Math Busters Word Problems Reproducible Worksheets

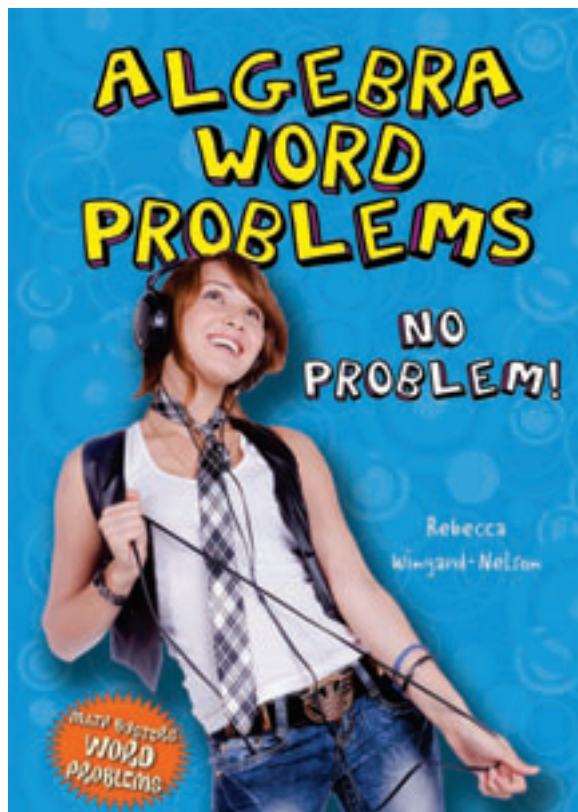Reproducible Worksheets
for:

Algebra Word Problems
No Problem!

Math Busters Word Problems Reproducible Worksheets

Reproducible Worksheets for:

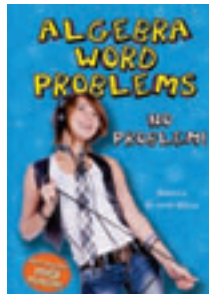# Algebra Word Problems
No Problem!

These worksheets practice math concepts explained in **Algebra Word Problems: No Problem!** (ISBN: 978-0-7660-3367-2), written by **Rebecca Wingard-Nelson**.

Math Busters Word Problems reproducible worksheets are designed to help teachers, parents, and tutors use the books from the Math Busters Word Problems series in the classroom and the home. The answers to the problems are contained in the Answers section starting on page 56.

Teachers, librarians, tutors, and parents are granted permission and encouraged to make photocopies of these worksheets.

Visit www.enslow.com and search for the **Math Busters Word Problems** series to download worksheets for the following titles:

Algebra Word Problems No Problem! 978-0-7660-3367-2	Graphing and Probability Word Problems No Problem! 978-0-7660-3372-6
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Problem-Solving Steps

1. What are the four problem-solving steps?

2. What can you do to help yourself understand a question?

3. Name at least three plans you can use to solve math problems.

4. What should you do if your plan for solving a problem does not work?

5. How can reviewing the problem after you have an answer help you in the future?

Problem-Solving Steps

Laura spent $16 on a pedicure and $30 on new sandals. How much did Laura spend in all?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Is the math correct?

What other plan could you use to solve this problem?

Integers

Cheryl's apartment manager turns on the air-conditioning when the temperature outside is 86 degrees Fahrenheit or higher. The temperature today is 94 degrees Fahrenheit. What integer represents today's temperature?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Integers

The city of New Orleans has an average elevation of 8 feet below sea level. What integer represents the average elevation of New Orleans?

Babylonian civilization ended in 539 B.C. What integer could be used to represent the end of Babylonian civilization?

Comparing Numbers

Alisa and Becky each have 120 fraction problems to solve for homework. Alisa has solved 2/9 of the problems so far, and Becky has solved 1/2 of the problems. Which student has solved more of the fraction problems?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Comparing Numbers

The school's hot lunch provided 3/8 of the recommended daily number of calories for a teenager. Lucinda packed a lunch that provided 1/3 of the recommended daily calories. Which lunch contained more calories?

During track practice, runners were supposed to walk or jog ten laps. Sammi jogged 1/4 of the laps. Josh jogged 2/5 of the laps. Who jogged farther?

