NAME _____ DATE _____

Parent Guide for Student Success

For use with Chapter 6

Chapter Overview **One way that you can help your student succeed in Chapter 6 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*
6.1: Solving One-Step Linear Inequalities	Graph linear inequalities in one variable. Solve one-step linear inequalities.	• Running a Race • Steel Arch Bridge • Musical Instruments
6.2: Solving Multi-Step Linear Inequalities	Solve multi-step linear inequalities. Use linear inequalities to model and solve real-life problems.	• Population • Fly Fishing Business • Animated Films
6.3: Solving Compound Inequalities	Write, solve, and graph compound inequalities. Model a real-life situation with a compound inequality.	• Elevations • Prices of Fine Art • Solar System
6.4: Solving Absolute-Value Equations and Inequalities	Solve absolute-value equations and inequalities.	• Quality Control • Boxing • Fireworks
6.5: Graphing Linear Inequalities in Two Variables	Graph a linear inequality in two variables. Model a real-life situation using a linear inequality in two variables.	• Treasure Diving • Football • Nutrition
6.6: Stem-and-Leaf Plots and Mean, Median, and Mode	Make and use a stem-and-leaf plot to put data in order. Find the mean, median, and mode of data.	• Age Distribution • Manufacturing • Number of Households
6.7: Box-and-Whisker Plots	Draw a box-and-whisker plot to organize real-life data. Read and interpret a box-and-whisker plot of real-life data.	• Meteorology • Cellular Telephones • Skyscrapers

Study Strategy

Showing Your Work is the study strategy featured in Chapter 6 (see page 332). Encourage your student to record all steps on assignments since this helps to prevent errors and makes it easier to find and correct mistakes that do occur. When an answer is incorrect, you may be able to help your student in identifying the mistake and deciding how to correct the steps.

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

Lesson	*Exercise*
6.1	Solve the inequality. $-5x < 45$ Is -10 a solution to the inequality? Is -8?
6.2	The Art Club is making crafts to raise money for art supplies. Each craft kit costs \$3.84. The club spent \$8 on advertising and plans to sell the crafts for \$5 each. Write and solve an inequality to find how many crafts the club needs to sell to make a profit of at least \$224.
6.3	Solve the inequality. $9 < 3 - 2x \leq 11$
6.4	A box of cereal must weigh between 245 grams and 255 grams. Write an absolute-value inequality to represent this requirement.
6.5	You are buying party favors. Hats cost \$0.22 each and small games cost \$0.34 each. You have a maximum of \$10 to spend on the favors. Write an inequality that models the different number of hats and small games you can purchase. Can you buy 20 of each? Can you buy 15 of each?
6.6	The numbers shown below represent the scores of ten students on the SAT math test. Find the mean, median, and mode of the data. 470, 512, 516, 485, 475, 523, 512, 518, 501, 497
6.7	Find the first, second, and third quartiles of the data. 19, 25, 16, 18, 17, 22, 22, 16, 24, 20

Home Involvement Activity

You will need: Paper, pencil, 10 coins

Directions: Toss up the ten coins and let them fall on a soft surface. Count the number of coins that land with heads up. Repeat for 25 trials, recording the data in a table. Find the mean, median, and mode of your data. Make a box-and-whisker plot.

Answers

6.1: $x > -9$; no; yes **6.2:** $5x - (3.84x + 8)$ 224; at least 200 **6.3:** $-4 \leq x < -3$ **6.4:** $|x - 250|$ 5 **6.5:** $0.22x + 0.34y \leq 10$; no; yes **6.6:** mean 500.9, median 506.5, mode 512 **6.7:** 17, 19.5, 22

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