

GO Math! Middle School
Grades 6–8 © 2018
Program Overview



GO Math! Middle School

Grades 6–8 © 2018 Program Preview

Next Generation Solution

FOCUSED – COHERENT – RIGOROUS

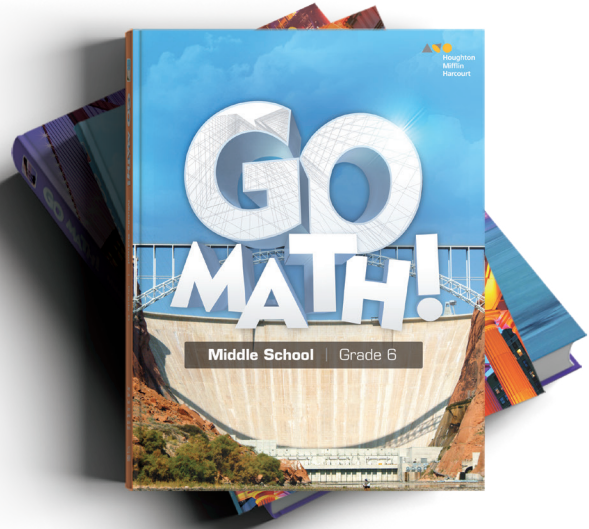
- **GO Math!**[®] focuses strongly on your standards.
- **GO Math!** carefully connects learning within and across grades.
- **GO Math!** gives equal intensity to conceptual understanding, fluency, and application.

EMPHASIS ON 21ST-CENTURY SKILLS

- This digital-first solution—built around the *HMH Player*[®]—transcends the traditional approach of eBooks and online resources with an enhanced tablet-friendly experience for students, teachers, and parents.
- Digital course management tools offer teachers flexibility in planning, instruction, and assessment for in-class or on-the-go learning.
- Personalized and adaptive instruction is taken to the next level with the **Personal Math Trainer**[®] Powered by Knewton[™].



A Truly Blended Approach to Instruction



DIGITAL COMPONENTS



PRINT COMPONENTS

Digital Student Experience

- HMH Player app
- Interactive Student Edition
- Student Dashboard

Digital Teacher Experience

- HMH Player app
- Interactive Teacher Edition
- Teacher Dashboard

- Write-In Student Edition
- Teacher Edition
- Solutions Key
- Differentiated Instruction
- Planning and Pacing Guide



Comprehensive Strategies and Resources for the Student

ESSENTIAL QUESTIONS at the beginning of each lesson engage students in the process of figuring out a mathematical concept.

ESSENTIAL QUESTION How can you use ratios and rates to make comparisons and predictions?



MATH ON THE SPOT tutorial videos are available for every lesson; students simply scan the QR code with a smartphone to watch.

EXPLORE ACTIVITY 1

EXPLORE ACTIVITIES at the beginning of each lesson in the Write-In Student Edition provide opportunities to interactively explore new concepts.

LESSON 6.3 Using Ratios and Rates to Solve Problems

6.3.6.3 Students will use ratios and rates to make comparisons and predictions.

ESSENTIAL QUESTION How can you use ratios and rates to make comparisons and predictions?

EXPLORE ACTIVITY 1

Using Tables to Compare Ratios

Anna's recipe for lemonade calls for 2 cups of lemonade concentrate and 3 cups of water. Bailey's recipe calls for 3 cups of lemonade concentrate and 5 cups of water.

A In Anna's recipe, the ratio of concentrate to water is $\frac{2}{3}$. Use equivalent ratios to complete the table.

Concentrate (c)	2	4		
Water (c)	3		9	15

$2 \times 2 = 4$ $2 \times 3 = 6$ $2 \times 5 = 10$

$3 \times 2 = 6$ $3 \times 3 = 9$ $3 \times 5 = 15$

B In Bailey's recipe, the ratio of concentrate to water is $\frac{3}{5}$. Use equivalent ratios to complete the table.

Concentrate (c)	3	9	12	
Water (c)	5			25

$3 \times 3 = 9$ $3 \times 4 = 12$ $3 \times 5 = 15$

$5 \times 3 = 15$ $5 \times 4 = 20$ $5 \times 5 = 25$

C Find two columns, one in each table, in which the amount of water is the same. Circle these two columns.

D Whose recipe makes stronger lemonade? How do you know?

E Compare the ratios: $\frac{10}{15}$ and $\frac{9}{15}$. $\frac{10}{15} > \frac{9}{15}$

EXPLORE ACTIVITY 1 (cont'd)

Reflect

1. **Analyze Relationships** Suppose each person pours herself one cup of the lemonade she made. How much concentrate is in each person's cup? How do you know?

