

Grades

6-8

# i-Ready® Classroom Mathematics

## Program Overview





# Making Classrooms Better Places for Teachers and Students

We believe that all students can learn grade-level mathematics given the right access and support. *i-Ready Classroom Mathematics* takes a **unique approach, building upon research-based practices that are proven to work.**

Through a **blend of purposeful print and digital components,** the instructional design makes mathematics accessible, increases student engagement, and builds confidence. Everything works together to support teachers and help students connect to mathematics in new ways.





## Students Take Ownership of Their Learning

Invite students to be active participants in math class, and help them become independent mathematical thinkers.

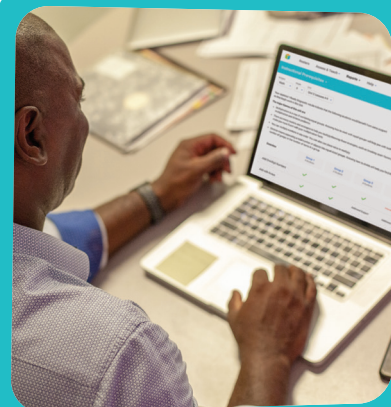
**Page 4**



## Practice Matches the Rigor of the Standards

Prepare students for high-stakes assessments with quality practice that reflects the rigorous expectations of the standards.

**Page 13**



## Teachers Use Data to Differentiate Instruction

When differentiation is used in service of mastering grade-level standards, it enables students to reach their greatest potential.

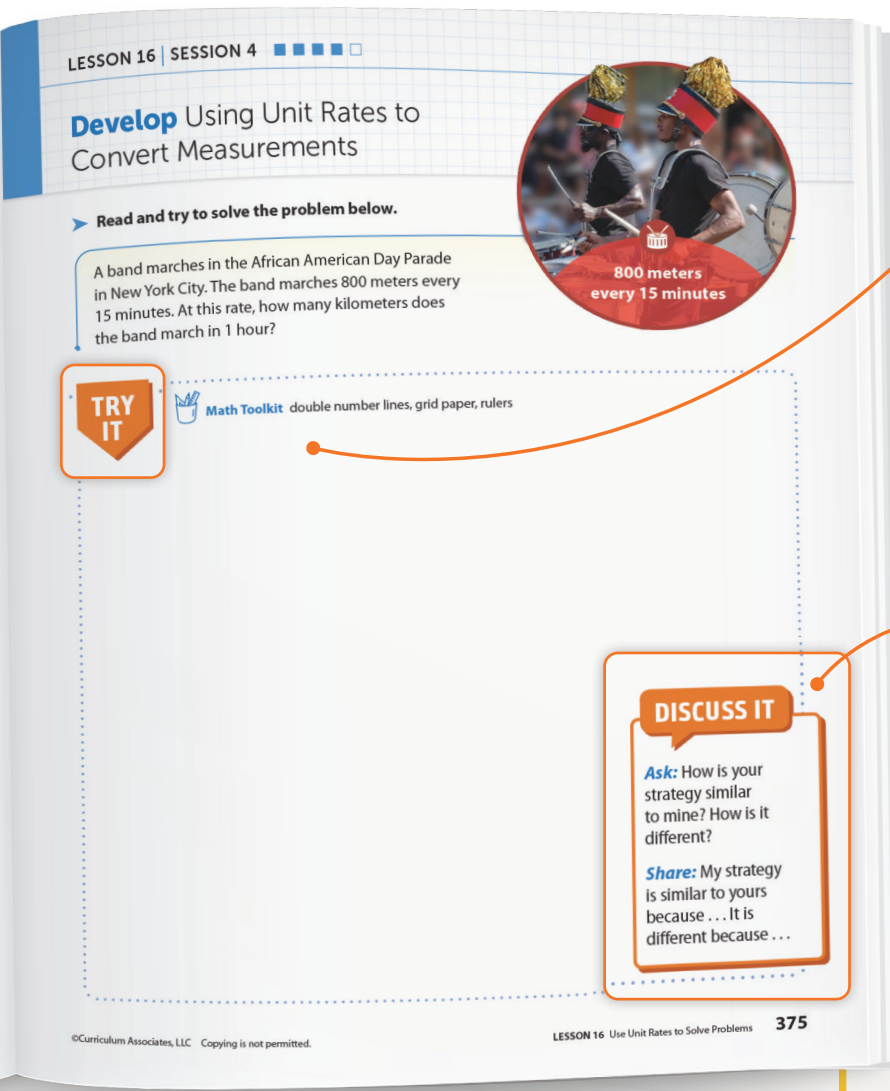
**Page 16**

**For a full list of program components available  
in English and Spanish, see page 22.**

# Math Shouldn't Be Quiet

Your middle school students love to talk, so get them talking about mathematics!

Instructional models like “I do, we do, you do” make it hard for students to develop independent mathematical thinking. *i-Ready Classroom Mathematics* invites all students to take part in math class. The Try–Discuss–Connect routine centers around student-generated solutions and meaningful discussions. This simple routine engages students and drives deeper understanding.



## TRY IT

The teacher introduces a rich task and helps students make sense of the problem.

Students have time to plan and solve the problem using the tools and strategies that make sense to them.

## DISCUSS IT

Students talk with a partner to share strategies and practice vocabulary. During the partner discussions, the teacher monitors and asks clarifying questions.

Selected students share their work with the class in a way that builds conceptual understanding.

Example of Grade 6 Try It and Discuss It





## CONNECT IT

Students complete questions that promote deeper connections. Then they apply their understanding to new problems.

After the class fully explores a variety of solution methods, models or examples are presented to enhance students' understanding.

### Explore different ways to convert between units of measure.

A band marches in the African American Day Parade in New York City. The band marches 800 meters every 15 minutes. At this rate, how many kilometers does the band march in 1 hour?



#### Model It

You can use a table of equivalent ratios to convert between units of measure.

1,000 meters = 1 kilometer									
÷ 1,000	× 1,000								
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Meters</th> <th style="width: 50%;">Kilometers</th> </tr> </thead> <tbody> <tr> <td>1,000</td> <td>1</td> </tr> <tr> <td>1</td> <td>0.001</td> </tr> <tr> <td>800</td> <td>0.8</td> </tr> </tbody> </table>	Meters	Kilometers	1,000	1	1	0.001	800	0.8	× 800
Meters	Kilometers								
1,000	1								
1	0.001								
800	0.8								

60 minutes = 1 hour							
÷ 4	× 4						
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Minutes</th> <th style="width: 50%;">Hours</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>1</td> </tr> <tr> <td>15</td> <td><math>\frac{1}{4}</math></td> </tr> </tbody> </table>	Minutes	Hours	60	1	15	$\frac{1}{4}$	× 4
Minutes	Hours						
60	1						
15	$\frac{1}{4}$						

The band marches 0.8 kilometers in  $\frac{1}{4}$  hour. Multiply by 4 to find the number of kilometers the band marches in 1 hour.

$$4 \times 0.8$$

#### Model It

You can multiply by a unit rate to convert between units of measure.

Write the rate for kilometers per meter.

$$1 \text{ kilometer} = 1,000 \text{ meters}$$

$$\frac{1}{1,000} \text{ kilometer per meter}$$

Find the number of meters the band marches in 1 hour.

$$4 \times 800 = 3,200$$

To convert 3,200 meters to kilometers, multiply by the unit rate.

meters	kilometers per meter
↓	↓
$3,200 \times$	$\frac{1}{1,000}$

## CONNECT IT

### Use the problem from the previous page to help you understand how to convert between units of measure.

- 1 Look at the first **Model It**. How are the relationships 1,000 meters = 1 kilometer and 60 minutes = 1 hour similar to rates?
- 2 Look at the second **Model It**. The relationship 1 kilometer = 1,000 meters is used to write the rate  $\frac{1}{1,000}$  kilometer per meter. How is this rate shown by a row of the table of meters and kilometers in the first **Model It**?
- 3 There are two rates that relate meters and kilometers. In the second **Model It**, why is  $\frac{1}{1,000}$  the unit rate that is used to convert 3,200 meters to kilometers?
- 4 How many kilometers does the band march in 1 hour?
- 5 How is converting between measurements similar to finding equivalent ratios?
- 6 **Reflect** Think about all the models and strategies you have discussed today. Describe how one of them helped you better understand how to convert between units of measure.