Recognizing Addition

Joe has a balance of negative $8 on his lunch account. He puts $12 more into the account. What is Joe's new account balance?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Recognizing Addition

Rachel has a balance of $4 on her lunch account. She puts $6 more into the account. What is Rachel's new account balance?

Aaron spent $4.50 on his lunch, then went back for ice cream. He spent another $2.25 on ice cream. How much did Aaron spend in all?

Integer Addition

Jamison's football team had a gain of 12 yards in one play. On the same play, a penalty was called that cost them 5 yards. What integer represents the total gain or loss on the play?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Integer Addition

Stephen owes his mother $22 for putting fuel in his car. He pays her $12. Does Stephen still owe his mother money, and if so, how much?

In Cleveland, Ohio, the temperature was –19°F in the morning. If the temperature rose 8°F, what is the temperature now?

Addition Properties

Bryan paid $58 for tickets to the prom. He paid $64 to rent a tuxedo, and another $36 for dinner. How much did Bryan pay in all?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Addition Properties

Selena's bank account shows a balance of $66 on Thursday, a deposit of $32 on Friday, and a withdrawal of $66 on Saturday. What is Selena's new account balance?

The Buccaneers had a 6-yard gain on their first play, a 14-yard gain on their second play, and a 27-yard gain on their third play. What was the total gain?

Expressions

Each rectangular table in the food court seats 8 people. Each round table seats 4. Write a numeric expression to find how many total people can sit at one rectangular and one round table.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Expressions

There are 128 students in marching band and 84 students in concert band. Write a numeric expression to find the difference between the number of students in marching band and the number of students in concert band.

James has 32 guppies and 18 red tetras in a fish tank. Write a numeric expression to find how many fish are in the fish tank.

Variable Expressions

Lauren has saved $2250 to buy her first car. Her father is also giving her some money for the car. Write a variable expression for the total amount of money Lauren can spend on her first car.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Variable Expressions

Alayne scored 86 points in the first six games of the basketball season. She scored more during the rest of the season. Write a variable expression for the number of points Alayne scored during the basketball season.

Jeffrey sold some candy bars for the sophomore class at his father's softball game. He sold another 31 candy bars at his sister's dance recital. Write a variable expression for the number of candy bars Jeffrey sold in all.

Writing Equations

Brianna spent $4.00 on admission to a basketball game. She also spent some money at the concession stand. In all, Brianna spent $16.00 at the basketball game. Write an algebraic equation to model the situation.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

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Writing Equations

On teacher appreciation day, the senior class bought 62 white carnations, one for each male teacher. They bought a pink carnation for each female teacher. The class purchased 130 carnations in all. Write an algebraic equation to model the situation.

Katelynn earned $1240 in two weeks at the recreation center during a trap shooting tournament. She earned $480 the first week and the rest the second week. Write an algebraic equation to model the situation.

Addition Algebra

Coach had the entire track team run 12 laps. When they had finished, he had the distance runners run some more laps. Each distance runner ran 48 laps in all. Use an algebraic equation to find how many laps the distance runners ran after the rest of the team had finished running.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Addition Algebra

David ran his first lap in 1.87 minutes. He ran two laps in 3.10 minutes. Use an algebraic equation to find how long it took David to run his second lap.

Morgan bought a pair of tennis shoes for $36.32. She also bought shoelaces to match her track uniform. Her total cost was $41.18. Use an algebraic equation to find the cost of the shoelaces.

Recognizing Subtraction

Jim can buy an MP3 player with 120 GB of space for $286, or he can buy the same brand of MP3 player with 160 GB of space for $426. How much more does the 160-GB MP3 player cost?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Recognizing Subtraction

Jamira went to the store with $100.00. She spent $83.60. How much money did Jamira have left?

Dennis ran his first lap in 1.64 minutes. He ran his second lap in 2.53 minutes. How much longer did it take Dennis to run the second lap?

Break It Apart

Emily borrowed $22.50 from Alex to buy a book about Elvis. Then she borrowed another $3.25 to get a smoothie. Emily gave Alex back $30.00 when they returned home. Does Emily still owe Alex money? If so, how much?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Break It Apart

Brendan wants to gain 2.4 pounds in a month to move into the next wrestling weight class. The first week, he gained 0.5 pounds. The second week, he gained 0.4 pounds. How much does Brendan still need to gain to make the next weight class?