Comparing Ratios

You can use equivalent ratios to solve real-world problems.

EXAMPLE 1

A fruit and nut bar recipe calls for 4 cups of chopped nuts and 6 cups of dried fruit. When Tonya made a batch of these bars, she used 6 cups of chopped nuts and 9 cups of dried fruit. Did Tonya use the correct ratio of nuts to fruit?

STEP 1 Find the ratio of nuts to fruit in the recipe.
 $\frac{4}{6}$ 4 cups of nuts to 6 cups of fruit

STEP 2 Find the ratio of nuts to fruit that Tonya used.
 $\frac{6}{9}$ 6 cups of nuts to 9 cups of fruit

STEP 3 Find equivalent ratios that have the same second term.
 $\frac{4}{6} = \frac{12}{18}$ $\frac{6}{9} = \frac{12}{18}$

The ratios $\frac{4}{6}$ and $\frac{6}{9}$ are equivalent. So, Tonya used the same ratio of nuts to fruit that was given in the recipe.

Math Talk

Explain how you compare two ratios to check if they are equivalent.

YOUR TURN

2. In the science club, there are 2 sixth-graders for every 3 seventh-graders. At this year's science fair, there were 7 projects by sixth-graders for every 12 projects by seventh-graders. Is the ratio of sixth-graders to seventh-graders in the science club equivalent to the ratio of science projects by sixth-graders to projects by seventh-graders? Explain.

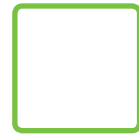
Math Talk

Mathematical Processes

Explain how you compare two ratios to check if they are equivalent.

REFLECT questions and **MATH TALK** are just two features out of many that provide continual opportunities for the student to reinforce the mathematical processes on a daily basis.





FOCUS ON HIGHER ORDER THINKING

14. **Justify Reasoning** An online retailer sells two packages of protein bars.

Package	10-pack of 2.1 ounce bars	12-pack of 1.4 ounce bars
Cost (\$)	15.37	15.35

- a. Which package has the better price per bar?

HIGHER-ORDER THINKING problems highlight mathematical practices and require students to explain, justify, and critique reasoning in a problem-solving setting.

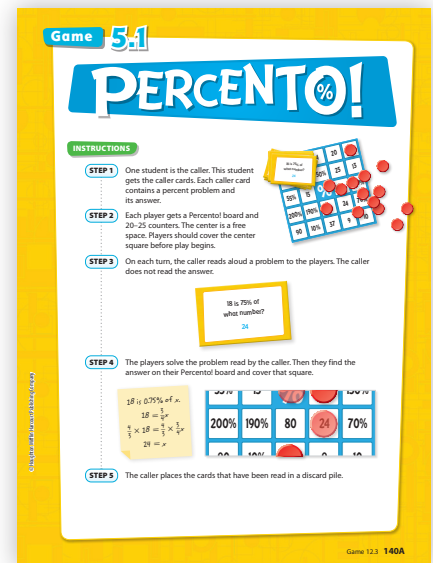
Unit 2 Performance Tasks

1. **CAREERS IN MATH** **Bicycle Tour Operator** Viktor is a bike tour operator and needs to replace two of his touring bikes. He orders two bikes from the sporting goods store for a total of \$2,000 and pays using his credit card. When the bill arrives, he reads the following information:

Balance: \$2,000

Annual interest rate: 14.9%

PERFORMANCE TASKS provide students with the opportunity to apply their learning to solve real-world application problems.



GAMES in each unit integrate hands-on collaborative activities that motivate students to explore “the math” and connect abstract concepts to real-world problems.

Getting Ready 3.6

Estimation Strategies

7.1.GR.3.6

Students will use mental math and estimation to assess the reasonableness of calculations.



ESSENTIAL QUESTION

How can you use mental math and estimation to assess the reasonableness of calculations?

GETTING READY (bridge to follow-on lessons) and **GOING FURTHER** (extension and application) lessons provide more Standards coverage aligned to the K–8 progression to Algebra.

An Engaging & Interactive Approach to Learning

GO Math! delivers the next-generation Online Student Edition that works on all Internet-enabled devices, offers digital answer submission functionality, and contains point-of-use links to *Math on the Spot* tutorials, *Animated Math Tutorials*, *Real-World Videos*, and **Personal Math Trainer**.