### Example of Grade 6 Connect It

*What does this look like in the classroom?*

Visit [CurriculumAssociates.com/TDC](https://CurriculumAssociates.com/TDC) to see the Try-Discuss-Connect routine in a real classroom!

# Help Students See Themselves in the Mathematics

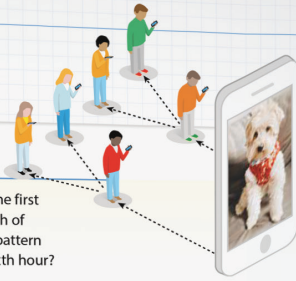
Affirm and validate students' identities using the embedded teacher support in *i-Ready Classroom Mathematics*. Contexts and ideas that honor diverse backgrounds help students make better connections to the content.

LESSON 5 | SESSION 2 ■ ■ ■ □

## Develop Writing and Evaluating Expressions with Exponents

Read and try to solve the problem below.

Kendra posts a photo on her social media account. In the first hour, 2 friends share the photo. In the second hour, each of those friends has 2 friends who share the photo. The pattern continues. How many people share the photo in the sixth hour?



TRY IT

Math Toolkit connecting cubes, counters, grid paper

Antonio

Hour 1: ●● 2 people  
 Hour 2: ●●●● 4 people  
 Hour 3: ●●●●●●●● 8 people  
 Hour 4: ●●●●●●●●●● 16 people

The number of people is multiplied by 2 each hour

Hour 5: 16 people  $\times 2 = 32$  people  
 Hour 6: 32 people  $\times 2 = 64$  people  
 In the sixth hour, 64 people share the photo.

Kesha

Hour:	1	2	3	4	5	6
Number of people:	2	4	8	16	32	64

$\times 2 \quad \times 2 \quad \times 2 \quad \times 2 \quad \times 2$

64 people share the photo in the sixth hour.

### DISCUSS IT

**Ask:** What did you do first to figure out how many people share the photo in the sixth hour?

**Share:** First I...

## Motivate and Engage

Relevant, high-interest scenarios provide multiple entry points to engage students in the mathematics.

## Real-World Connection

STEAM-focused connections show how mathematics is used in everyday life.

### REAL-WORLD CONNECTION

Engineers measure a machine's efficiency by calculating its mechanical advantage (MA), or the amount of help you get from the machine when completing a task. Even a simple mechanical device—such as a ramp—provides measurable MA. To find the MA of a ramp, divide its length by its height. For example, a 6-foot ramp that is  $\frac{1}{2}$  foot high provides an MA of  $6 \div \frac{1}{2}$ , or 12. A 6-foot ramp that is  $\frac{3}{4}$  foot high provides an MA of  $6 \div \frac{3}{4}$ , or 8. The  $\frac{1}{2}$ -foot ramp has the greater MA, meaning that a mechanized wheelchair will not have to work as hard to travel up it. Ask students to think of other real-world examples when knowing how to divide by fractions would be useful.



### CULTURAL CONNECTION

**Alternate Notation** In many parts of the world, including Latin America, the colon (:) is used as a division symbol. In the United States, the colon (:) is used as a ratio symbol and the obelus ( $\div$ ), which has a horizontal line and two dots similar to a colon, is used as a division symbol. The solidus (/) can also be used as a division symbol throughout the world. Encourage students who have experience with using a colon as a division symbol to share what they know with the class.

12 : 4  
 12 ÷ 4  
 12 / 4  
 $\frac{12}{4}$   
 4 ) 12

**Cultural Connection**  
 Alternative notations and algorithms used in various cultures are identified to help raise awareness.

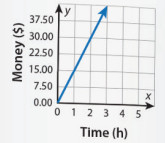




**Apply It**

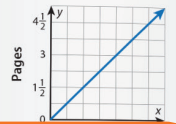
Use what you learned to solve these problems.

8 Alejandro babysits in the evenings. He makes a graph to show the money he earns. How much money does Alejandro earn for each hour of babysitting? How do you know?

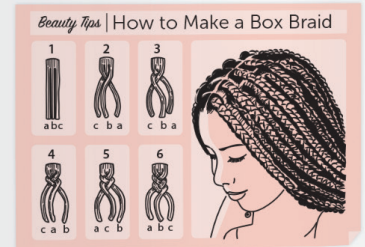
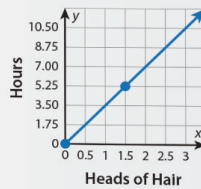


9 Indira makes a graph to show how many pages of her graphic novel she can illustrate each day.

a. What is the constant of proportionality for the relationship between pages and days?



10 Ellema's little sisters want box braids. They complain that Ellema braids too slowly. So, she makes a graph to show them how fast she is.



a. What does the point (0, 0) mean?

b. What does the point (1.5, 5.25) mean?

**Making Math Relevant**  
Problems and examples reflect students' own experiences and the world around them.

**Community of Interconnected Learners** The Try-Discuss-Connect routine gives every student a voice and the opportunity to engage with the content in a way that is meaningful to them.

**Try-Discuss-Connect Routine**

**TRY IT**

- Make sense of the problem
- Solve and support your thinking

**DISCUSS IT**

- Share your thinking with a partner
- Compare strategies

**CONNECT IT**

- Make connections and reflect on what you have learned
- Apply your thinking to a new problem



# Integrate Language and Mathematics

Build academic language and deepen conceptual understanding at the same time. The Try–Discuss–Connect routine helps students contextualize word problems and engage in academic discourse. *i-Ready Classroom Mathematics* also includes targeted support to help build academic English for all.