Drew had a $25.00 gift card for an online store. He spent $12.95 on a movie, and another $3.95 for shipping. How much credit is left on his gift card?

Subtraction Algebra

Norma's average in science for the first marking period went down 6 points to 91% in the second marking period. Use an algebraic equation to find Norma's average in science during the first marking period.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Subtraction Algebra

Cory needs 21 credits to graduate from high school. After his freshman year, Cory still needed 14 credits. Use an algebraic equation to find the number of credits Cory had earned by the end of his freshman year.

The high school record for the 300-meter hurdles is 38.16 seconds. Galen finished in 39.02 seconds. Use an algebraic equation to find the difference between Galen's time and the school record.

Recognizing Multiplication

Ami sees one new movie at the adult price every Tuesday. How much did she spend to see new movies over 8 weeks?

Adult:
$8.00
Child ages 3-12:
$6.00
Senior:
$5.00
Saturday Matinee–All:
$5.00

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Recognizing Multiplication

Derick is planting trees in seedling trays. Each tray has 8 rows of 4 holes for starting trees. How many trees can Derick start in each tray?

Sydney's club earns $0.42 for each pound of trash its members collect. Last weekend they collected 21 pounds of trash. How much money did they earn collecting trash last weekend?

Multiplication Properties

Allisha's family bought 3 large pizzas. Each pizza had one pound of cheese on it. How many pounds of cheese were used on all three pizzas? What multiplication property can you use to solve this problem?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multiplication Properties

Brant ate six pieces of pizza. Each piece was 1/6 of a pizza. How many pizzas did Brant eat? What multiplication property can you use to solve this problem?

Each school day Callista has 7 classes. This past week there were zero school days. How many classes did Callista have? What multiplication property can you use to solve this problem?

The Distributive Property

A stand at the mall sells silver chains by length. Gwen picked a style that cost $3.00 per inch. She bought 5.35 inches for a bracelet. Later, she went back and bought 7.65 inches for an ankle bracelet. What was Gwen's total cost for the silver chains?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does the answer match the questions?
Did your plan work for this problem?
Try solving this problem in a different way.

The Distributive Property

Tickets for a school play cost $6.00 each. Brandy sold 8 tickets to her father, then sold another 4 tickets to her aunt. How much money did Brandy collect for the tickets?

The band sold candy bars for two weeks as a fund-raiser. They earned $0.50 for each candy bar they sold. The first week, they sold 328 candy bars. The second week, they sold 432 candy bars. How much did they earn in all?

Multiplication Algebra

Jose downloads music from a pay-per-song website. He pays $1.99 for each song. On Monday he spent $27.86 downloading songs. Use an algebraic equation to find the number of songs Jose downloaded on Monday.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multiplication Algebra

Brittany takes summer art classes. Last summer, he took 5 classes, and each cost the same amount. The total cost of the classes was $210.00. Use an algebraic equation to find the cost of each of Brittany's classes.

The life sciences class is making dessert for the entire 8th grade class. There are 614 students in the 8th grade. They used exactly 307 cups of cherry topping. Use an algebraic equation to find the amount of cherry topping on each dessert.

Draw a Picture

A high school marching band has 84 members. When they march in a parade, there are four band members marching in each row. How many rows does the band form? Draw a picture to solve this problem.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How does the problem tell you to solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Draw a Picture

Sarah is baking cookies for a bake sale at school. She plans to bake 132 cookies. Frozen cookie dough comes in packages of 12 cookies. How many packages of cookie dough does Sarah need? Draw a picture to solve this problem.

The cheerleaders set up a booth to raise money for new flowers and bushes around the school. They would like to plant 42 flower bulbs. For each dollar they raise, they can buy a package of 6 flower bulbs. How many dollars do they need to raise to buy 42 flower bulbs? Draw a picture to solve this problem.

Recognizing Division

Tim's cell phone is billed every 30 days. He is charged for every text message he sends, but not for those he receives. His last bill showed that he had 780 text message charges. On average, how many text messages did Tim send each day?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Recognizing Division

The Blanton twins each pays for half of the fuel they use in their car. Last week, they put $58.50 of fuel in the car. How much did each need to pay?

