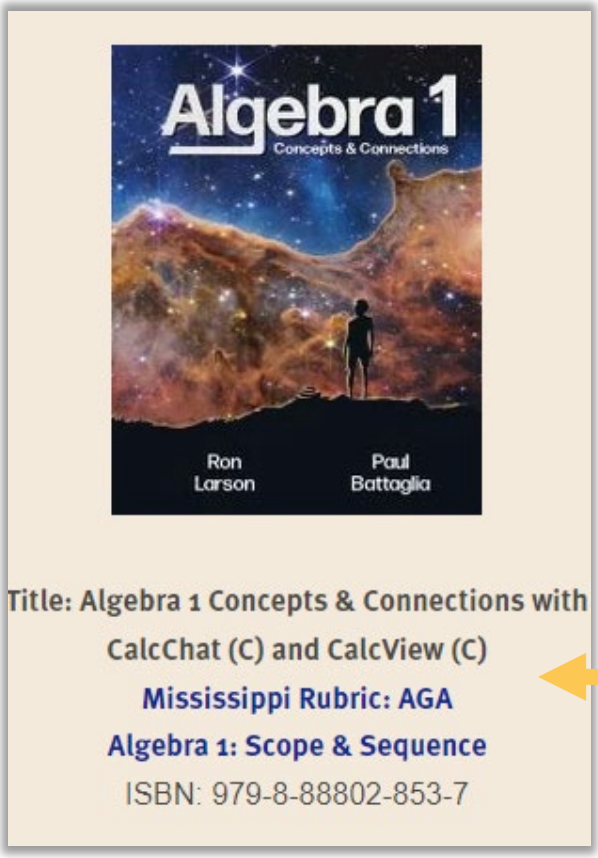
Concepts and Connections
Algebra 1, Geometry, & Algebra 2
Features and Benefits

Visit https://bigideaslearning.com/mississippi-review (Password: MSReview2024)
Your one-stop shop for all the information needed to review *Concepts & Connections*.

Step 1:

On the Review Site, view the **MS HQIM Rubrics** by grade band and **Scope & Sequence** by grade level, demonstrating 100% alignment of *Concepts & Connections* to the MS College and Career Readiness Standards for Mathematics (2016).



The **Scope and Sequence** and **AGA Rubric** is provided at point of use for each grade level on the review site.

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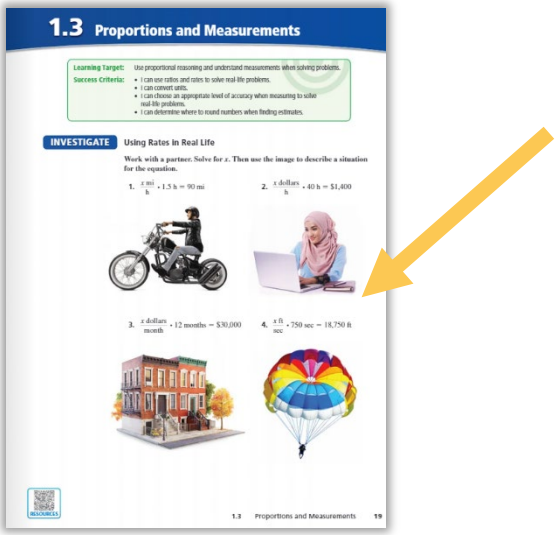
Step 2:

Review the **Instructional Guide**. Resources, such as the Table of Contents, show the progression of content taught throughout the grade. At the chapter level, each chapter opens with **Coherence through the Grades**, which demonstrates the vertical and horizontal alignment to standards progressions, the **Learning Targets and Success Criteria**, and implementation of the **Standards for Mathematical Practices (SMPs)**.

Step 3:

Identifying rigor in conceptual understanding within *Concepts & Connections* is the first of three prongs within our lesson design and visible in both the teaching and student editions. Every lesson begins with the development of conceptual understanding through the **Launch** (Instructional Guide only) and **Investigate** (Instructional Guide and Student Edition). This part of the lesson design is consistent in every grade and allows opportunities for use of models, manipulatives and real-life tools to support rigor and develop deep understanding.



Student Edition Investigate Algebra 1

Students utilize real-world contexts to see the relevance in the math they are learning.

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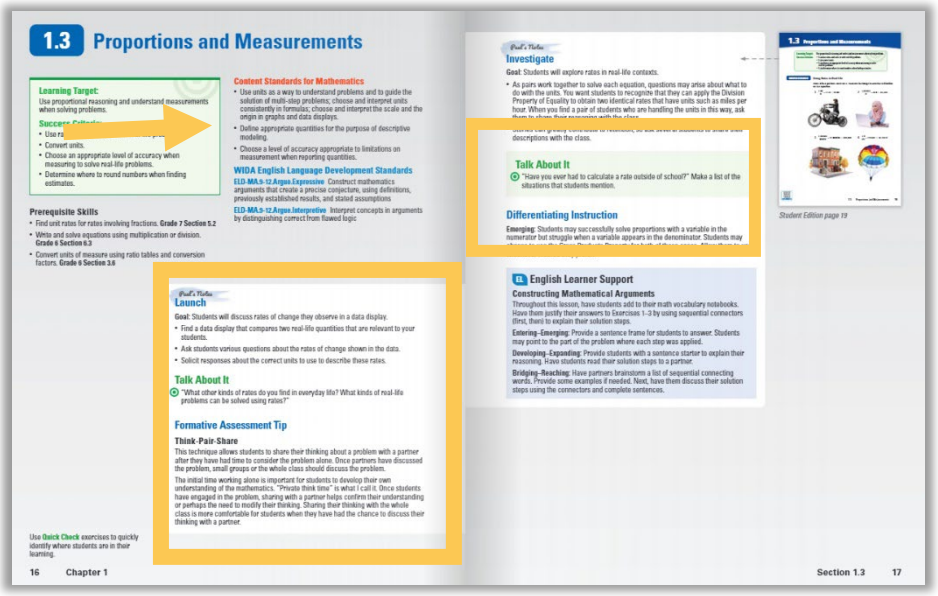