## Supports for discourse, sense making, and academic language within the Try–Discuss–Connect Routine

### TRY IT

#### Language Routines

- Three Reads
- Co-Craft Questions
- Notice and Wonder
- Say It Another Way

#### Teacher Moves

- Turn and Talk
- Individual Think Time

### DISCUSS IT

#### Language Routines

- Compare and Connect
- Collect and Display

#### Teacher Moves

- Turn and Talk
- Individual Think Time
- Four Rs

#### Conversation Tips

### CONNECT IT

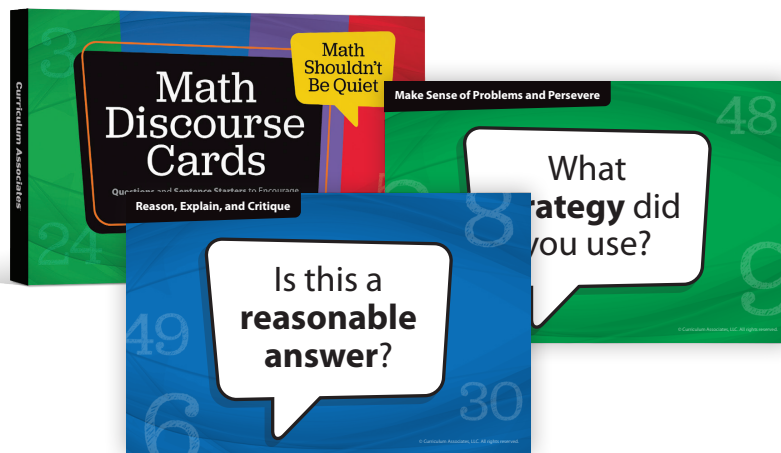
#### Language Routines

- Collect and Display
- Compare and Connect

#### Teacher Moves

- Turn and Talk
- Individual Think Time
- Four Rs

#### Conversation Tips

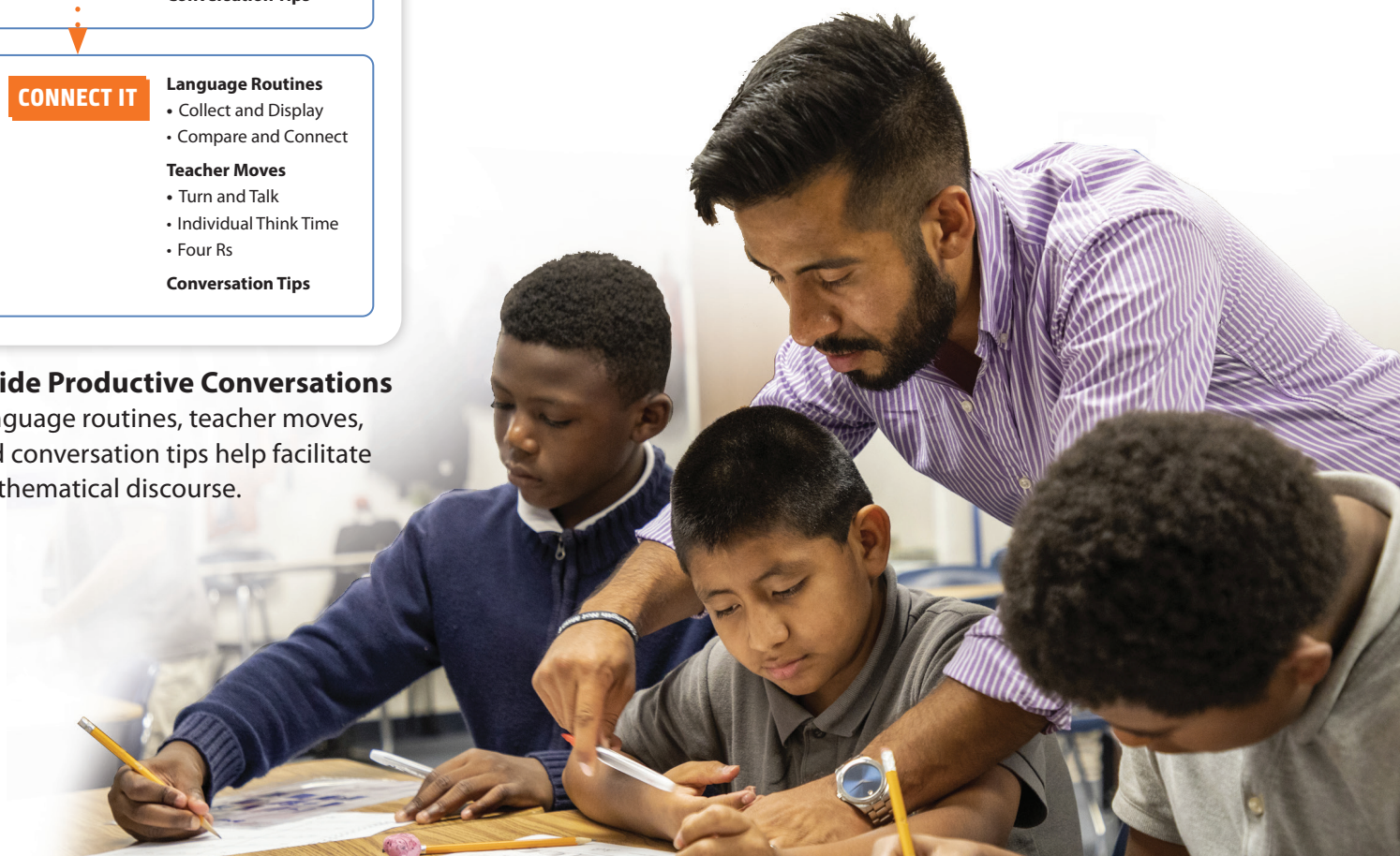


## Additional Language and Discourse Supports

- Discourse Cards
- Bilingual Glossary (English/Spanish)
- Multilingual Glossary
- Academic Vocabulary Glossary

## Guide Productive Conversations

Language routines, teacher moves, and conversation tips help facilitate mathematical discourse.







## Vocabulary Development

Every lesson includes:

- Vocabulary graphic organizer
- Teacher support to help students review previously learned mathematics concepts and vocabulary they will build on during the lesson

### DEVELOP ACADEMIC LANGUAGE

**WHY?** Develop understanding of the phrase *isolate the variable*.

**HOW?** In the second Model It, students explore solving an equation by isolating the  $x$ -term. Ask students to use prior knowledge to give a rough definition for *isolate*. Provide the synonym *separate*. Read the second Model It and have students turn and talk with a partner about the steps used to isolate the  $x$ -term.

- 1 Think about what you know about linear equations. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

What is it?	What I Know About It
<div style="border: 1px solid green; border-radius: 50%; padding: 5px; display: inline-block;"> <b>linear equation</b> </div>	
Examples	Examples

each drink is \$2.50.

our work.

divide 17.50 by 7 to find the price

$$\frac{17.50}{7} = 2.50$$

The price of each item is \$2.50.

286

### DIFFERENTIATION | ENGLISH LANGUAGE LEARNERS

Use with Session 2 Apply It

#### Levels 1–3: Reading/Listening

Help students interpret Apply It problem 7. Use **Three Reads**. Focus on the first two sentences in the first read. Explain the difference between *scores* and *earn*s points. Have students state the number of points earned for a touchdown and a field goal. Then have volunteers use **Act It Out**—one person tossing a coin 7 times — heads = touchdown, tails = field goal, while other students record points and the final score. Reread sentences 3–5 and have them relate their coin toss game to the equations in the problem. Then read the problem. Ask, *What is the system of equations? What do the variables represent?* Have students solve the problem.

#### Levels 2–4: Reading/Listening

Use **Three Reads** to help students interpret Apply It problem 7. After the first read, have partners turn and talk about the difference between scoring multiple times and earning points. Point to the score board and ask: *What number is this?* Have students share what they know about earning points in sports. Have students use a coin toss (7 tosses, heads = touchdown; tails = field goal) to **Act It Out** to show the way teams earn points in a football game.

After the last read, display these questions:

- What do the variables represent?
- What information is in each equation?

#### Levels 3–5: Reading/Listening

Use **Three Reads** to help students interpret Apply It problem 7. After the first read, have partners discuss the meanings of *scores* and *earn*s. Have them talk about different ways to score and earn points in sports.

After the next read, have partners discuss the quantities and relationships in the problem. Display these questions to support discussions:

- What do the variables represent?
- What information is in each equation?

Reinforce with students that clear explanations use complete sentences and precise vocabulary.

## Differentiation for English Learners

These scaffolds are provided every day to support the different proficiency levels in the classroom for both receptive and productive language.

# Designed to Deliver Powerful Results


The mathematics standards for middle school are rigorous. The instructional design of *i-Ready Classroom Mathematics* scaffolds challenging content to make mathematics accessible and increase student achievement.

## Different Lesson Types to Address All Aspects of Rigor

**Understand Lessons** These lessons focus primarily on conceptual understanding and occur at key points in the instructional sequence.


**Strategy Lessons** These lessons help students develop and discuss a variety of solution strategies, helping them make important connections and deepen their understanding.

**Math in Action Lessons** These lessons review unit content and teach students how to develop complete responses to a performance task.



## Contents

<b>UNIT</b>	<b>Algebraic Thinking</b>	
<b>5</b>	<b>Equivalent Expressions and Equations with Variables</b>	
	Unit Opener .....	433
	Prepare for Equivalent Expressions and Equations with Variables .....	434
<b>LESSON 19</b>	Write and Identify Equivalent Expressions .....	435
<b>LESSON 20</b>	<b>Understand</b> Solutions of Equations ..... 6.EE.B.5	463
<b>LESSON 21</b>	Write and Solve One-Variable Equations ..... 6.EE.B.7	475
<b>LESSON 22</b>	Analyze Two-Variable Relationships .....	503
<b>MATH IN ACTION</b>	Equivalent Expressions and Equations with Variables .....	525
	Self Reflection .....	534
	Vocabulary Review .....	535
	Unit Review .....	536



vi

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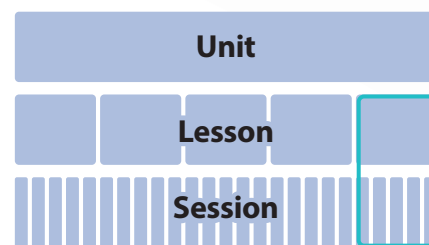






# Multiple-Day Lessons Provide More Time for Deeper Understanding

Give students the time they need to dig deeper into challenging concepts. The lessons in *i-Ready Classroom Mathematics* span multiple days to provide the time students need to make important connections. Lessons are divided into Explore, Develop, and Refine sessions.