The girls' volleyball team scored 128 points in 8 games. What is their average score per game?

Division Algebra

Jennifer and her 4 friends bought a cake and divided the cost equally. Each paid $6.00. Use an algebraic equation to find the cost of the cake.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Division Algebra

To find the average number of miles Madi walks each day, she divides her total miles by the number of days she has walked. Madi walked an average of 12.4 miles for 6 days. Use an algebraic division equation to find the total number of miles Madi walked.

Dan has part of a box of drinking straws. He showed his friends how to make a pyramid using 6 straws. They made 42 pyramids. Use an algebraic division equation to find the number of straws Dan and his friends used.

More Division Algebra

Shea was given $650 in gift cards as graduation presents. Each gift card had the same value. There was a total of 13 gift cards. Use an algebraic equation to find the value of each gift card.

Read and understand the problem.

What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.

How can you solve this problem?

Solve the problem.

Carry out your plan.

Look back.

Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

More Division Algebra

In physical education class, 24 students were divided into teams. Each team had 6 students. Use an algebraic equation to find the number of teams.

Every day Ian drinks exactly the same amount of cola. He drank 192 ounces of cola over the course of 5 days. Use an algebraic equation to find the amount of cola Ian drinks each day.

Multistep Problems

Chelsea worked 5 eight-hour shifts and 2 five-hour shifts one week. She earns $8.00 per hour. Use an equation to find her gross pay for the week.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multistep Problems

Diane divided 80 brownies into 8 boxes. Mr. Howard bought 3 boxes of brownies. Use an equation to find the number of brownies in 3 boxes.

Tomas purchased twelve donuts for $4.99. He sold each donut for $0.75. Use an equation to find the amount Tomas made selling donuts.

Multistep Algebra

Abby works at a local animal shelter on Tuesdays and Fridays. On both days, the same number of cats were adopted. There were 47 dogs adopted on both days together. In all, 71 dogs and cats were adopted on the two days. Use an algebraic equation to find the number of cats that were adopted on Tuesday.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multistep Algebra

Jo had 8 boxes of pens. She gave Ellen 2 of the boxes. Jo had 60 pens left. Use an algebraic equation to find the number of pens in each box.

Kayla glued 30 photos into her scrapbook. She put 3 rows of photos on each page of her scrapbook, with 2 photos in each row. Use an algebraic equation to find the number of pages of photos Kayla glued in her scrapbook.

Inequalities

Write an inequality for the following sentence:

You must be under 12 to get the child's price for a meal.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Inequalities

Write an inequality for the following sentences:

Each book has at least 500 pages.

The cost of 3 shirts is less than $20.00.

$100.00 is more than half of Sara's paycheck.

Addition and Subtraction Inequalities

In a class, you must get at least 195 points on three tests to pass. You get a 90 and a 60. What score on the last test will give you a passing grade?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Addition and Subtraction Inequalities

Zoe wants to earn no less than $650 during the four weeks she works at the rec center. The first three weeks she earned $120, $210, and $97. How much can Zoe earn so that her earnings are over $650?

On Friday, Leon went out with his friends and brought $30. They are going to the mall and then the movies. How much can Leon spend at the mall and still have at least $8 left for his movie ticket?

Multiplication and Division Inequalities

The eighth grade is sponsoring a donkey basketball game to raise money for new earth-friendly lunch trays. Sponsors pledge as many dollars as points that each team scores. If a team scores 20 points, how many sponsors would they need to raise more than $800?

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multiplication and Division Inequalities

Tori has 45 medals she's won in math and science competitions. She hangs each medal in her room from a silver hook. How many hooks can Tori use to have no more than 6 medals on each hook?

Each game at a school carnival costs $0.25. If you have $5.00, what is the possible number of games you can play?

Multistep Inequalities

David has $88.00 to spend at a media store. He is buying a 4-GB flash drive for $40. He also wants to buy some DVDs that are on sale for $7 each. Use an inequality to find the number of DVDs David can buy.

Read and understand the problem.
What does the problem ask you to find?

What information do you need to solve the problem?

Make a plan.
How can you solve this problem?

Solve the problem.
Carry out your plan.

Look back.
Does your answer match the question?
Does the answer make sense?