*The Instructional Guide **Launch** promotes conceptual understanding, accesses prior knowledge, and encourages classroom discussion. The Instructional Guide also has specific **Differentiating Instruction** callouts and, in this lesson, demonstrates Standards alignment to A.SSE.A.1.a as notated on the Scope and Sequence for the Algebra 1 Course.*

Step 4:

Developing procedural skill and fluency is the second prong of our consistent lesson design. Again, visible in both the Student Edition and Instructional Guide, there are opportunities for teachers to model and students to practice, all with appropriate scaffolding and pedagogical approaches to instruction. The development of these skills will be visible in the **Examples, In-Class Practice: Self-Assessments,** and **Practice** sections of the lesson. In addition to developing fluency and procedural skills throughout the lesson, students also conclude the lesson with **Review & Refresh,** providing a spiral review to maintain fluency on previously learned skills.

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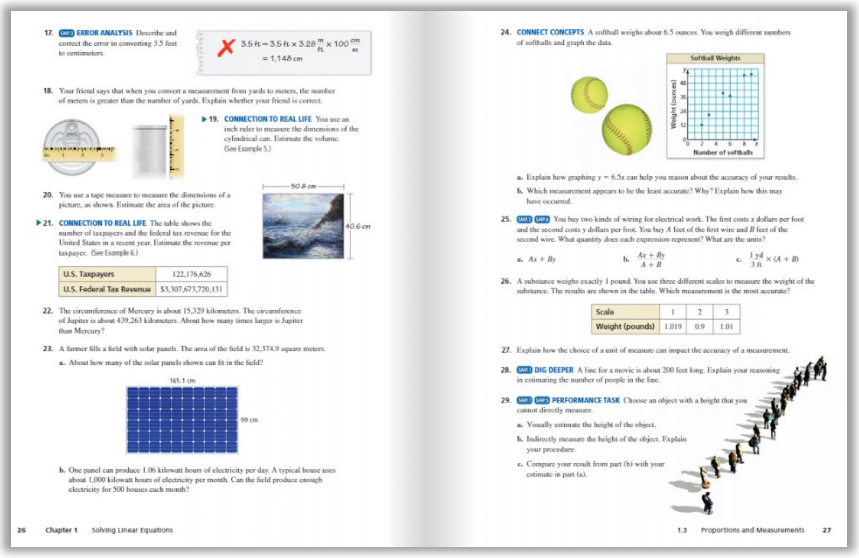


17. **ERROR ANALYSIS** Describe and correct the error in converting 3.5 feet to centimeters.

$3.5 \text{ ft} \approx 3.5 \text{ ft} \times 3.28 \frac{\text{m}}{\text{ft}} \times 100 \frac{\text{cm}}{\text{m}} = 1,148 \text{ cm}$

18. Your friend says that when you convert a measurement from yards to meters, the number of meters is greater than the number of yards. Explain whether your friend is correct.

19. **CONNECTION TO REAL LIFE** You use an inch ruler to measure the dimensions of the cylindrical can. Estimate the volume. (See Example 5.)

20. You use a tape measure to measure the dimensions of a picture, as shown. Estimate the area of the picture.

50.8 cm, 40.6 cm

21. **CONNECTION TO REAL LIFE** The table shows the number of taxpayers and the federal tax revenue for the United States in a recent year. Estimate the revenue per taxpayer. (See Example 6.)

U.S. Taxpayers	122,176,626
U.S. Federal Tax Revenue	$3,307,673,720,131

22. The circumference of Mercury is about 15,329 kilometers. The circumference of Jupiter is about 439,263 kilometers. About how many times larger is Jupiter than Mercury?

23. A farmer fills a field with solar panels. The area of the field is 32,374.9 square meters.

a. About how many of the solar panels shown can fit in the field?

165.1 cm, 99 cm

b. One panel can produce 1.06 kilowatt hours of electricity per day. A typical house uses about 1,000 kilowatt hours of electricity per month. Can the field produce enough electricity for 500 houses each month?

24. **CONNECT CONCEPTS** A softball weighs about 6.5 ounces. You weigh different numbers of softballs and graph the data.

Softball Weights

Weight (ounces), Number of softballs

a. Explain how graphing $y = 6.5x$ can help you reason about the accuracy of your results.

b. Which measurement appears to be the least accurate? Why? Explain how this may have occurred.

25. You buy two kinds of wiring for electrical work. The first costs x dollars per foot and the second costs y dollars per foot. You buy A feet of the first wire and B feet of the second wire. What quantity does each expression represent? What are the units?

a. $Ax + By$ b. $\frac{Ax + By}{A + B}$ c. $\frac{1}{3}\text{ft} \times (A + B)$

26. A substance weighs exactly 1 pound. You use three different scales to measure the weight of the substance. The results are shown in the table. Which measurement is the most accurate?

Scale	1	2	3
Weight (pounds)	1.019	0.9	1.01

27. Explain how the choice of a unit of measure can impact the accuracy of a measurement.

28. **DIG DEEPER** A line for a movie is about 200 feet long. Explain your reasoning in estimating the number of people in the line.

29. **PERFORMANCE TASK** Choose an object with a height that you cannot directly measure.

a. Visually estimate the height of the object.