## Structure of a Lesson

Day 1	Day 2	Day 3	Day 4	Day 5
<b>Explore SESSION</b>	<b>Develop SESSION</b>	<b>Develop SESSION</b>	<b>Develop SESSION</b>	<b>Refine SESSION</b>
<ul style="list-style-type: none"> <li>• Connect prior knowledge.</li> <li>• Introduce new lesson content.</li> <li>• Address unfinished learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Standards-based instruction</li> <li>• Try–Discuss–Connect discourse routine</li> <li>• Build understanding, practice new skills, and apply new learning</li> <li>• Embedded differentiation options to meet all students' learning needs</li> </ul>			<ul style="list-style-type: none"> <li>• In-class time to practice and strengthen skills and understanding</li> <li>• Reteach, remediate, reinforce, and extend the learning</li> </ul>

**Start**

**Same and Different**

$4a = 24$	$0.5b = 3$
$c - 1.2 = 4.8$	$d + 5.5 = 11.5$

### Connect to Prior Knowledge

The Start activity follows an asset-based approach, using students' prior knowledge as a springboard for learning new concepts.

**How can we isolate the variable,  $p$ ?**

$6,000 + (-25p) = 4,000$

**Step #1**

$6,000 - 25p - 6,000 = 4,000 - 6,000$

$-25p = -2,000$

Divide both sides of the equation by $-25$ .	Multiply both sides of the equation by $25$ .	Multiply both sides of the equation by $-25$ .	Divide both sides of the equation by $25$ .
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### Explore Concepts with Technology

Interactive Tutorials allow students to explore concepts more deeply.

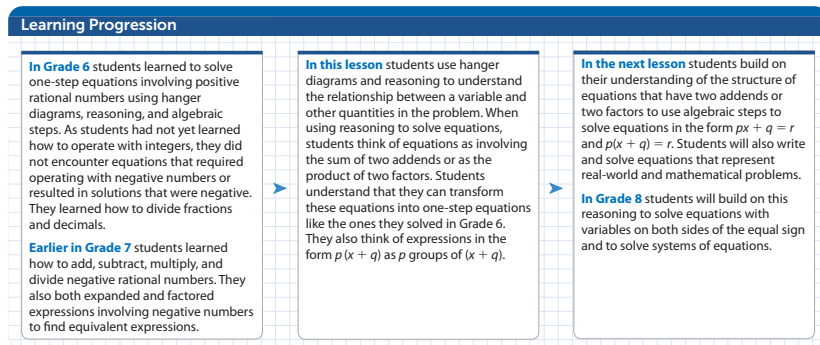


### In-Class Practice

Dedicated class time and activities provide practice and differentiation.

## Teacher Support That Empowers

Enhance teacher knowledge, skill, and effectiveness with embedded strategies and support. *i-Ready Classroom Mathematics* includes professional learning designed to help teachers bring mathematical concepts to life.



### Learning Progression

This chart illustrates the learning arc for the skills in each lesson and the coherence across grades.

### Facilitate Whole Class Discussion

Call on students to share selected strategies. As they present, remind students to provide clear explanations and details regarding what approach they used to solve the problem and why.

Guide students to **Compare and Connect** the representations. Have students turn and talk with a partner to discuss ways they can check to be sure their answer is reasonable.

**ASK** How were the values 5 lb and 4.5 lb used to find the percent error in all of the strategies?

**LISTEN FOR** All of the strategies use the difference between 5 lb and 4.5 lb as the amount of error and compare it to 5 lb to find the percent error.

### Facilitation Support in the Teacher's Guide

Integrate the National Council of Teachers of Mathematics (NCTM)'s Effective Teaching Practices to promote and facilitate mathematical discourse for all learners, especially English Learners.



### *i-Ready Classroom Central*

From how-to tips to planning tools, get on-demand access to everything needed for a successful implementation.



### Onsite and Online Professional Development (PD)

Our ongoing, classroom-focused PD supports teachers in using student thinking and mathematical practices to transform mathematics classrooms.

### Your Feedback Matters!

We continually grow and enhance our PD resources based upon your needs and opinions.





# High-Quality Independent Practice

Practice needs to build conceptual understanding and match the rigorous expectations of the standards. *i-Ready Classroom Mathematics* provides questions and practice problems that solidify students' conceptual understanding before providing computational practice to develop fluency.

## Additional Practice in Student Worktext

In every session, students build proficiency with the strategies learned in class and apply those ideas to answer critical-thinking questions and solve new problems.

LESSON 18 | SESSION 3      Name: \_\_\_\_\_

### Practice Writing and Solving Equations with Grouping Symbols

► Study the Example showing how to use an equation with grouping symbols to solve a problem. Then solve problems 1–5.

**Example**

Lillie and her family donate money to charity at the end of each year. Lillie's brother donates \$3 more than Lillie. Her parents donate 4.5 times as much as Lillie's brother. Lillie's parents donate \$45. How much does Lillie donate?

You can represent the situation with an equation.

$d$  = Lillie's donation in dollars

$$4.5(d + 3) = 45$$

$$\frac{4.5(d + 3)}{4.5} = \frac{45}{4.5}$$

$$d + 3 = 10$$

$$d + 3 - 3 = 10 - 3$$

$$d = 7$$

Lillie donates \$7.

1 Look at  $4.5(d + 3) = 45$  from the Example.

- What does  $(d + 3)$  represent?
- Why is  $(d + 3)$  multiplied by 4.5?
- How much does Lillie's brother donate?

2 Malik joins a gym. He gets \$2 per month off the regular monthly rate for 3 months. Malik pays \$49.50 for 3 months. What is the gym's regular monthly rate,  $r$ ? Show your work.

**SOLUTION** \_\_\_\_\_

LESSON 18 | SESSION 3

3 Luis is shopping for gifts. Mugs are on sale for \$4 off the regular price,  $p$ . Luis buys 6 mugs. He pays a total of \$54. What is the regular price of a mug? Show your work.

**SOLUTION** \_\_\_\_\_

4 Solve  $\frac{3}{4}(5x - 3) + 8 = 17$ . Show your work.

**SOLUTION** \_\_\_\_\_

5 Solve  $-72 = 8(y - 3)$ . Show your work.

**SOLUTION** \_\_\_\_\_

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# Multiple Practice Opportunities Build Students' Confidence

Effective mathematics practice needs to be more than asking students to memorize math facts and recall answers to questions. *i-Ready Classroom Mathematics* provides a variety of practice opportunities to help students build conceptual understanding and demonstrate procedural fluency by experiencing mathematics in multiple ways.

## Refine Sessions

To help students solidify their understanding, each lesson provides one day of in-class practice time with the support of other students and the teacher.

**Example of Grade 8 Refine Session**

LESSON 13 | SESSION 5

**Refine** Solving Systems of Linear Equations Algebraically

Complete the Example below. Then solve problems 1–9.

**Example**  
What is the solution of the system of equations?  
 $3x = 4y - 20$   
 $3x = -y + 10$   
Look at how you could solve the system by substitution.  
 $4y - 20$  and  $-y + 10$  are both equal to  $3x$ .  
 $4y - 20 = -y + 10$       $3x = -y + 10$   
 $5y = 30$       $3x = -6 + 10$   
 $y = 6$       $3x = 4$   
 $x = \frac{4}{3}$

**SOLUTION** \_\_\_\_\_

**PAIR/SHARE**  
How could you use elimination to solve this problem?

**Apply It**  
1 What is the solution of the system of equations? Show your work.  
 $y = x + 3$   
 $3x - 4y = -7$

**SOLUTION** \_\_\_\_\_

**PAIR/SHARE**  
How can you check your answer?

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## Fluency and Skills Practice

Optional targeted practice uses patterns and repeated reasoning to build skills. Available as a student workbook\* or as PDFs on the Teacher Toolbox.