Did your plan work for this problem?

Multistep Inequalities

Alex competes in three gymnastics events that are scored on a ten-point scale. Her first two event scores are 8.2 and 9.1. Use an inequality to find the score Alex needs to have at least an 8.7 average.

The maximum weight in an elevator is 1500 pounds. There are 8 people in the elevator with an average weight of 160 pounds. Use an inequality to find the weight for a ninth person that will keep the total weight within safety codes.

Problem-Solving Steps

Page 2: 1. Read and understand the problem. Make a plan. Solve the problem. Look Back.

2. Possible answers: Read the problem again. Find the meaning of words you do not understand. Write the problem in different words.

3. Possible answers: Write an equation. Make a diagram. Work backward.

4. Try a different plan. Don't give up.

5. It helps you know how to solve similar problems.

Page 3: **Read and understand the problem.**

How much Laura spent in all.

The cost of the pedicure and the cost of the sandals.

Make a plan. Possible answer: Write an equation.

Solve the problem. Laura spent $46 in all.

Look back. Answers may vary.

Integers

Page 4: **Read and understand the problem.**

An integer to represent today's temperature.

The temperature today.

Make a plan. Possible answer: Write the integer.

Solve the problem. The integer 94 represents today's temperature.

Look back. Answers may vary.

Page 5: The integer –8 represents the elevation of New Orleans.

The integer –539 represents the end of Babylonian civilization.

Comparing Numbers

Page 6: **Read and understand the problem.**

The name of the student who has solved more of the fraction problems.

The amount of problems each student has solved.

Make a plan. Possible answer: Compare fractions using fraction bars.

       Solve the problem. Becky has solved more of the fraction
         problems.
       Look back. Answers may vary.

Page 7: The school's lunch contained more calories.
       Josh jogged farther.

Recognizing Addition
Page 8: **Read and understand the problem.**
       Joe's new account balance.
       The original account balance, and how much Joe
       added.
       Make a plan. Possible answer: Use a number line.
       Solve the problem. Joe's new account balance is $4.
       Look back. Answers may vary.

Page 9: Rachel's new account balance is $10.
       Aaron spent $6.75 in all.

Integer Addition
Page 10: **Read and understand the problem.**
       An integer to represent the total gain or loss.
       The yard gain on the play and the penalty yards.
       Make a plan. Possible answer: Write a number sentence.
       Solve the problem. They had a 7-yard gain. The integer is $^+7$.
       Look back. Answers may vary.

Page 11: Yes. Stephen owes his mother $10.
       The temperature now is –11 degrees F.

Addition Properties
Page 12: **Read and understand the problem:**
       How much Bryan spent in all.
       The cost of the tickets, the tuxedo, and the dinner.
       Make a plan. Possible answer: Write an equation.
       Solve the problem. Bryan spent $158 in all.
       Look back. Answers may vary.

Expressions
Read and understand the problem.
        A numeric expression for how many people can sit at
            one rectangular table and one round table.
        The number of people that can sit at each type of table.
    Make a plan. The plan is in the question: Write a numeric
        expression.
    Solve the problem. 8 + 4
    Look back. Answers may vary.

Variable Expressions
Read and understand the problem.
        A variable expression for the total amount of money
            Lauren can spend on her first car.
        The amount Lauren has saved, and a variable for the
            amount Lauren's father is giving her.
    Make a plan. The plan is in the question: Write a variable
        expression.
    Solve the problem. $2250 + f
    Look back. Answers may vary.

Writing Equations
Read and understand the problem.
        An algebraic equation to model the situation.
        The amount Brianna spent on admission, a variable for
            the amount she spent at the concession stand, and
            the total amount.
    Make a plan. The plan is in the question: Write an
        algebraic equation.
    Solve the problem. $4.00 + c = $16.00
    Look back. Answers may vary.

Page 19: 62 + *f* = 130

$480 + *s* = $1240

Addition Algebra

Page 20: **Read and understand the problem.**

The number of laps the distance runners ran after the rest of the team had finished running.

The number of laps the entire team ran and the number of laps the distance runners ran.

Make a plan. The plan is given: Write an algebraic equation.

Solve the problem. 12 + *d* = 48, *d* = 36

The distance runners ran 36 laps after the rest of the team had finished running.