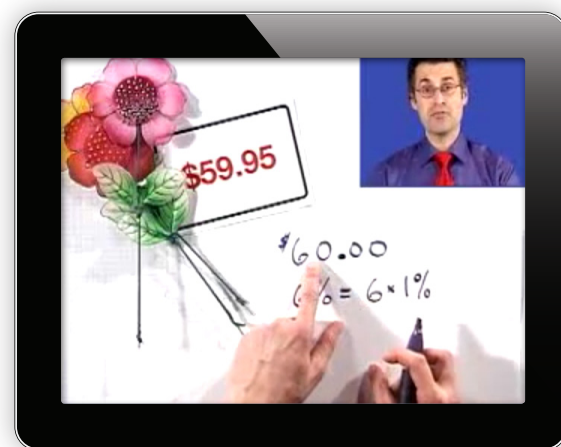


MATH ON THE SPOT video tutorials, featuring program authors Dr. Edward Burger and Martha Sandoval-Martinez, accompany every example in the textbook and give students step-by-step instructions and explanations of key math concepts. Access for teachers, students, and parents helps improve their understanding of concepts.

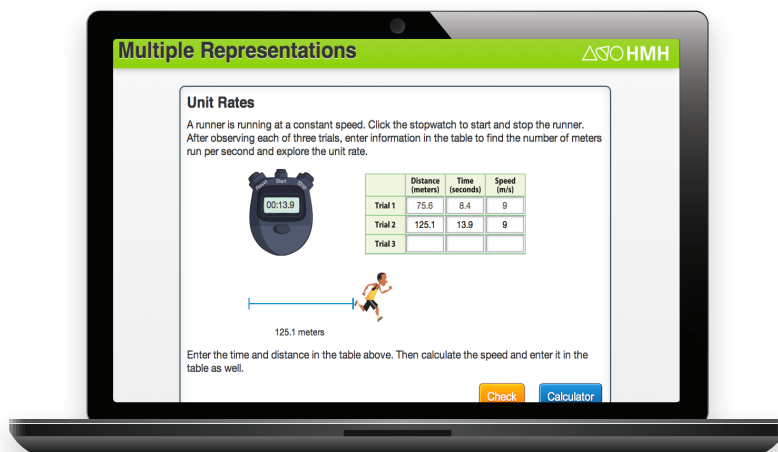


Scan with your smart-phone to jump directly to the online edition, video tutor, and more.

Math On the Spot
my.hrw.com



ANIMATED MATH TUTORIALS are short interactivities or simulations that drive home the key concept within each lesson and keep students engaged as they develop fluency.





REAL-WORLD VIDEOS engage students with interesting and relevant applications of the mathematical content of each module.

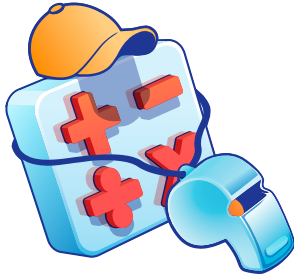


ONLINE STUDENT EDITION

allows students to write, take notes, and bookmark pages as well as access important links that reinforce concepts.