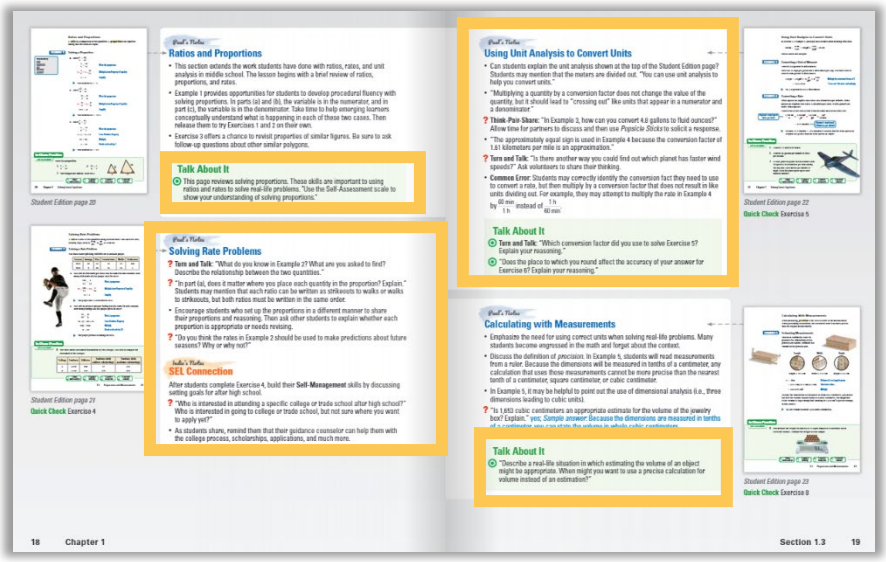
b. Indirectly measure the height of the object. Explain your procedure.

c. Compare your result from part (b) with your estimate in part (a).

26 Chapter 1 Solving Linear Equations

1.3 Proportions and Measurements 27

Practice *from the Student Edition. (Note: Exercises 19 and 21 have a blue triangle next to the number. This indicates these exercises are supported through* ***CalcChat*** *and* ***CalcView. CalcChat*** *provides a live, online tutor to support students learning.* ***CalcView*** *shows example videos of this specific exercise being worked out with explanations.*



Ratios and Proportions

Talk About It

Solving Rate Problems

SEL Connection

Using Unit Analysis to Convert Units

Talk About It

Calculating with Measurements

Talk About It

18 Chapter 1

Section 1.3 19

Examples *and* ***In-Class Practice*** *with scaffolding opportunities, discussion prompts, formative check, and feedback opportunities from the Instructional Guide.*

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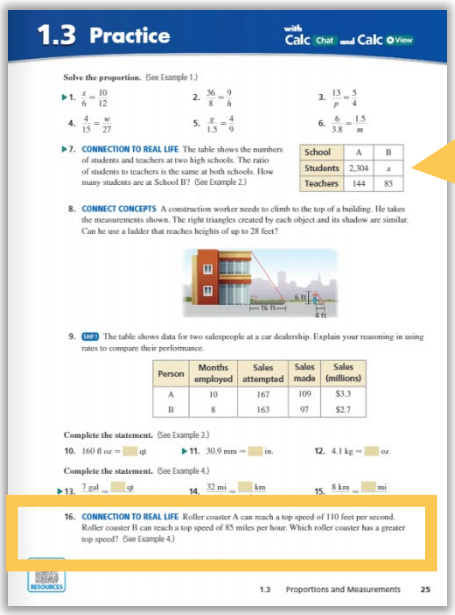
Step 5:

To complete the third prong of rigor, *Concepts & Connections* lessons both start and conclude with application opportunities. Again, demonstrated in both the Student Edition and Instructional Guide, teachers and students will find math relevant by practicing examples relating to real-world applications. This section is strongly embedded from the introduction of the lesson in the **Big Idea of the Chapter,** throughout the lesson in the **In-Class Practice** and **Key Concepts**. This application is reinforced by the teacher's guidance in the **Talk About It** section found in the Instructional Guide.



1.3 Practice

with Calc Chat and Calc View

Solve the proportion. (See Example 1.)

1. $\frac{x}{6} = \frac{10}{12}$ 2. $\frac{36}{8} = \frac{9}{h}$ 3. $\frac{13}{p} = \frac{5}{4}$

4. $\frac{4}{15} = \frac{w}{27}$ 5. $\frac{g}{1.5} = \frac{4}{9}$ 6. $\frac{6}{3.8} = \frac{1.5}{m}$

7. **CONNECTION TO REAL LIFE** The table shows the numbers of students and teachers at two high schools. The ratio of students to teachers is the same at both schools. How many students are at School B? (See Example 2.)

School	A	B
Students	2,304	x
Teachers	144	85

8. **CONNECT CONCEPTS** A construction worker needs to climb to the top of a building. He takes the measurements shown. The right triangles created by each object and its shadow are similar. Can he use a ladder that reaches heights of up to 28 feet?

9. **SMP** The table shows data for two salespeople at a car dealership. Explain your reasoning in using rates to compare their performance.

Person	Months employed	Sales attempted	Sales made	Sales (millions)
A	10	167	109	$3.3
B	8	163	97	$2.7

Complete the statement. (See Example 3.)

10. 160 fl oz = ___ qt 11. 30.9 mm = ___ in. 12. 4.1 kg = ___ oz

Complete the statement. (See Example 4.)

13. 7 gal = ___ qt 14. 32 mi = ___ km 15. 8 km = ___ mi

16. **CONNECTION TO REAL LIFE** Roller coaster A can reach a top speed of 110 feet per second. Roller coaster B can reach a top speed of 85 miles per hour. Which roller coaster has a greater top speed? (See Example 4.)

RESOURCES

1.3 Proportions and Measurements 25

Connection to Real Life uses real-world examples that students can relate to.

*Student Edition highlighting **Connection to Real Life** and **Connect Concepts**.*

Step 6:

In need of even more ways to provide tailored, rigorous instruction for your students? Look at the chapter openers and closers, which include **Learning Targets and Success Criteria, SMP guidance, Career Explorations** and connections, corresponding **Performance Tasks,** and **Chapter Practice.** Also, in the print **Practice Workbook,** teachers have access to Tier-1 practice for every lesson as well as targeted standards-based practice. Further practice, differentiation and assessments can be found using the online platform, www.myadamath.com. Login credentials and a digital walk through are found on the Review Site webpage (password: MSReview2024).