**Example of Grade 7 Fluency and Skills Practice**

FLUENCY AND SKILLS PRACTICE | Name: \_\_\_\_\_

LESSON 12

**Multiplying Negative Rational Numbers**

Find the product of the rational numbers. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1  $2 \times -\frac{7}{4}$      2  $-\frac{1}{3} \times -\frac{6}{5}$      3  $\frac{2}{3} \times -\frac{3}{4}$

4  $-2\frac{1}{2} \times \frac{5}{4}$      5  $-\frac{3}{2} \times -1\frac{2}{3}$      6  $-3\frac{5}{6} \times -2\frac{1}{2}$

7  $0.75 \times -\frac{4}{3}$      8  $-0.2 \times -\frac{2}{5}$      9  $-0.35 \times -1\frac{3}{5}$

10  $2.5 \times -3\frac{4}{5}$      11  $0.2 \times -0.45$      12  $-0.25 \times -1.4$

13  $-2.3 \times 6.8$      14  $-3.9 \times 5\frac{2}{3}$      15  $-4.2 \times -6\frac{2}{3}$

**Answers**  
-21 $\frac{2}{3}$      -15.64     -9 $\frac{1}{2}$      -3 $\frac{1}{2}$      -2 $\frac{11}{12}$   
-1     - $\frac{3}{10}$      -0.09      $\frac{2}{25}$      0.35  
 $\frac{2}{5}$       $\frac{1}{2}$       $\frac{5}{7}$       $9\frac{2}{7}$       $26\frac{2}{3}$

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## Cumulative Practice

Students revisit previously learned content to deepen their understanding and strengthen retention.

**Example of Grade 7 Cumulative Practice**

UNIT 6 Cumulative Practice Name: \_\_\_\_\_

**Set 5 Multiply and Divide with Negative Numbers**

Multiply or divide. Show your work.

1  $-\frac{1}{3}(-30)$      2  $-3\frac{1}{3} \div \frac{4}{5}$

3  $11.7 \div (-6.5)$      4  $-4\frac{1}{2} \times (-6.2)$

**Set 6 Add Opposites**

Write an addition equation to represent and solve each problem.

1 The temperature increases by 6°F to 0°F. What was the original temperature?

2 Fajah has \$8. She spends \$8 on her lunch. How much money does she have after buying lunch?

3 A diver is swimming at an elevation of -12 meters relative to sea level. She swims up 12 meters. What is her elevation now?

4 A football team gains 5 yards on their first play. It loses 5 yards on the next play. How many yards did it gain in total over the two plays?

5 The temperature changes by -2°C to 0°C. What was the original temperature?

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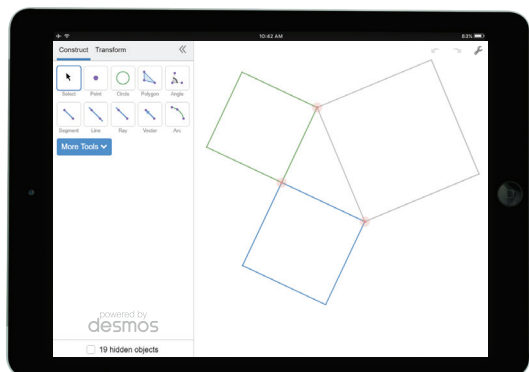
Available as PDF, editable Word® doc, and Fill-In PDF

\*Additional purchase



- Student PDFs work with any learning management system!
- Easily assign resources to Google Classroom.





### Digital Math Tools Powered by Desmos

Students have access to the online graphing and scientific calculators, as well as the geometry tools, to explore concepts and deepen understanding.

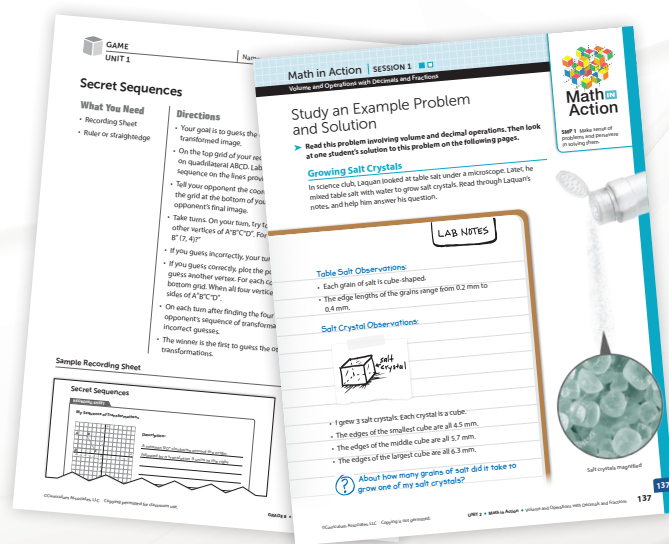
### Interactive Practice with Technology-Enhanced Items

This assignable, digital resource provides practice that reinforces understanding. Students receive immediate, meaningful feedback to keep them on track.



### Learning Games

Engaging fluency practice allows students to explore essential skills in a low-stakes environment. Students can create and share their own puzzles with classmates and toggle to play games in Spanish. In-depth reports offer real-time snapshots of skills progress and growth mindset.



**Apply Skills, Strategies, and Procedures**  
The Unit Games and Math in Action Lessons use students' critical-thinking skills as they engage with games and robust performance tasks.


# Intuitive Data at Your Fingertips

Students come with a wide range of backgrounds, knowledge, and experiences. *i-Ready Classroom Mathematics* helps teachers optimize class time by providing deep knowledge of students' learning needs and guidance to address unfinished learning.

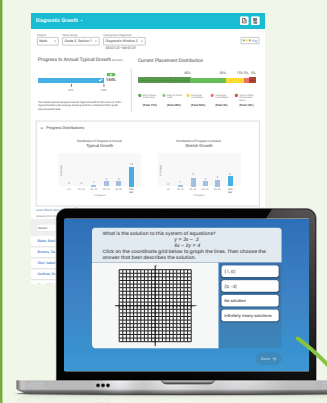
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## Start of School

Use **Lesson 0** to ease students back into classroom routines with concepts from the previous year.



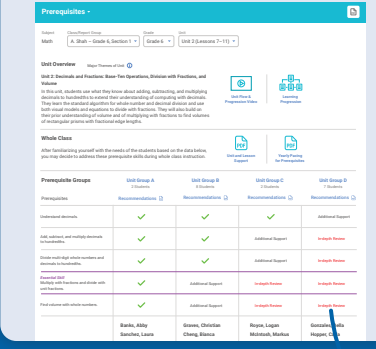
Administer **Diagnostic 1**.



2

## Post-Diagnostic

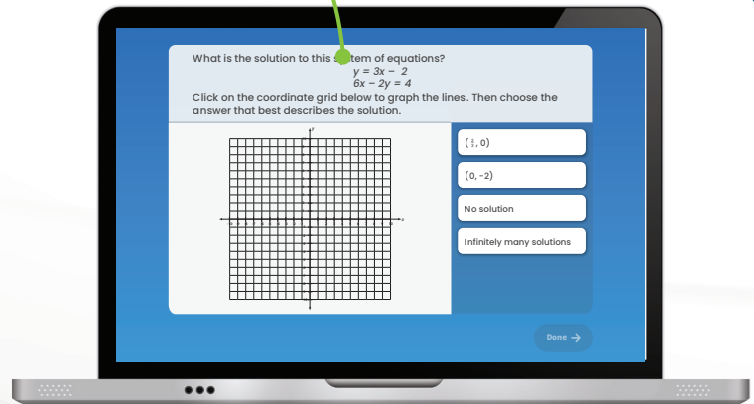
Identify whole class and small group prerequisite learning needs using the **Prerequisites report**.