Look back. Answers may vary.

Page 21: 1.87 + *t* = 3.10, *t* = 1.23. David ran the second lap in 1.23 minutes.

$36.32 + *s* = $41.18, *s* = $4.86. The cost of the shoelaces was $4.86.

Recognizing Subtraction

Page 22: **Read and understand the problem.**

The difference between the cost of 120-GB MP3 player and a 160-GB MP3 player.

The cost of each MP3 player.

Make a plan. Possible answer: Write an equation.

Solve the problem. The 160-GB MP3 player costs $140 more than the 120-GB MP3 player.

Look back. Answers may vary.

Page 23: Jamira has $16.40 left.

It took Dennis 0.89 seconds longer to run the second lap.

Break It Apart

Page 24: **Read and understand the problem.**

If Emily owes Alex money, and how much money.

How much Emily borrowed and how much she paid back.

Make a plan. Possible answer: Break it apart.

Solve the problem. No, Emily does not owe Alex money. She paid back $4.25 more than she owed.
Look back. Answers may vary.

<u>Page 25:</u> Brendan must gain another 1.5 pounds to make the next weight class.
Drew has $8.10 left on his gift card.

<u>Subtraction Algebra</u>
<u>Page 26:</u> **Read and understand the problem.**
Norma's average in science during the first marking period.
Norma's average in the second marking period and the change between the first and second marking periods.
Make a plan. Use an algebraic equation.
Solve the problem. Norma had a 97% in science during the first marking period.
Look back. Answers may vary.

<u>Page 27:</u> 21 – c = 14. Cory had earned 7 credits by the end of his freshman year.
39.02 - 38.16 = 0.86. There is a 0.86 second difference between Galen's time and the school record.

<u>Recognizing Multiplication</u>
<u>Page 28:</u> **Read and understand the problem.**
How much Ami spent to see new movies over 8 weeks.
The price of each movie.
Make a plan. Possible answer: Write an equation.
Solve the problem. 8 x $8.00 = $64.00. Ami spent $64 to see new movies over 8 weeks.
Look back. Answers may vary.

<u>Page 29:</u> Derick can start 32 trees in each tray.
Sydney's club earned $8.82 collecting trash.

<u>Multiplication Properties</u>
<u>Page 30:</u> **Read and understand the problem.**
How many pounds of cheese are on each pizza, and

what property you can use to solve the problem.
The number of pizzas and the amount of cheese on each pizza.
Make a plan. Possible answer: Write an equation.
Solve the problem. 1 x 3 = 3. There were 3 pounds of cheese on the pizzas. You can use the identity property.
Look back. Answers may vary.

<u>Page 31:</u> Brant ate one pizza. You can use the inverse property.
Callista had zero classes. You can use the zero property.

<u>The Distributive Property</u>
<u>Page 32:</u> **Read and understand the problem.**
The total cost of the silver chains.
The length of each chain, and the cost per inch.
Make a plan. Possible answer: Write an equation.
Solve the problem. $3.00 (5.35 + 7.65) = x. Gwen's total cost for the chains was $39.00.
Look back. Answers may vary.

<u>Page 33:</u> Brandy collected $72 for tickets.
The band earned $380.

<u>Multiplication Algebra</u>
<u>Page 34:</u> **Read and understand the problem.**
The number of songs Jose downloaded on Monday.
The price per song and the amount Jose spent.
Make a plan. Use an algebraic equation.
Solve the problem. 1.99s$ = $27.86. Jose downloaded 14 songs on Monday.
Look back. Answers may vary.

<u>Page 35:</u> 5c = $210.00, Each of Braittany's classes cost $42.00.
614t = 307. There was 1/2 cup of cherry topping on each dessert.

Page 36: **Read and understand the problem.**
   How many rows the band forms.
   The number of band members and how many are in a row.
   Make a plan. Draw a picture.
   Solve the problem. There are 21 rows.
   Look back. Answers may vary.

Page 37: Sara needs 11 packages of cookie dough.
   They need to raise 7 dollars to buy 42 flower bulbs.

Recognizing Division
Page 38: **Read and understand the problem.**
   The average number of texts Tim sends per day.
   The number of total texts and the number of days.
   Make a plan. Possible answer: Write an equation.
   Solve the problem. 780/30 = 26. Tim sent an average of 26 texts per day.
   Look back. Answers may vary.