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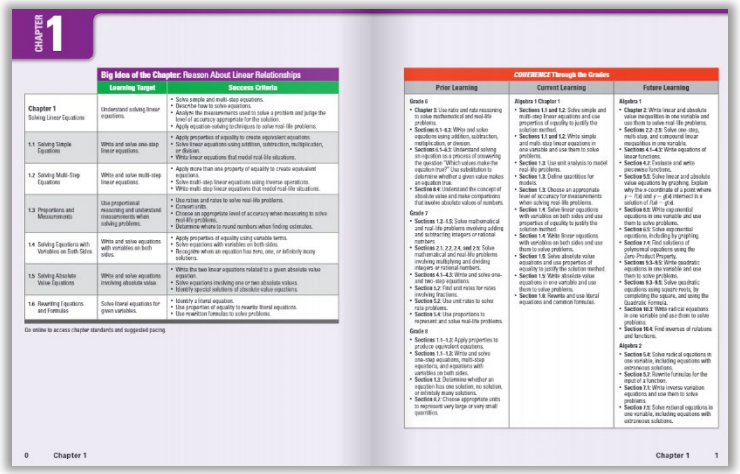

CHAPTER 1

Big Idea of the Chapter: Reason About Linear Relationships

	Learning Target	Success Criteria
Chapter 1 Solving Linear Equations	Understand solving linear equations.	• Solve simple and multi-step equations. • Describe how to solve equations. • Analyze the measurements used to solve a problem and judge the level of accuracy appropriate for the solution. • Apply equation-solving techniques to solve real-life problems.
1.1 Solving Simple Equations	Write and solve one-step linear equations.	• Apply properties of equality to create equivalent equations. • Solve linear equations using addition, subtraction, multiplication, or division. • Write linear equations that model real-life situations.
1.2 Solving Multi-Step Equations	Write and solve multi-step linear equations.	• Apply more than one property of equality to create equivalent equations. • Solve multi-step linear equations using inverse operations. • Write multi-step linear equations that model real-life situations.
1.3 Proportions and Measurements	Use proportional reasoning and understand measurements when solving problems.	• Use rates and ratios to solve real-life problems. • Convert units. • Choose an appropriate level of accuracy when measuring to solve real-life problems. • Determine where to round numbers when finding estimates.
1.4 Solving Equations with Variables on Both Sides	Write and solve equations with variables on both sides.	• Apply properties of equality using variable terms. • Solve equations with variables on both sides. • Recognize when an equation has zero, one, or infinitely many solutions.
1.5 Solving Absolute Value Equations	Write and solve equations involving absolute value.	• Write the two linear equations related to a given absolute value equation. • Solve equations involving one or two absolute values. • Identify special solutions of absolute value equations.
1.6 Rewriting Equations and Formulas	Solve literal equations for given variables.	• Identify a literal equation. • Use properties of equality to rewrite literal equations. • Use rewritten formulas to solve problems.

Go online to access chapter standards and suggested pacing.