## Lesson 0

Build a community of learners by introducing students to the **Try-Discuss-Connect** routine. See pages 4–5 for more about the routine.



## Diagnostic

Administer this adaptive digital assessment to gain comprehensive insight into student learning and growth across all K–12 skills and meet the needs of all students.



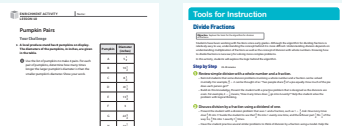
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## Recommended Guidance and Resources

### Whole Class Prerequisite Lessons, Guidance, and Support



### Small Group Recommended Resources



4

## Instruction

### Whole Class Instruction



### Small Group Instruction



## Prerequisites Report

Use the Prerequisites report to address unfinished learning, either during whole class or small group instruction, depending on the needs of the class.

**Prerequisites**

Subject: Math | Class/Report Group: A. Shah - Grade 6, Section 1 | Grade: Grade 6 | Unit: Unit 2 (Lessons 7-11)

**Unit Overview** | Major Themes of Unit

**Unit 2: Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume**

In this unit, students use what they know about adding, subtracting, and multiplying decimals to hundredths to extend their understanding of computing with decimals. They learn the standard algorithm for whole number and decimal division and use both visual models and equations to divide with fractions. They will also build on their prior understanding of volume and of multiplying with fractions to find volumes of rectangular prisms with fractional edge lengths.

**Whole Class**

After familiarizing yourself with the needs of the students based on the data below, you may decide to address these prerequisite skills during whole class instruction.

**Prerequisite Groups**

Prerequisites	Unit Group A 2 Students	Unit Group B 8 Students	Unit Group C 2 Students	Unit Group D 7 Students
Understand decimals.	✓	✓	✓	Additional Support
Add, subtract, and multiply decimals to hundredths.	✓	✓	Additional Support	In-depth Review
Divide multi-digit whole numbers and decimals to hundredths.	✓	✓	Additional Support	In-depth Review
<b>Essential Skill</b> Multiply with fractions and divide with unit fractions.	✓	Additional Support	In-depth Review	In-depth Review
Find volume with whole numbers.	✓	Additional Support	In-depth Review	In-depth Review
	Banks, Abby Sanchez, Laura	Graves, Christian Cheng, Bianca Delaney, Aaron	Royce, Logan McIntosh, Markus	Gonzales, Bella Hopper, Carla Vu, Kaylee

### Whole Class Instruction

Use this pacing and guidance to adjust lesson plans to address prerequisites during whole class instruction when most students have similar learning needs.

### Small Group Instruction

Use recommended resources with groups of students with similar needs.

See the Digital Assessment Reports Sampler for sample reports.



# Optimize Your Class Time

Math class goes by quickly. You need a thoughtful approach to effectively differentiate in that short amount of time. Whether it's addressing unfinished learning or gaining insights into students' understanding, *i-Ready Classroom Mathematics* has the plan and resources for efficient differentiation.

## Address Unfinished Learning with the Prerequisites Report

**Prerequisites**

Subject: Math | Class/Report Group: A. Shah - Grade 6, Section 1 | Grade: Grade 6 | Unit: Unit 2 (Lessons 7-11)

**Unit Overview** Major Themes of Unit

**Unit 2: Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume**

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**Whole Class**

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Prerequisite Groups	Unit Group A 2 Students	Unit Group B 8 Students	Unit Group C 2 Students	Unit Group D 7 Students
Understand decimals.	Recommendations ✓	Recommendations ✓	Recommendations ✓	Additional Support
Add, subtract, and multiply decimals to hundredths.	Recommendations ✓	Recommendations ✓	Additional Support	In-depth Review
Divide multi-digit whole numbers and decimals to hundredths.	Recommendations ✓	Recommendations ✓	Additional Support	In-depth Review

**Learning Progression** outlines the coherence of the standards from previous grades to help uncover students' learning needs.

**On-the-Spot Teaching Tips** suggest additional scaffolding to support students with unfinished learning as they engage in grade-level work.

**UNIT AND LESSON SUPPORT**  
GRADE 6, UNIT 2

READY CLASSROOM MATHEMATICS

> INSTRUCTIONAL SUPPORT | Lessons 9-10 continued

**ON-THE-SPOT TEACHING TIPS FOR GRADE 6**

- Use simpler numbers.** It is easier to see patterns and relationships when the fractions are easy to envision. Provide additional problems with simpler numbers, spending extra time with problems where one number is a unit fraction or a whole number.
- Connect division and multiplication.** Reinforce the foundational work students did with division with unit fractions and whole numbers in Grade 5 to build their understanding of important relationships between division and multiplication. For example, students can understand that  $3 \div \frac{1}{4} = 12$  because they know that  $12 \times \frac{1}{4} = 3$ . Students can also recognize that the division expression  $3 \div \frac{1}{4}$  is equivalent to the multiplication expression  $3 \times 4$  because one way to answer the question "How many  $\frac{1}{4}$ s are in 3?" is to multiply 3 by 4.
- Make sense of the operation in word problems.** As in their Grade 5 work on division with unit fractions, encourage students to use both a visual model and an appropriate division equation when solving word problems. Visual models help them make sense of situations that involve division with fractions and help them determine which quantity is the dividend and which is the divisor.

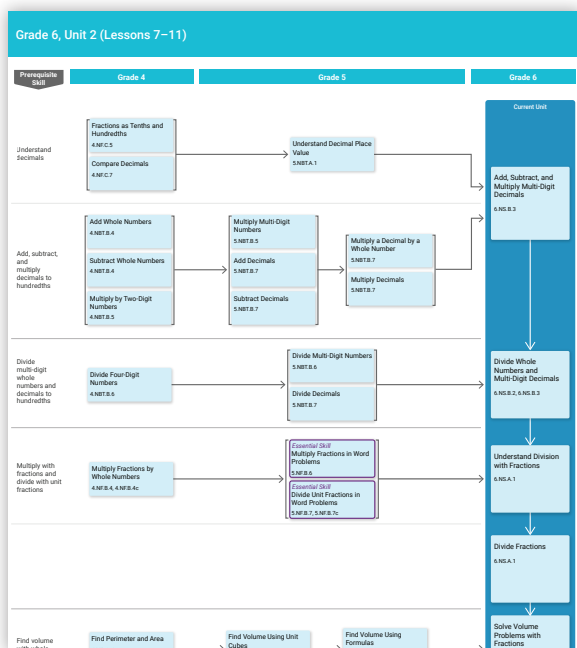
**Yearly Pacing for Prerequisites and Unit and Lesson Support** provide guidance on when and how to use Prerequisite Lessons to address unfinished learning throughout the year.



## Support Grade-Level Content

The **Try–Discuss–Connect routine** provides multiple opportunities to observe student understanding and includes embedded instructional supports to differentiate instruction.

- Try It
- Discuss It
- Pair/Share
- Ask/Listen For
- Common Misconceptions
- Hands-On Activities
- Visual Models
- Error Alert
- Reflect
- Connect It
- Deepen Understanding
- Apply It
- Support Whole Group/ Partner Discussion
- Close: Exit Ticket/ Math Journal



### YEARLY PACING FOR PREREQUISITES

READY CLASSROOM MATHEMATICS

#### Unit 2: Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume

**Unit 2, Lesson 7** continues to build fluency with decimal addition, subtraction, and multiplication. There are no recommended prerequisite lessons.

**Lesson 7** Add, Subtract, and Multiply Multi-Digit Decimals 6.NS.B.3 (A) 2 to 4 days

**PREPARE for Unit 2, Lesson 8** by reviewing dividing with two-digit divisors and with decimals to support students in learning an algorithm for division. 0 to 4 days

**Grade 5, Lesson 5** Divide Multi-Digit Numbers

**Grade 5, Lesson 17** Divide Decimals

**Lesson 8** Divide Whole Numbers and Multi-Digit Decimals 6.NS.B.2 (A) 6.NS.B.3 (A) 2 to 5 days

**PREPARE for Unit 2, Lessons 9–10** by reviewing fraction multiplication and division with unit fractions to support students as they expand their skills with dividing fractions.

