Name _____ Date _____

CHAPTER 1

Parents as Partners

For use with Expressions, Equations, and Functions

Chapter Overview **One way you can help your student succeed in this chapter is by discussing the lesson goals in the chart below. When a lesson is completed, ask your student the following questions. "What were the goals of the lesson? What new words and formulas did you learn? How can you apply the ideas of the lesson to your life?"**

Lesson Title	Lesson Goals	Key Applications
Evaluate Expressions	Evaluate algebraic expressions and use exponents.	• Movies • Storage Cubes • Football
Apply Order of Operations	Use the order of operations to evaluate expressions.	• Litter Collection • Sales • Online Shopping
Write Expressions	Translate verbal phrases into expressions.	• Tips • Cell Phones • Digital Photos
Write Equations and Inequalities	Translate verbal sentences into equations or inequalities.	• Mountain Biking • Compact Discs • Baking Measurements
Use a Problem Solving Plan	Use a problem solving plan to solve problems.	• Running • Framing • Hiking
Use Precision and Measurement	Compare measurements for precision	• Reflecting Pool • Health • Gardening
Represent Functions as Rules and Tables	Represent functions as rules and as tables.	• Concert Tickets • Yard Sale • Savings
Represent Functions as Graphs	Represent functions as graphs.	• SAT Scores • Guitar Sales • Elections

Big Ideas for this Chapter

In this chapter, you will apply the big ideas listed in the Chapter Opener and reviewed in the Chapter Summary.

1. Writing and evaluating algebraic expressions
2. Using algebraic expressions to write equations and inequalities
3. Representing functions as verbal rules, equations, tables, and graphs

Name _____ Date _____

CHAPTER SUPPORT

CHAPTER 1

Parents as Partners *continued*

For use with Expressions, Equations, and Functions

Key Ideas Your student can demonstrate understanding of key concepts by working through the following exercises with you.

Lesson	Exercise
Evaluate Expressions	Find the volume of a cube-shaped CD player, where each side s is 23 centimeters. Use the formula $V = s^3$.
Apply Order of Operations	Evaluate $10(x - 3) + 6$ and $10x - 3 + 6$ when $x = 5$.
Write Expressions	The student council is holding a craft show as a fundraiser. Each exhibitor is charged \$40 for a table and the admission price is \$3.50 per person. Write an expression for the amount (in dollars) raised. There are 38 exhibitors and 420 people attend the craft show. Find the amount raised.
Write Equations and Inequalities	It costs \$380 to attend a leadership conference. The school will contribute \$75. You can save \$35 per week. Use the inequality $35w + 75 \geq 380$ to model the situation. What does w represent? How many weeks will it take to save enough money?
Use a Problem Solving Plan	You are framing a picture that is 9.5 inches long and 7 inches wide. The picture is bordered by 2-inch matting. The wood to make the frame is 1.5 inches wide. Find the length and width of the frame. What is the total area of the framed picture? Use a problem solving plan to find the solution.
Use Precision and Measurement	At the gas pump, the meter reads 12.82 gallons. Ted says he bought 12.8 gallons of gas. Which measurement is more precise?
Represent Functions as Rules and Tables	Make a table for the function $y = 2x - 2$ with domain 1, 2, 3, 4, and 5. Identify the range of the function.
Represent Functions as Graphs	Graph the function $y = 3x + 1$ with domain 0, 1, 2, 3, and 4.

Home Involvement Activity

Directions Use exactly five 5's and grouping symbols to make each whole number from one to ten. For example, $1 = \frac{5}{5} + \left(\frac{5 - 5}{5}\right)$.

Answers

1: 12,167 cm^3 **2:** 26; 53 **3:** $40e + 3.5p$; \$2990 **4:** w represents the number of weeks needed to save; 9 weeks **5:** 16.5 in.; 14 in.; 321 in.^{2} **6:** 12.82

7:

x	1	2	3	4	5
y	0	2	4	6	8

8: range: 0, 2, 4, 6, 8