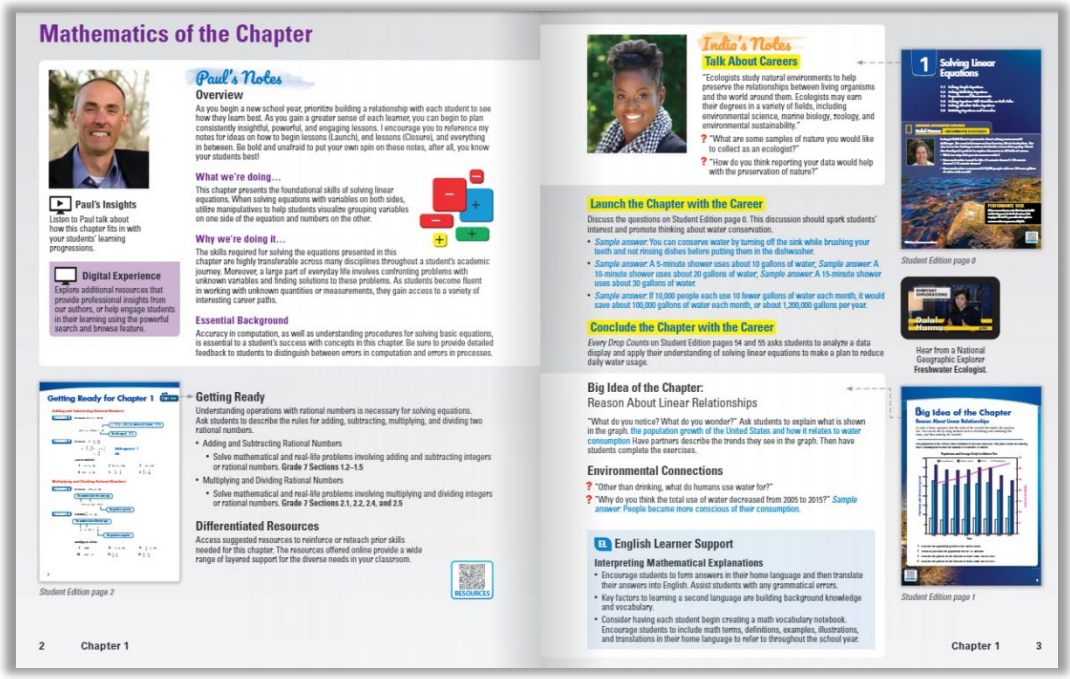
COHERENCE Through the Grades

Prior Learning	Current Learning	Future Learning
Grade 6 • **Chapter 3** Use ratio and rate reasoning to solve mathematical and real-life problems. • **Sections 6.1–6.2** Write and solve equations using addition, subtraction, multiplication, or division. • **Sections 6.3–6.5** Understand solving an equation as a process of answering the question "Which values make the equation true?" Use substitution to determine whether a given value makes an equation true. • **Sections 6.6–6.7** Understand the concept of absolute value and make comparisons that involve absolute values of numbers. **Grade 7** • **Sections 1.2–1.5** Solve mathematical and real-life problems involving adding and subtracting integers or rational numbers. • **Sections 2.1, 2.2, 2.4, and 2.5** Solve mathematical and real-life problems involving multiplying and dividing integers or rational numbers. • **Sections 4.1–4.3** Write and solve one- and two-step equations. • **Section 5.2** Find unit rates for rates involving fractions. • **Section 5.2** Use unit rates to solve rate problems. • **Section 5.4** Use proportions to represent and solve real-life problems. **Grade 8** • **Sections 1.1–1.2** Apply properties to produce equivalent equations. • **Sections 1.1–1.2** Write and solve one-step equations, multi-step equations, and equations with variables on both sides. • **Section 1.2** Determine whether an equation has one solution, no solution, or infinitely many solutions. • **Section 6.7** Choose appropriate units to represent very large or very small quantities.	**Algebra 1 Chapter 1** • **Sections 1.1 and 1.2** Solve simple and multi-step linear equations and use properties of equality to justify the solution method. • **Sections 1.1 and 1.2** Write simple and multi-step linear equations in one variable and use them to solve problems. • **Section 1.2** Use unit analysis to model real-life problems. • **Section 1.3** Define quantities for models. • **Section 1.3** Choose an appropriate level of accuracy for measurements when solving real-life problems. • **Section 1.4** Solve linear equations with variables on both sides and use properties of equality to justify the solution method. • **Section 1.4** Write linear equations with variables on both sides and use them to solve problems. • **Section 1.5** Solve absolute value equations and use properties of equality to justify the solution method. • **Section 1.5** Write absolute value equations in one variable and use them to solve problems. • **Section 1.6** Rewrite and use literal equations and common formulas.	**Algebra 1** • **Chapter 2** Write linear and absolute value inequalities in one variable and use them to solve real-life problems. • **Sections 2.2–2.5** Solve one-step, multi-step, and compound linear inequalities in one variable. • **Sections 4.1–4.3** Write equations of linear functions. • **Section 4.7** Evaluate and write piecewise functions. • **Section 5.5** Solve linear and absolute value equations by graphing. Explain why the x-coordinate of a point where $y = f(x)$ and $y = g(x)$ intersect is a solution of $f(x) = g(x)$. • **Section 6.5** Write exponential equations in one variable and use them to solve problems. • **Section 6.6** Solve exponential equations, including by graphing. • **Section 7.4** Find solutions of polynomial equations using the Zero Product Property. • **Sections 9.3–9.5** Write quadratic equations in one variable and use them to solve problems. • **Sections 9.3–9.5** Solve quadratic equations using square roots, by completing the square, and using the Quadratic Formula. • **Section 10.3** Write radical equations in one variable and use them to solve problems. • **Section 10.4** Find inverses of relations and functions. **Algebra 2** • **Section 5.4** Solve radical equations in one variable, including equations with extraneous solutions. • **Section 5.7** Rewrite formulas for the input of a function. • **Section 7.1** Write inverse variation equations and use them to solve problems. • **Section 7.5** Solve rational equations in one variable, including equations with extraneous solutions.

0 Chapter 1

Chapter 1 1

*At the beginning of each chapter, teachers can review the **Learning Targets and Success Criteria**, related to each lesson and the **Coherence Through the Grades** to ensure mastery and understanding for all students. To access chapter standards, suggested pacing and SMP guidance, go online at www.myadamath.com.*


Mathematics of the Chapter

Paul's Notes

Overview

As you begin a new school year, prioritize building a relationship with each student to see how they learn best. As you gain a greater sense of each learner, you can begin to plan consistently insightful, powerful, and engaging lessons. I encourage you to reference my notes for ideas on how to begin lessons (Launch), and lessons (Closure), and everything in between. Be bold and unafraid to put your own spin on these notes, after all, you know your students best!

What we're doing...

This chapter presents the foundational skills of solving linear equations. When solving equations with variables on both sides, utilize manipulatives to help students visualize grouping variables on one side of the equation and numbers on the other.

Why we're doing it...

The skills required for solving the equations presented in this chapter are highly transferable across many disciplines throughout a student's academic journey. Moreover, a large part of everyday life involves confronting problems with unknown variables and finding solutions to these problems. As students become fluent in working with unknown quantities or measurements, they gain access to a variety of interesting career paths.

Essential Background

Accuracy in computation, as well as understanding procedures for solving basic equations, is essential to a student's success with concepts in this chapter. Be sure to provide detailed feedback to students to distinguish between errors in computation and errors in processes.

Paul's Insights

Listen to Paul talk about how this chapter fits in with your students' learning progressions.

Digital Experience

Explore additional resources that provide professional insights from our authors, or help engage students in their learning using the powerful search and browse feature.

Getting Ready for Chapter 1

Student Edition page 2

Getting Ready

Understanding operations with rational numbers is necessary for solving equations. Ask students to describe the rules for adding, subtracting, multiplying, and dividing two rational numbers.

- Adding and Subtracting Rational Numbers
  - Solve mathematical and real-life problems involving adding and subtracting integers or rational numbers. **Grade 7 Sections 1.2–1.5**
- Multiplying and Dividing Rational Numbers
  - Solve mathematical and real-life problems involving multiplying and dividing integers or rational numbers. **Grade 7 Sections 2.1, 2.2, 2.4, and 2.5**

Differentiated Resources

Access suggested resources to reinforce or reteach prior skills needed for this chapter. The resources offered online provide a wide range of layered support for the diverse needs in your classroom.

RESOURCES

2 Chapter 1

India's Notes

Talk About Careers

"Ecologists study natural environments to help preserve the relationships between living organisms and the world around them. Ecologists may earn their degrees in a variety of fields, including environmental science, marine biology, zoology, and environmental sustainability."

? "What are some samples of nature you would like to collect as an ecologist?"

? "How do you think reporting your data would help with the preservation of nature?"

Launch the Chapter with the Career

Discuss the questions on Student Edition page 0. This discussion should spark students' interest and promote thinking about water conservation.