**Grade 5, Lesson 22** Multiply Fractions in Word Problems

**Grade 5, Lesson 24** Divide Unit Fractions in Word Problems

**Lesson 9** Understand Division with Fractions 6.NS.A.1 (M) 3 days

**Lesson 10** Divide Fractions 6.NS.A.1 (M) 4 days

**Lesson 11** Solve Volume Problems with Fractions 6.G.A.2 (S) 2 to 4 days

#### Unit 3: Ratio Reasoning: Ratio Concepts and Equivalent Ratios





# Actionable Insights for Progress Monitoring

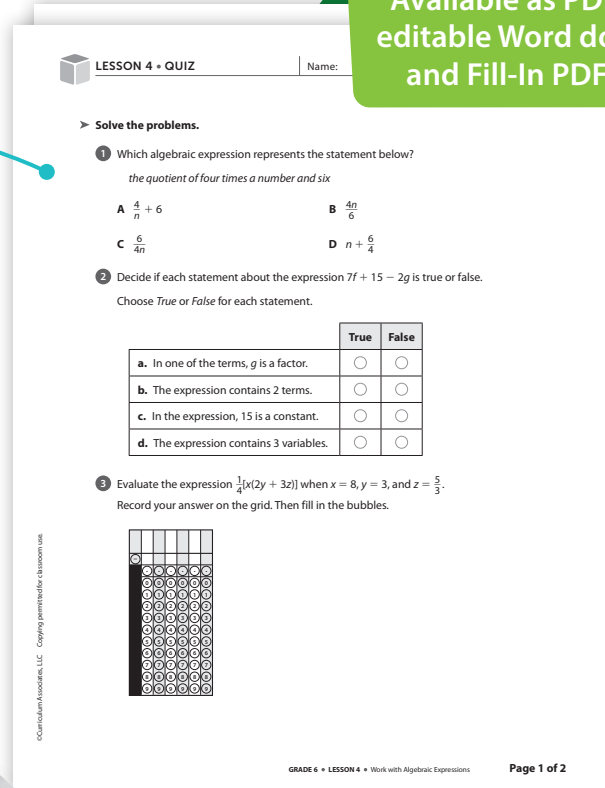
Know what your students know. *i-Ready Classroom Mathematics* includes print and digital assessments and a wealth of resources to meet all students' learning needs. Reports are in-depth, yet intuitive, so you can easily plan the next steps for instruction.

**Assess student understanding and monitor progress toward learning benchmarks and goals.**

- Lesson Quizzes
- Unit Assessments
- Digital Comprehension Checks (Lesson and Unit)



Available as PDF, editable Word doc, and Fill-In PDF



## Digital Comprehension Checks

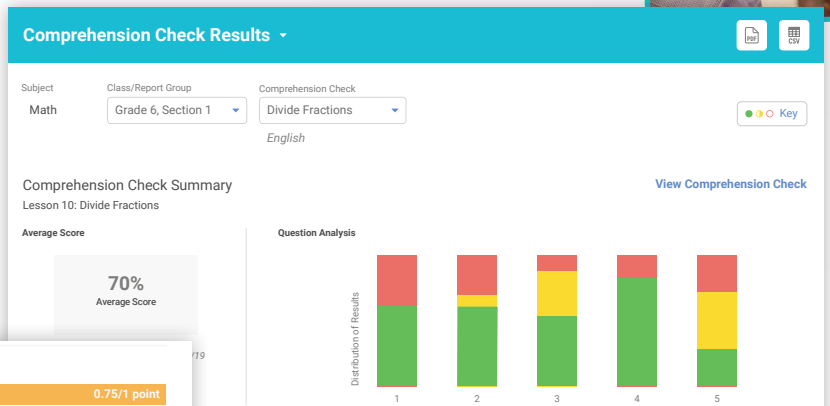
- Comparable to Lesson Quizzes and Unit Assessments
- Flexible to use
- Assign premade version or customize to add/remove problems
- Auto-scored to save time





## Comprehension Check Reports

- In-depth analysis of student understanding of lesson and unit concepts
- Intuitive item analysis identifies needs for whole class or small group instruction



Score	Date	Duration	1	2	3	4	5
100%	12/13/19	10m	●	●	●	●	●
100%	12/13/19	14m	●	●	●	●	●
100%	12/13/19	13m	●	●	●	●	●
90%	12/16/19	9m	●	●	●	●	●
90%	12/17/19	13m	●	●	●	●	●
80%	12/13/19	15m	●	●	●	●	○
80%	12/16/19	13m	●	●	●	○	●
80%	12/18/19	12m	●	●	●	●	○
70%	12/13/19	12m	○	●	●	●	●
70%	12/13/19	14m	●	○	●	●	●
70%	12/13/19	9m	●	○	●	●	●

**Item 1** (0.75/1 point)

Determine whether each quotient is less than 1, greater than 1, or equal to 1.

Drag each expression into a box to show the relationship between the quotient and 1.

Less than 1 | Greater than 1 | Equal to 1

1:  $\frac{1}{3} \div \frac{4}{9}$  (Incorrect) | 2:  $\frac{4}{9} \div \frac{1}{8}$ ,  $\frac{8}{9} \div \frac{1}{4}$  (Correct) | 3:  $\frac{1}{2} \div \frac{3}{10}$  (Correct)

Correct answers: 1:  $\frac{1}{3} \div \frac{4}{9}$  | 2:  $\frac{4}{9} \div \frac{1}{8}$ ,  $\frac{8}{9} \div \frac{1}{4}$  | 3:  $\frac{1}{2} \div \frac{3}{10}$

Students may have an incorrect response because they may not understand how the relationship between the dividend and divisor can be used to determine whether a quotient is less than, greater than, or equal to 1.

Students who classified  $\frac{1}{3} \div \frac{4}{9}$  as greater than 1 may have thought that when the divisor is greater than the dividend, the quotient is greater than 1.

Students who classified  $\frac{4}{9} \div \frac{1}{8}$  and/or  $\frac{8}{9} \div \frac{1}{4}$  as less than 1 may have thought that when the divisor is less than the dividend, the quotient is less than 1.

Students who classified  $\frac{1}{2} \div \frac{3}{10}$  as less than 1 may have thought that the dividend is less than the divisor because the numerator and denominator of the dividend are both less than the numerator and denominator of the divisor.

## Resources Aligned to Students' Needs

- **Reteach:** Tools for Instruction are mini-lessons for reteaching lesson concepts.
- **Out-of-Class Support:** The Develop Session Video Library provides instructional videos for remote learning, homework support, or reteaching concepts.
- **Student-Led Small Groups:** Leveled Math Center Activities are designed for on-, below-, and above-level students.
- **Independent Reinforcement:** Learning Games offer fun, challenging, and personalized practice and help students develop a growth mindset.
- **Extension:** Enrichment Activities challenge students with higher-order thinking tasks and technology-focused activities.
- **Personalized Instruction:** This optional add-on provides lessons designed to accelerate growth and grade-level learning.

**ENRICHMENT ACTIVITY**  
LESSON 9

**Line Slide**

**Your Challenge**  
When a linear equation has the form  $y = mx + b$ , how does changing  $m$  or  $b$  affect its graph?

- Use graphing technology to explore the effect of changing the values of  $m$  and  $b$  on the graph of a line.
  - Open the graphing technology program.
  - Type  $y = mx + b$  in the field where equations are entered. Then create sliders for  $m$  and  $b$ .
  - Move each slider bar to see how changing the values for  $m$  and  $b$  affects the graph of the equation.
  - Investigate how changing  $m$  in the equation  $y = mx + b$  changes the graph of the equation.
    - What is the overall effect on the graph when the value of  $m$  changes?

How does the graph change when the value of  $m$  changes from positive to negative?

