____

Write each fraction as a percent.

5 $\dfrac{7}{4}$ _____

6 $\dfrac{2}{5}$ _____

▶ Application

Follow the directions for the activity.

- Students work in groups of 4.
- One student creates an equation in the form $ax + b = c$, using either decimals or fractions for the values for a, b, and c.
- Each of the 3 other students creates a word problem that could be represented by this equation. (See Problem Solving page for examples.)
- Players share and check word problems.
- The first student gives the solution to his or her equation.
- Each of the other 3 students gives the solution in terms of his or her problem. Example: solution of $x = 3.30$ might represent $3.30.
- Continue until all 4 students have a turn creating an equation.

Lesson
5-1 Practice: Vocabulary and English
Language Development

▶ Activate Prior Knowledge

Find the needed test score.

To find the average of 5 test scores, you find the sum
of all of the scores and then you divide the sum by 5.

Celia Test Results:	Grade Chart:
A 87	A 95–100
B 96	B 85–94
C 94	C 75–84
D 88	D 70–74
E ___	F below 70

1 What is the sum of Celia's 4 test scores? _____

2 According to the grade chart, to make a grade of B or better, Celia must

have an average of at least _____.

3 Write an inequality that could be used to find the score Celia needs on

the 5th test in order to make at least a B in the class. _____

▶ Definition Review

When translating mathematical sentences from words to symbols, you
can often change each word or phrase directly to a symbol.

**Write the correct symbol beside each phrase. Symbols may be used
more than once.**

4 greater than or equal to _____   **5** not equal to _____

6 more than _____   **7** less than _____

8 at least _____   **9** at most _____

10 greater than _____   **11** less than or equal to _____

12 not the same as _____   **13** fewer than _____

▶ Application

Follow the directions to play the game.

- Make 18 cards, 3 with each symbol: $=, \neq, <, \leq, >, \geq$
- Work in pairs. Cards are shuffled and placed facedown.
- One student turns the top card faceup.
- The first student to recognize the meaning of the symbol shouts it out.
  If he or she is correct, then the student keeps the card. If not, the card
  is given to the other student. Continue the game until all cards have
  been used.
- The student with the most cards is the winner of the game.

Math Triumphs

Lesson 5-2 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Compare the amounts.
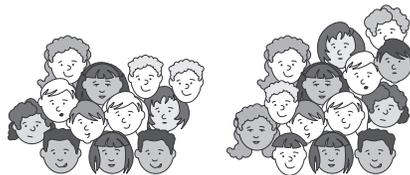
Diego's team   Jim's team

1 Write an inequality comparing the number of players on Diego's team to the number of players on Jim's team. _____

2 Each team had one player added to its roster. Write an inequality comparing the number of players on Diego's team to the number of players on Jim's team. _____

▶ Definition Review

Addition and subtraction are **inverse operations.**

Answer the following.

3 Name two **inverse operations.** Explain why they are inverses of each other.

_____

_____

▶ Application

Follow the directions for the activity.

- Work in pairs. Make 2 sets of 6 cards having the symbols:
  $=, \neq, <, \leq, >,$ and $\geq$.
- Shuffle the cards and place them facedown.
- Each student chooses a number less than 10 and announces it.
- Each student then picks a card from the pile.
- Each student writes an inequality on the card using the symbol on the card and the two chosen numbers.
- Then students check each other's results.
- Repeat activity six times.

Math Triumphs

5-3 Practice: Vocabulary and English Language Development

Lesson 5-3

▶ Activate Prior Knowledge

Compare the amounts.

Alicia's Candy   Oscar's Candy

1   Write an inequality comparing the number of candies Alicia has to the number of candies Oscar has.   _____

▶ Definition Review

Multiplication and division are **inverse operations.**

Match the symbol to its meaning.

2   not equal to _____   a. $\geq$

3   less than _____   b. $\neq$

4   greater than or equal to _____   c. $\leq$

5   greater than _____   d. $>$

6   less than or equal to _____   e. $<$

▶ Application

Follow the directions to play the game.

- Two to four players may play this memory game.
- Write each of the following on one of 36 cards:

$+1$	-1	$\times 1$	$\div 1$	$+2$	-2	$\times 2$	$\div 2$
$+3$	-3	$\times 3$	$\div 3$	$+4$	-4	$\times 4$	$\div 4$
$+5$	-5	$\times 5$	$\div 5$	$+6$	-6	$\times 6$	$\div 6$
$+7$	-7	$\times 7$	$\div 7$	$+8$	-8	$\times 8$	$\div 8$
$+9$	-9	$\times 9$	$\div 9$				

- Shuffle the cards and place facedown in a 6 by 6 arrangement.
- A player turns two cards faceup.
  - If the cards are inverse operations, the player keeps the cards and turns up two more cards.
  - If the cards are not inverse operations, the player turns the cards facedown again and his or her turn is over.
- The next player repeats these steps.
- Play continues until all cards have been collected.
- The winner is the player with the most cards.

Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Find, solve, and interpret.

County Fair	
Admission	$10.00
Rides	$2.00
Games	$1.50
Petting Zoo	$1.00

Jeff and Amy both attended this year's county fair.
Look at the sign shown at the right and answer the questions.

1 Amy spent at most $17 on admission, rides, and the petting zoo. Write and

solve an inequality to find the number of rides, r, that Amy rode. _____

▶ Definition Review

The **Addition Property of Inequality** states that adding the same amount to both sides of an **inequality** keeps the **inequality** balanced.

The **Multiplication Property of Inequality** states that multiplying the same amount to both sides of an **inequality** keeps the **inequality** balanced.

2 Solve the equation $5x + 2 > 37$. Show all work.

3 Place a box around the step in Exercise 2 that demonstrates the **Multiplication Property of Inequality**.

▶ Application

**Solve each equation or inequality and describe your results in words. Compare and discuss the results.**

$3n - 1 \ ? \ 11$

$3n - 1 < 11$	$3n - 1 = 11$	$3n - 1 > 11$

$3n - 1 \leq 11$	$3n - 1 \neq 11$	$3n - 1 \geq 11$
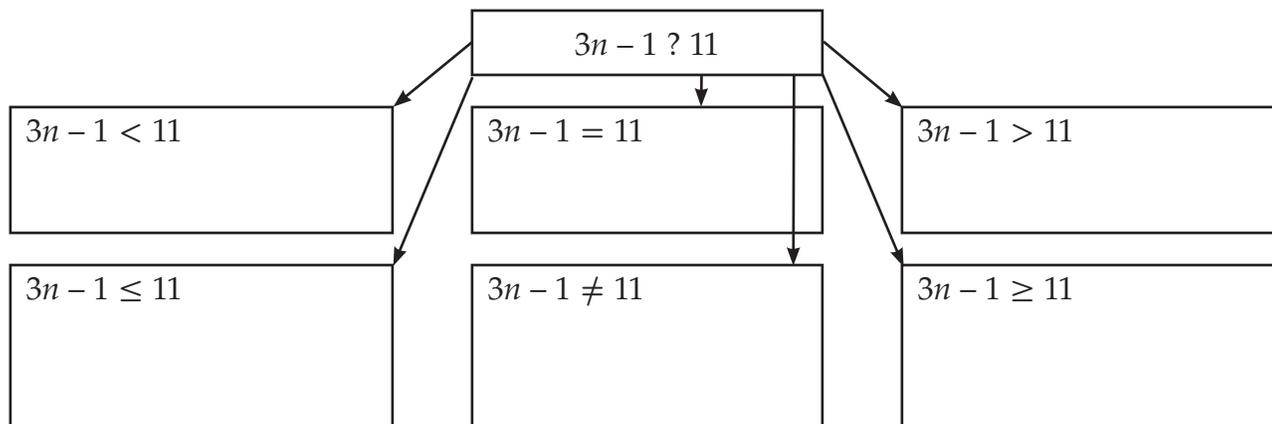
Lesson 5-5 Practice: Vocabulary and English Language Development

▶ Activate Prior Knowledge

Interpret and graph.

1 A number is more than 7.

0 1 2 3 4 5 6 7 8 9 10
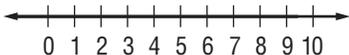
2 A number is less than 2.

0 1 2 3 4 5 6 7 8 9 10
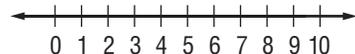
▶ Definition Review

A **closed circle** indicates the value is part of the solution.

An **open circle** indicates the value is not part of the solution.

The equation $x = 4$ has one solution, which is 4. The **inequality** $x > 4$ has an infinite number of solutions, such as 4.01, 4.2, 5, 25, 407. Because you cannot list all of the solutions, you can show them on a number line.

Fill in the blank.

For each word or phrase, write the symbol that it represents in the first blank.

In the second blank, describe the graph by describing the circle as open or closed and giving the direction of the shaded line.

3 greater than _____   _____

4 less than or equal to _____   _____

5 greater than or equal to _____   _____

6 less than _____   _____

▶ Application

Follow the directions for the activity.

- Work in pairs. Each pair needs a number cube and tools for drawing number lines.
- The first student rolls the number cubes and states an inequality using the numbers rolled. (Use words such as *greater than*, *less than*, *at most*, *at least*, and so on.)
- The second student writes this inequality and graphs it on a number line.
- The first student checks to see if the second student is correct.