NAME _____ DATE _____

Parent Guide for Student Success

For use with Chapter 1: Connections to Algebra

Chapter Overview One way that you can help your student succeed in Chapter 1 is by discussing the lesson goals in the chart below. When a lesson is completed, ask your student to interpret the lesson goals for you and to explain how the mathematics of the lesson relates to one of the key applications listed in the chart.

Lesson Title	*Lesson Goals*	*Key Applications*
1.1: Variables in Algebra	Evaluate a variable expression. Write a variable expression that models a real-life situation.	• Hiking Trips • Mountain Climbing • Batting Average
1.2: Exponents and Powers	Evaluate expressions containing exponents. Use exponents in real-life problems.	• Aquariums • Sculpture • Rain Forest Pyramid
1.3: Order of Operations	Use the order of operations to evaluate algebraic expressions. Use a calculator to evaluate real-life expressions.	• Retail Sales • Football Uniforms • Admission Prices
1.4: Equations and Inequalities	Check solutions of equations and inequalities. Solve equations using mental math. Use equations and inequalities in real-life situations.	• Veterinarian • Computer Center • Aircraft Design
1.5: A Problem Solving Plan Using Models	Translate verbal phrases into algebraic expressions. Use a verbal model to write an algebraic equation or inequality to solve a real-life problem.	• Dining Out • Fundraising • Law Enforcement
1.6: Tables and Graphs	Use tables and graphs to organize real-life data.	• Eating Habits • Movie Making • Salaries
1.7: An Introduction to Functions	Identify a function and make an input-output table for a function. Write an equation for a real-life function.	• Scuba Diving • Apple Trees • Housesitting

Study Strategy

Keeping a Math Notebook is the study strategy featured in Chapter 1 (see page 2). Be sure your student has set up a notebook in which to keep math notes. Encourage your student to record notes in math class each day and to review them at home each night. Your student can use these math notes to share with you what was done in class.

NAME _____ DATE _____

Parent Guide for Student Success

For use with Chapter 1

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

Lesson	Exercise
1.1	The simple interest earned on money P at an annual interest rate r for t years is given by the formula Prt. Find how much interest you would earn on $900 deposited in a bank at 4% simple interest for 0.75 years.
1.2	Evaluate $5x^2$ and $(5x)^2$ when $x = 2$.
1.3	The area of a trapezoid can be found with the formula $A = \frac{1}{2}h(b_1 + b_2)$. Find the area of a trapezoid with a height of 9 meters and bases of 7 and 11 meters.
1.4	You are taking a family trip. You need to travel 270 miles and can average 60 miles per hour. Use $60t \geq 270$ to model the situation. What do 60, t, and 270 represent? Can you make the trip in 4 hours? Can you make the trip in 5 hours?
1.5	Write an algebraic model and solve it to find how many soft drinks you bought last week at $.60 each if you spent $5.40.
1.6	In 1996, the average personal income of people living in Kansas was $23,281. In Alabama, it was $20,055; in California, $25,144; in Massachusetts, $29,439; in Montana, $19,047; in New York, $28,782; and in Texas, $22,045. What scale might you use to make a bar graph of these data?
1.7	Make an input-output table for the function $y = 8 - 3x$. Use 0, 1, and 2 as the domain.

Home Involvement Activity

Directions: Use exactly four 4's and grouping symbols to make each whole number from one to ten. For example, $1 = \frac{4}{4} + (4 - 4)$.

Activity Sample Answers

$1 = \frac{4}{4} + (4 - 4)$ $2 = \frac{4}{4} + \frac{4}{4}$ $3 = \frac{(4 + 4 + 4)}{4}$ $4 = 4 + \left(\frac{4 - 4}{4}\right)$ $5 = \frac{(4 \cdot 4 + 4)}{4}$

$6 = 4 + \left(\frac{4 + 4}{4}\right)$ $7 = 4 + 4 - \left(\frac{4}{4}\right)$ $8 = 4 + 4 + (4 - 4)$ $9 = 4 + 4 + \left(\frac{4}{4}\right)$ $10 = \frac{(44 - 4)}{4}$

Answers

1.1: $27 **1.2:** 20, 100 **1.3:** 81 m² **1.4:** 60 is the speed, t is the driving time, and 270 is the distance traveled; no; yes **1.5:** 9 soft drinks **1.6:** *Sample answer:* from 0 to $30,000 by $5000 **1.7:** 8, 5, 2