

**CHAPTER
2****Parents as Partners***For use with Solving Linear Equations*

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
Find Square Roots and Compare Real Numbers	Find square roots and compare real numbers	<ul style="list-style-type: none"> • Furniture • Mazes • Pyramids of Giza
Solve One-Step Equations	Solve one-step equations using algebra.	<ul style="list-style-type: none"> • Olympics • Crafts • Wheelchairs
Solve Two-Step Equations	Solve two-step equations.	<ul style="list-style-type: none"> • Scuba Diving • Dance Classes • Car Repair
Solve Multi-Step Equations	Solve multi-step equations.	<ul style="list-style-type: none"> • Birds • Basketball • Lifeguard Training
Solve Equations with Variables on Both Sides	Solve equations with variables on both sides.	<ul style="list-style-type: none"> • Car Sales • Camping • High-Speed Internet
Write Ratios and Proportions	Find ratios and write and solve proportions.	<ul style="list-style-type: none"> • Volleyball • Elevators • Pizza Sales
Solve Proportions Using Cross Products	Solve proportions using cross products.	<ul style="list-style-type: none"> • Seals • Maps • Digital Photographs
Rewrite Equations and Formulas	Write equations in function form and rewrite formulas.	<ul style="list-style-type: none"> • Temperature • Carpentry • Bowling

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. Solving equations in one variable
2. Solving proportion problems
3. Rewriting equations in two or more variables

CHAPTER
2

Parents as Partners *continued*

For use with Solving Linear Equations

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

Lesson	Exercise
Find Square Roots and Compare Real Numbers	Evaluate the expression. Approximate the square root to the nearest integer, if necessary. (a) $\sqrt{169}$ (b) $-\sqrt{25}$ (c) $\sqrt{81}$ (d) $-\sqrt{196}$
Solve One-Step Equations	Solve the equation. Check your solution. (a) $x + 7 = 4$ (b) $y - 1 = 12$ (c) $-6x = 48$ (d) $-14 = \frac{2}{3}y$
Solve Two-Step Equations	Your hockey team pays \$1750 to a local ice rink to use its facilities for the season. There is a one-time deposit of \$250 and weekly rental charges are \$125. How many weeks long is the season?
Solve Multi-Step Equations	Solve the equation. Check your solution. (a) $5x + 17 - 4x = 36$ (b) $6y + 3y - 12 = -48$ (c) $8x - 2(x + 7) = 52$ (d) $-\frac{2}{5}(10y - 5) = 14$
Solve Equations with Variables on Both Sides	Solve the equation, if possible. (a) $n + 7 = n + 3$ (b) $13m = 27 + 4m$ (c) $18x + 34 = 7x - 65$ (d) $4 - 12y = 2(-6y + 3)$
Write Ratios and Proportions	There are 150 cats and dogs at a local animal shelter. If the ratio of cats to dogs is 3 : 2, how many dogs are at the shelter?
Solve Proportions Using Cross Products	Solve the proportion. Check your solution. (a) $\frac{3}{x} = \frac{20}{60}$ (b) $\frac{14}{9} = \frac{56}{y}$ (c) $\frac{12}{4x} = \frac{-3}{8}$ (d) $\frac{y + 2}{5y - 4} = \frac{4}{6}$
Rewrite Equations and Formulas	Write $18 = 6y + 30x$ in function form.

Home Involvement Activity

Directions Conduct a survey about any subject of your choice. Make sure that there are at least 4–5 possible answers to your question. Then write ratios comparing the number of responses for each answer to the total number of responses and to each other.

Answers
 1: (a) 13 (b) -5 (c) 9 (d) -14 2: (a) -3 (b) 13 (c) -8 (d) -21 3: 12 weeks
 4: (a) 19 (b) -4 (c) 11 (d) -3 5: (a) no solution (b) 3 (c) -9 (d) no solution
 6: 60 dogs 7: (a) 9 (b) 36 (c) -8 (d) 2 8: $y = -5x + 3$

Answers

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