**TRY IT!** Make sense of the problem

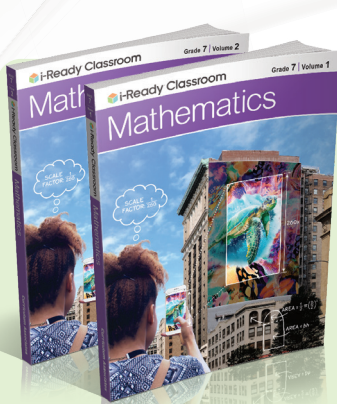
Bella starts filling this rectangle with squares. How many total squares does it take to fill the rectangle without going outside the edges?

What is the problem about?  
What are you trying to find out?  
What information is important?



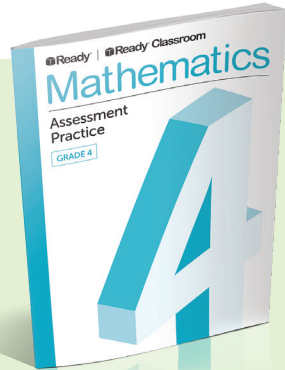
# Program Components

## Student Materials



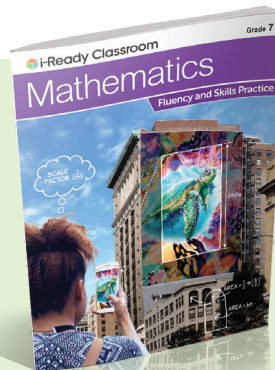
### Student Worktext E/S

Students take ownership of their learning as they work through the rich tasks and practice new skills in each lesson.



### Assessment Practice Book E/S

A series of standards-aligned practice assessments  
Available in print and downloadable in English and Spanish from the Teacher Toolbox



### Fluency and Skills Practice Book

Targeted fluency practice for every lesson  
Included on the Teacher Toolbox and available in print for an additional purchase



### Hands-On Materials

Engage students in hands-on learning.  
Available at:  
[Hand2Mind.com/Curriculum-Associates](http://Hand2Mind.com/Curriculum-Associates)

## Student Digital Experience

The Student Digital Experience, accessible through [i-ReadyConnect.com](http://i-ReadyConnect.com), provides access to all student components of *i-Ready Classroom Mathematics*.

**Student Bookshelf** provides online access to student resources, including:

- **Digital Student Worktext E/S**  
Includes tools, such as note-taking, text-to-speech, highlighting, and a calculator
- **Family Resources E/S**  
- Family Letter for every lesson  
- Unit Flow & Progression Videos
- **Multilingual Glossary** available in nine languages
- **Student Handbook** with a guide to the Standards for Mathematical Practice, a mathematical language reference tool, and 100 Mathematical Discourse Questions

### Digital Math Tools Powered by Desmos

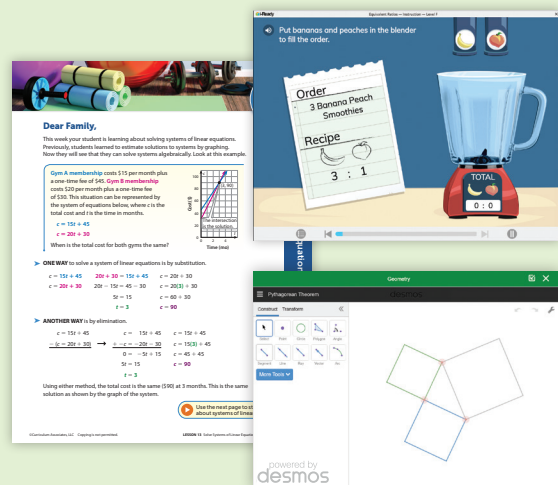
Provide virtual representations of various models

### Interactive Learning Games E/S

Develop conceptual understanding, improve fluency, and establish a positive relationship to challenge

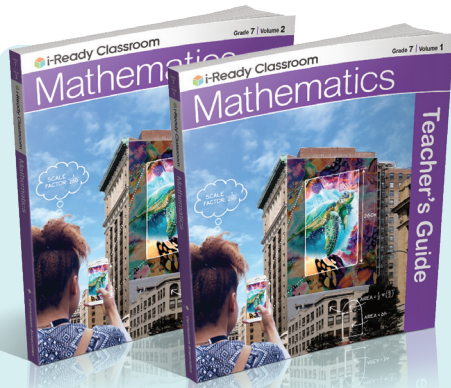
### Interactive Practice

Helps students build procedural fluency and skills by providing immediate, meaningful feedback



E/S = Available in English and Spanish

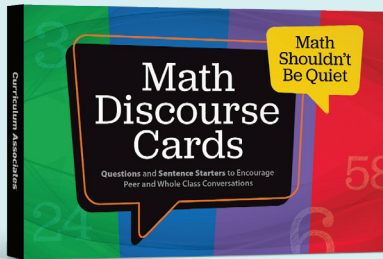
# Teacher Materials



## Teacher's Guide E/S

Two volumes include discourse-based instructional support, math background, and embedded professional learning.

Available in print and online



## Discourse Cards E/S

Discourse Cards provide questions and sentence starters to get students talking about mathematics.

Available in print and online



## i-Ready Classroom Central

This teacher portal provides on-demand access to tips and resources for a successful implementation.

## Teacher Digital Experience

The Teacher Digital Experience, accessible through i-ReadyConnect.com, provides access to all teacher components of *i-Ready Classroom Mathematics*.

**Teacher Toolbox** provides access to all K–8 resources in one convenient location. A few highlights include:

- Interactive Tutorials
- Digital Math Tools Powered by Desmos
- Lesson PowerPoint® Slides E/S
- Fluency and Skills Practice E/S
- Center Activities E/S
- Enrichment Activities E/S
- Assessment Resources E/S
- Unit Flow & Progression Videos\*
- Literacy Connections E/S
- Unit Games E/S

### Digital Practice Resources

- Learning Games E/S
- Interactive Practice

### Digital Assessments

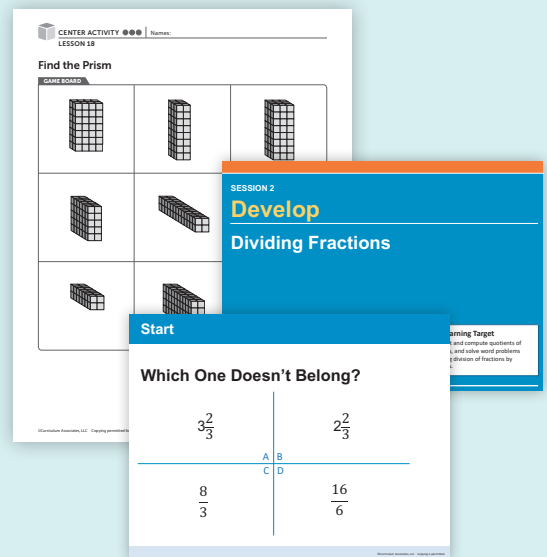
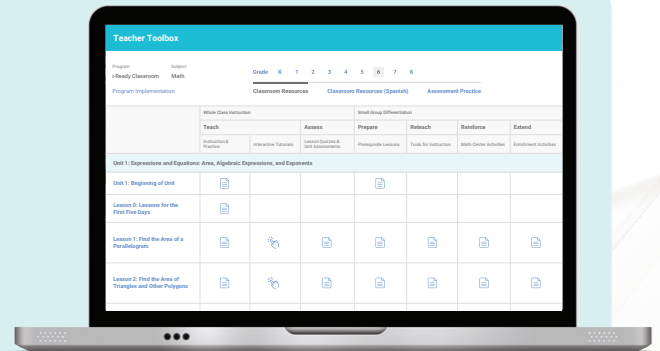
- Diagnostic E/S
- Comprehension Checks E/S

### Reports

- Diagnostic Results
- Comprehension Check Results
- Prerequisites
- Learning Games

### Optional Add-On

- *i-Ready Personalized Instruction*



E/S = Available in English and Spanish

\*Closed-captioned in English and Spanish





# i-Ready<sup>®</sup> Classroom Mathematics

Grades  
6-8

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