Page 39: Each twin needed to pay $29.25 for fuel.
   The girls' team scored an average of 16 points per game.

Division Algebra
Page 40: **Read and understand the problem.**
   The cost of the cake.
   The number of people who paid, and the amount each paid.
   Make a plan. Write an algebraic equation.
   Solve the problem. $c/5 = \$6$, $c = \$30.00$. The cake cost $30.00.
   Look back. Answers may vary.

Page 41: $t/6 = 12.4$, $t = 74.4$. Madi walked a total of 74.4 miles.
   $s/6 = 42$, $s = 252$. Dan and his friends used 252 straws.

More Division Algebra
Page 42: **Read and understand the problem.**
   The value of each gift card.
   The total amount of the cards and the number of cards.

Make a plan. Use an algebraic equation.
Solve the problem. $650/d = 13$, $d = 50. The value of each gift card is $50.
Look back. Answers may vary.

Page 43: $24/n = 6$, $n = 4$. There were 4 teams.
$192/c = 5$, $c = 38.4$. Ian drinks 38.4 ounces of cola each day.

Multistep Problems
Page 44: **Read and understand the problem.**
Chelsea's gross pay for the week.
The number of hours Chelsea worked, and the pay per hour.
Make a plan. Write an equation.
Solve the problem. $8.00[5(8) + 2(5)] = $8.00(50)$ = 400.00. Chelsea's gross pay was $400.00.
Look back. Answers may vary.

Page 45: $3(80/8) = 3(10) = 30$, There were 30 brownies in 3 boxes.
$12($0.75) — $4.99 = $9.00 — $4.99 = 4.01. Tomas made $4.01 selling donuts.

Multistep Algebra
Page 46: **Read and understand the problem.**
The number of cats that were adopted on Tuesday.
The total number of animals adopted, the number of dogs that were adopted, and that the same number of cats were adopted on each day.
Make a plan. Use an algebraic equation.
Solve the problem. $2c + 47 = 71$, $c = 12$. There were 12 cats adopted on Tuesday.
Look back. Answers may vary.

Page 47: $(8 — 2)p = 60$, $p = 10$. There were 10 pens in each box.
$(3)(2)p = 30$, $p = 5$. Kayla glued 5 pages of photos in her scrapbook.
An inequality for the given sentence.
The age for a child's meal.

Inequalities

Page 48: **Read and understand the problem.**
Make a plan. Write an inequality.
Solve the problem. $a < 12$
Look back. Answers may vary.

Page 49: $p \geq 500$
$3s < \$20.00$
$\$100.00 > (1/2)p$

Addition and Subtraction Inequalities

Page 50: **Read and understand the problem.**
The score for the last test that will give you a passing grade.
The combined score you need to pass and the scores so far.
Make a plan. Possible answer: Write an inequality.
Solve the problem. Possible answer: You must receive at
least a 45 on the last test to have a passing grade.
Look back. Answers may vary.

Page 51: Zoe must earn more than $223 to have earnings over $650.
Leon can spend up to $22 at the mall.

Multiplication and Division Inequalities

Page 52: **Read and understand the problem.**
The number of sponsors needed to raise more than $800.
The number of points scored, and that each point raises
one dollar.
Make a plan. Write and solve an inequality.
Solve the problem. $\$20 \times s > \$800$. They need more than
40 sponsors to raise more than $800.
Look back. Answers may vary.

Page 53: $45/n \leq 6$. Tori needs at least 8 hooks.
$\$5.00/\$0.25 \geq g$. You can play up to 20 games if you
have $5.00.

Page 54: **Read and understand the problem.**

        The number of DVDs David can buy.

        How much David can spend, and how much each
           item costs.

     Make a plan. Write and solve an inequality.

     Solve the problem. $\$88.00 \geq \$40 + 7d$.

       David can buy up to 6 DVDs.

     Look back. Answers may vary.

Page 55: $8.2 + 9.1 + s \geq 8.7 \times 3$. Alex needs to score at least
        an 8.8 on the third event.

      $1500 \geq (8)(160) + w$. The ninth person in the elevator
       must weigh no more than 220 pounds.