

**Parent Guide for Student Success**

For use with Chapter 1

**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.

| <i>Lesson Title</i>   | <i>Lesson Goals</i>   | <i>Key Applications</i>  |
|---|---|--|
| <b>1.1: Real Numbers and Number Operations</b>                | Use a number line to graph and order real numbers. Identify properties and use operations with real numbers.            | <ul style="list-style-type: none"> <li>• Money Exchange</li> <li>• Masters Golf</li> <li>• Bar Codes</li> </ul>        |
| <b>1.2: Algebraic Expressions and Models</b>                  | Evaluate algebraic expressions and simplify algebraic expressions by combining like terms.                              | <ul style="list-style-type: none"> <li>• Music</li> <li>• Average Salaries</li> <li>• Physical Therapy</li> </ul>      |
| <b>1.3: Solving Linear Equations</b>                          | Solve linear equations and use linear equations to answer questions about real-life situations.                         | <ul style="list-style-type: none"> <li>• Real Estate</li> <li>• Photo Framing</li> <li>• Stockbroker</li> </ul>        |
| <b>1.4: Rewriting Equations and Formulas</b>                  | Solve an equation for one of its variables and rewrite common formulas.   | <ul style="list-style-type: none"> <li>• Benefit Concert</li> <li>• Honeybees</li> <li>• Baseball</li> </ul>           |
| <b>1.5: Problem Solving Using Algebraic Models</b>            | Follow a general plan to solve a real-life problem and incorporate other strategies into the plan.                      | <ul style="list-style-type: none"> <li>• Water Conservation</li> <li>• Railroads</li> <li>• The Chunnel</li> </ul>     |
| <b>1.6: Solving Linear Inequalities</b>                       | Solve simple and compound inequalities.   | <ul style="list-style-type: none"> <li>• Traffic Enforcement</li> <li>• Mars</li> <li>• Winter</li> </ul>              |
| <b>1.7: Solving Absolute Value Equations and Inequalities</b> | Solve absolute value equations and inequalities. Use absolute value equations and inequalities in real-life situations. | <ul style="list-style-type: none"> <li>• Quality Control</li> <li>• Palm Widths</li> <li>• Sports Equipment</li> </ul> |

**Study Strategy**

**Making a Vocabulary File** is the study strategy featured in Chapter 1 (see page 2). Be sure your student has index cards and a box or envelope to store them. Encourage your student to make cards each day for any new terms and to use these cards to review regularly at home. You can “quiz” your student by reading the term and asking for the definition or vice versa.

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

| <b>Lesson</b> | <b>Exercise</b>  |
|---------------|--|
| <b>1.1</b>    | How much lower is Alamorio at $-135$ feet than Orita at $-92$ feet? Both are in Imperial Valley, California.   |
| <b>1.2</b>    | Evaluate $\frac{(x-4)^2}{xy}$ when $x = 3$ and $y = -2$ .  |
| <b>1.3</b>    | Pants are on sale for \$36, which is 25% off the regular price. What is the regular price?   |
| <b>1.4</b>    | The formula for the volume of a rectangular prism is $V = lwh$ , where $l$ is the length, $w$ is the width, and $h$ is the height of the prism. Solve this formula for $h$ .   |
| <b>1.5</b>    | The education support group has raised \$20,500 so far. How many raffle tickets priced at \$5 each must be sold in order to meet the \$22,000 goal?                            |
| <b>1.6</b>    | Solve $4x - 9 > 2x + 11$ .   |
| <b>1.7</b>    | The healthy weight of an adult who is 5 feet 7 inches tall is between 121 pounds and 159 pounds, inclusive. Write an absolute value inequality describing the healthy weights. |

**Home Involvement Activity**

**Directions:** Write and solve an equation to find how many minutes you can talk long distance for \$20 using your current long distance service. If rates vary for different times and places, describe when and where you would like to call. Write and solve an inequality to find how long you can talk and spend no more than \$35.

$$1.1: 43 \text{ ft} \quad 1.2: -\frac{6}{1} \quad 1.3: \$48 \quad 1.4: h = \frac{wV}{l} \quad 1.5: 300 \quad 1.6: x < 10 \quad 1.7: |x - 140| \leq 19$$

**ANSWERS**