- *Sample answer:* You can conserve water by turning off the sink while brushing your teeth and not rinsing dishes before putting them in the dishwasher.
- *Sample answer:* A 5-minute shower uses about 10 gallons of water; *Sample answer:* A 10-minute shower uses about 20 gallons of water; *Sample answer:* A 15-minute shower uses about 30 gallons of water.
- *Sample answer:* If 10,000 people each use 10 fewer gallons of water each month, it would save about 100,000 gallons of water each month, or about 1,200,000 gallons per year.

Conclude the Chapter with the Career

Every Drop Counts on Student Edition pages 54 and 55 asks students to analyze a data display and apply their understanding of solving linear equations to make a plan to reduce daily water usage.

Big Idea of the Chapter:
Reason About Linear Relationships

"What do you notice? What do you wonder?" Ask students to explain what is shown in the graph, the population growth of the United States and how it relates to water consumption. Have partners describe the trends they see in the graph. Then have students complete the exercises.

Environmental Connections

? "Other than drinking, what do humans use water for?"

? "Why do you think the total use of water decreased from 2005 to 2015?" *Sample answer:* People became more conscious of their consumption.

English Learner Support

Interpreting Mathematical Explanations

- Encourage students to form answers in their home language and then translate their answers into English. Assist students with any grammatical errors.
- Key factors to learning a second language are building background knowledge and vocabulary.
- Consider having each student begin creating a math vocabulary notebook. Encourage students to include math terms, definitions, examples, illustrations, and translations in their home language to refer to throughout the school year.

Student Edition page 0

Hear from a National Geographic Explorer Freshwater Ecologist.

Student Edition page 1

Chapter 1 3

*The **Mathematics of the Chapter** provides teacher support for new and veteran teachers. It explains the relevance of the content, common misconceptions, and introduces a career launch that relates to the content of the chapter and lessons. The **Big Idea of the Chapter** encourages curiosity and provides opportunities for meaningful mathematical thinking and discussion.*

NATIONAL GEOGRAPHIC LEARNING | Cengage

Big Ideas Learning

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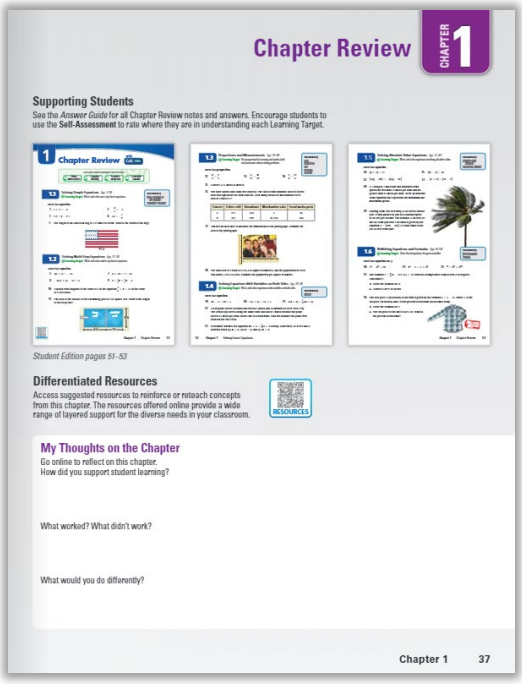


Chapter Review

CHAPTER 1

Supporting Students

See the *Answer Guide* for all Chapter Review notes and answers. Encourage students to use the **Self-Assessment** to rate where they are in understanding each Learning Target.

Student Edition pages 51–53

Differentiated Resources

Access suggested resources to reinforce or reteach concepts from this chapter. The resources offered online provide a wide range of layered support for the diverse needs in your classroom.

RESOURCES

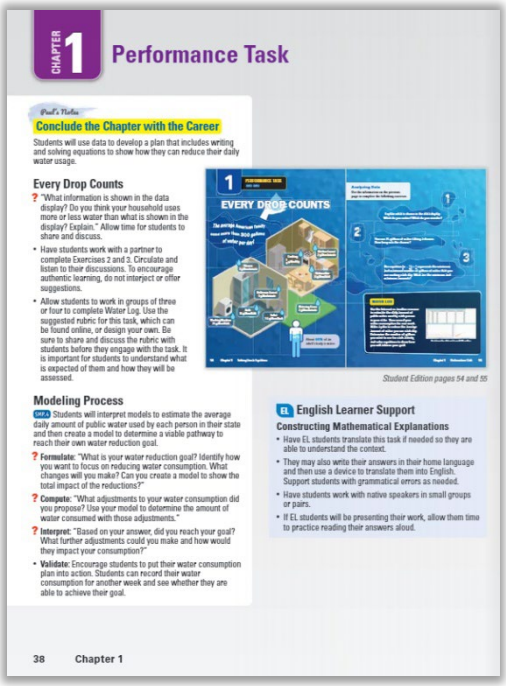
My Thoughts on the Chapter

Go online to reflect on this chapter.
How did you support student learning?

What worked? What didn't work?

What would you do differently?

Chapter 1 37



CHAPTER 1 Performance Task

Conclude the Chapter with the Career

Students will use data to develop a plan that includes writing and solving equations to show how they can reduce their daily water usage.

Every Drop Counts

? "What information is shown in the data display? Do you think your household uses more or less water than what is shown in the display? Explain." Allow time for students to share and discuss.

- Have students work with a partner to complete Exercises 2 and 3. Circulate and listen to their discussions. To encourage authentic learning, do not interject or offer suggestions.
- Allow students to work in groups of three or four to complete Water Log. Use the suggested rubric for this task, which can be found online, or design your own. Be sure to share and discuss the rubric with students before they engage with the task. It is important for students to understand what is expected of them and how they will be assessed.

Student Edition pages 54 and 55

Modeling Process

MP.4 Students will interpret models to estimate the average daily amount of public water used by each person in their state and then create a model to determine a viable pathway to reach their own water reduction goal.

? **Formulate:** "What is your water reduction goal? Identify how you want to focus on reducing water consumption. What changes will you make? Can you create a model to show the total impact of the reductions?"

? **Compute:** "What adjustments to your water consumption did you propose? Use your model to determine the amount of water consumed with those adjustments."

? **Interpret:** "Based on your answer, did you reach your goal? What further adjustments could you make and how would they impact your consumption?"

- **Validate:** Encourage students to put their water consumption plan into action. Students can record their water consumption for another week and see whether they are able to achieve their goal.

EL English Learner Support

Constructing Mathematical Explanations

- Have EL students translate this task if needed so they are able to understand the context.
- They may also write their answers in their home language and then use a device to translate them into English. Support students with grammatical errors as needed.
- Have students work with native speakers in small groups or pairs.
- If EL students will be presenting their work, allow them time to practice reading their answers aloud.

38 Chapter 1

*The chapter concludes with **Chapter Review**, **Chapter Practice**, a **Practice Test**, **Performance Task** (directly related to the career launched at the beginning of the chapter), and **Chapter Assessment** (on digital experience) to reinforce and assess learned content.*

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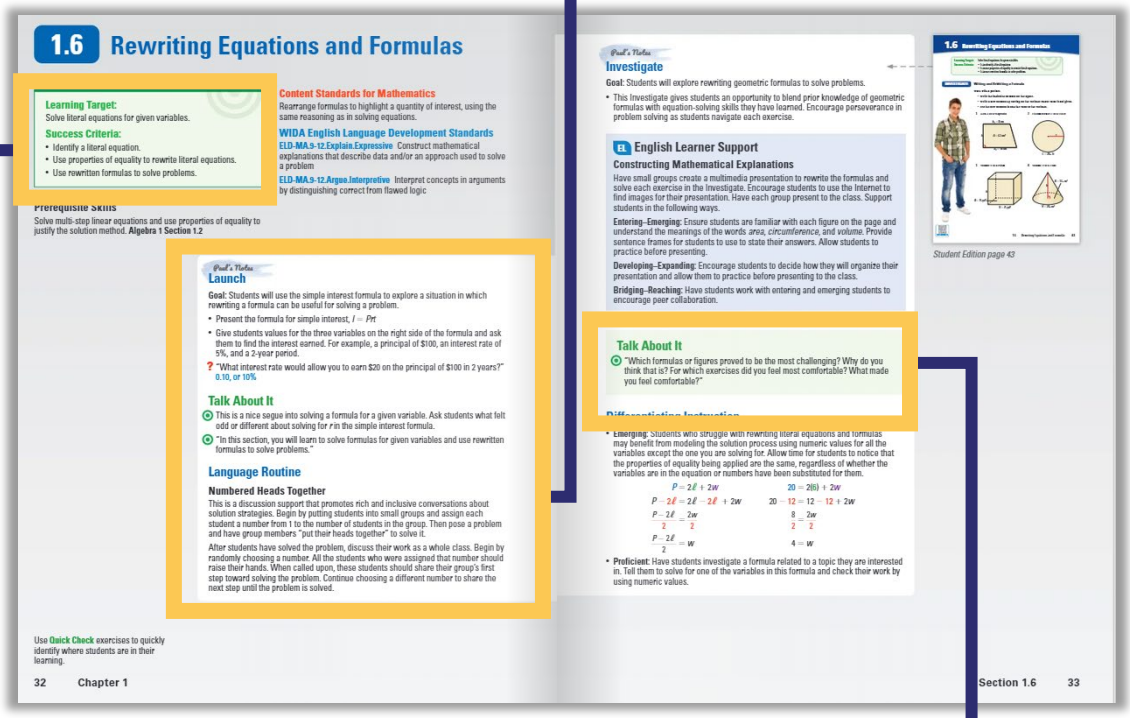
Step 7:

Concepts & Connections is designed to support teachers with point-of-use professional development in the Instructional Guide. *Concepts & Connections* embeds proven high-impact strategies within every lesson. These strategies, such as classroom discussion, teacher clarity, and feedback, are proven to be highly effective strategies that are within a teacher's control from Dr. John Hattie's *Visible Learning* research. These high-impact strategies are found in every lesson beginning with Learning Targets and Success Criteria, along with opportunities for feedback, and discussion prompts all at point of use in every lesson.

Learning Targets and Success Criteria align with the high-impact strategy of Teacher Clarity

Red Question Marks indicate classroom discussion prompts for the teacher.



1.6 Rewriting Equations and Formulas

Learning Target:
Solve literal equations for given variables.

Success Criteria:
- Identify a literal equation.
- Use properties of equality to rewrite literal equations.
- Use rewritten formulas to solve problems.

Content Standards for Mathematics
Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

WIDA English Language Development Standards
ELD-MA.9-12.Explain.Expressive Construct mathematical explanations that describe data and/or an approach used to solve a problem
ELD-MA.9-12.Argue.Interpretive Interpret concepts in arguments by distinguishing correct from flawed logic

Prerequisite Skills
Solve multi-step linear equations and use properties of equality to justify the solution method. Algebra 1 Section 1.2

Launch
Goal: Students will use the simple interest formula to explore a situation in which rewriting a formula can be useful for solving a problem.
- Present the formula for simple interest, $I = Prt$.
- Give students values for the three variables on the right side of the formula and ask them to find the interest earned. For example, a principal of $100, an interest rate of 5%, and a 2-year period.

? "What interest rate would allow you to earn $20 on the principal of $100 in 2 years?" 0.10, or 10%

Talk About It
- This is a nice segue into solving a formula for a given variable. Ask students what felt odd or different about solving for r in the simple interest formula.
- "In this section, you will learn to solve formulas for given variables and use rewritten formulas to solve problems."

Language Routine
Numbered Heads Together
This is a discussion support that promotes rich and inclusive conversations about solution strategies. Begin by putting students into small groups and assign each student a number from 1 to the number of students in the group. Then pose a problem and have group members "put their heads together" to solve it.
After students have solved the problem, discuss their work as a whole class. Begin by randomly choosing a number. All the students who were assigned that number should raise their hands. When called upon, these students should share their group's first step toward solving the problem. Continue choosing a different number to share the next step until the problem is solved.

Use Quick Check exercises to quickly identify where students are in their learning.

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Investigate
Goal: Students will explore rewriting geometric formulas to solve problems.
- This Investigate gives students an opportunity to blend prior knowledge of geometric formulas with equation-solving skills they have learned. Encourage perseverance in problem solving as students navigate each exercise.

English Learner Support
Constructing Mathematical Explanations
Have small groups create a multimedia presentation to rewrite the formulas and solve each exercise in the Investigate. Encourage students to use the Internet to find images for their presentation. Have each group present to the class. Support students in the following ways.
Entering–Emerging: Ensure students are familiar with each figure on the page and understand the meanings of the words *area*, *circumference*, and *volume*. Provide sentence frames for students to use to state their answers. Allow students to practice before presenting.
Developing–Expanding: Encourage students to decide how they will organize their presentation and allow them to practice before presenting to the class.
Bridging–Reaching: Have students work with entering and emerging students to encourage peer collaboration.

Talk About It
"Which formulas or figures proved to be the most challenging? Why do you think that is? For which exercises did you feel most comfortable? What made you feel comfortable?"

Emerging: Students who struggle with rewriting literal equations and formulas may benefit from modeling the solution process using numeric values for all the variables except the one you are solving for. Allow time for students to notice that the properties of equality being applied are the same, regardless of whether the variables are in the equation or numbers have been substituted for them.

$P = 2\ell + 2w$
$P - 2\ell = 2\ell - 2\ell + 2w$
$\frac{P - 2\ell}{2} = \frac{2w}{2}$
$\frac{P - 2\ell}{2} = w$

$20 = 2(8) + 2w$
$20 - 12 = 12 - 12 + 2w$
$\frac{8}{2} = \frac{2w}{2}$
$4 = w$

Proficient: Have students investigate a formula related to a topic they are interested in. Tell them to solve for one of the variables in this formula and check their work by using numeric values.

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Section 1.6 33

The bullseye icon indicates opportunities for feedback directly relating to the Learning Targets and Success Criteria.

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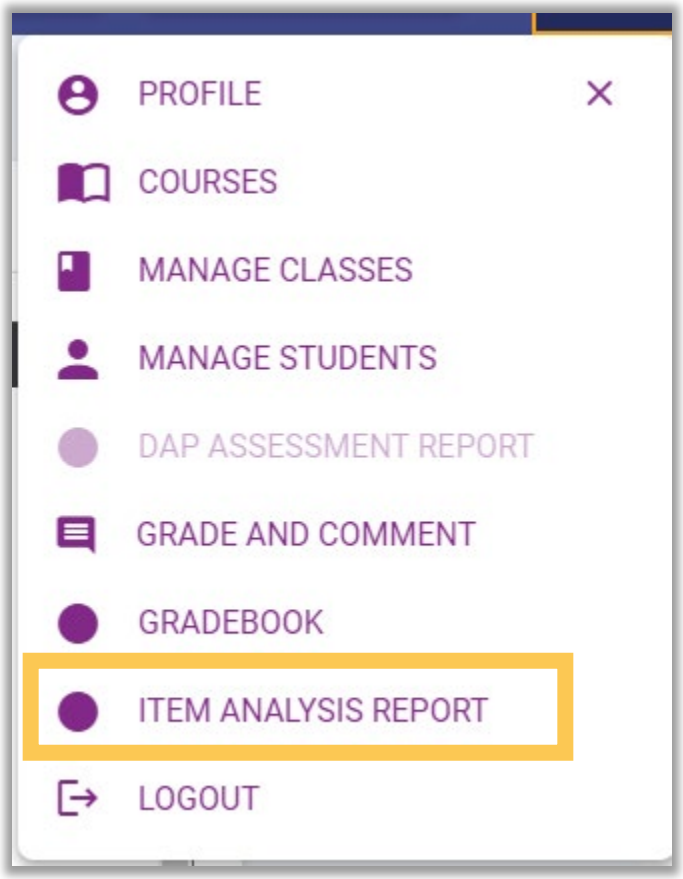
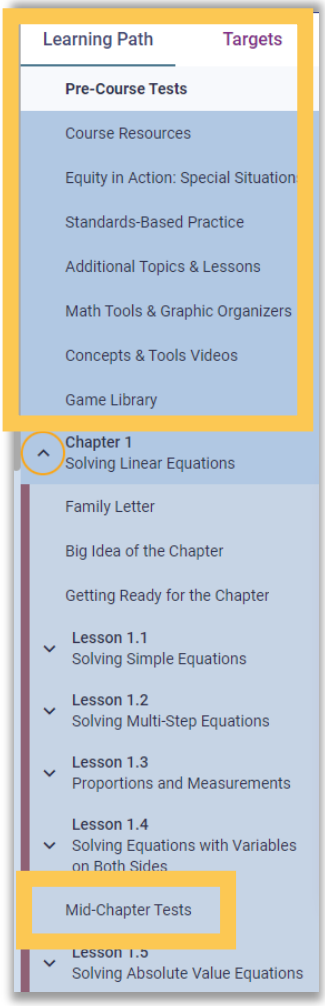
Step 8:

Using the digital access credentials found on the Review Site, visit www.myadamath.com to view summative, formative, and self-assessment options. Once logged in, select **Plan.** Along the left side of your Learning Path, you will find **Pre-Course Tests**, additional **Course Resources, Standards-Based Practice,** and **Additional Topics & Lessons.** Expand a chapter to view the **Mid-Chapter Tests, Performance Task, Chapter Tests,** and in select chapters, a **Multi-Chapter Test.** You will have the opportunity to view reports for all assessments, including **Item Analysis Reports.**





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