Personalized and Adaptive Learning with Personal Math Trainer Powered by Knewton



**Personal
Math
Trainer**®
Powered by Knewton™

 **POWERED BY
KNEWTON**

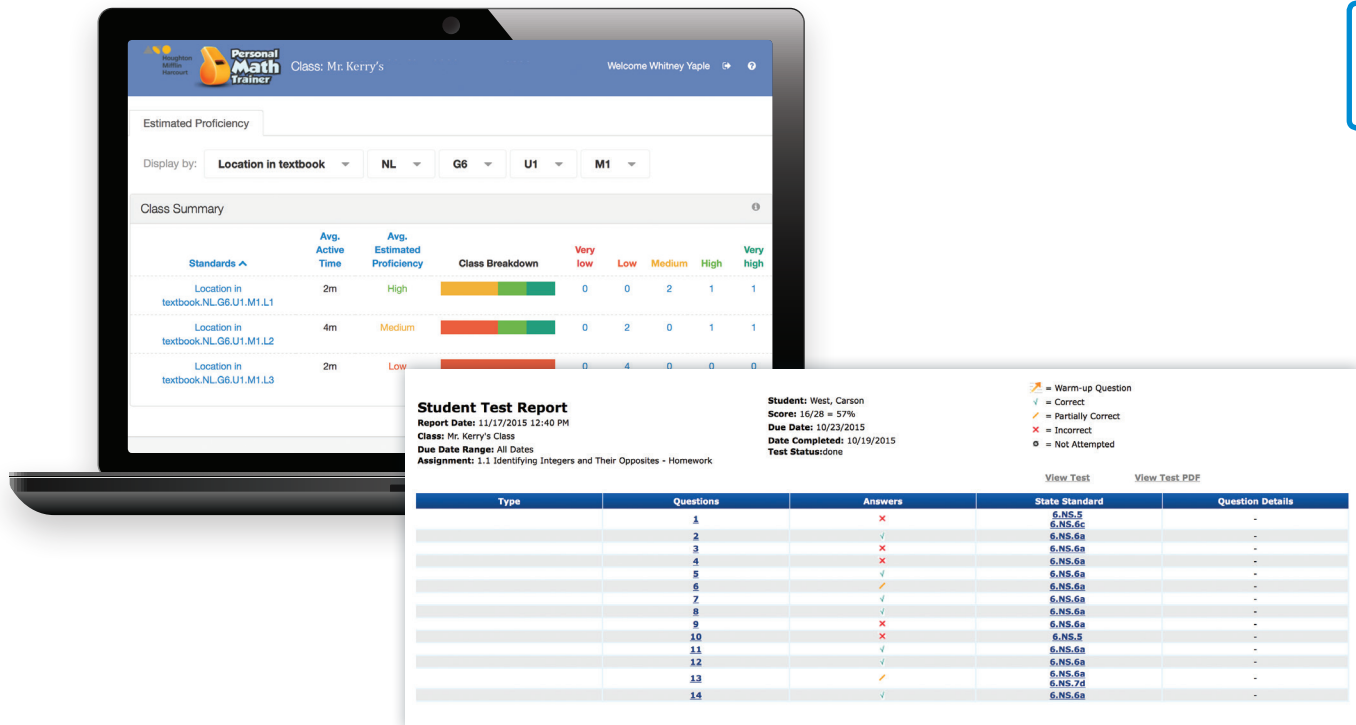
PERSONAL MATH TRAINER POWERED BY KNEWTON is the ultimate online, adaptive assessment and personalized learning system for students, with an automatic reporting and intervention system for the teacher.



PERSONAL MATH TRAINER allows students to:

- Access learning aids, including guided examples, step-by-step solutions, and video tutorials, to help develop understanding of concepts.
- Receive real-time feedback for every homework and practice problem answered.





PERSONAL MATH TRAINER allows teachers to:

- Analyze each student's interactions with the program content down to the concept level to determine personal strengths, weaknesses, preferences, and pace.
- Provide personalized learning paths for every student to help achieve learning goals.
- Provide each student with targeted recommendations for other assignments.
- Gain real-time insights into each student's needs, challenges, and learning styles, so they can quickly and easily change the course of their instruction with targeted support such as Active, Standard Based, and Course Intervention Workflow.
- View information by individual student, whole class, standard, and test items—all with predictive analytics.

GO Mobile! with Global Delivery— Anytime, Anywhere Access

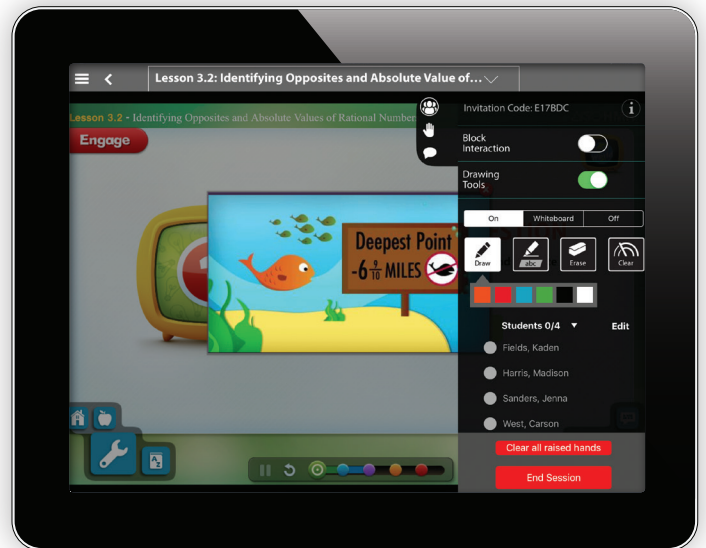


DIGITAL STUDENT EXPERIENCE

HMH PLAYER: AN ALL-IN-ONE CLASSROOM APPLICATION

This game-changing app for teachers and students:

- Provides direct access to program materials and lesson resources
- Includes digital engagement features, such as classroom collaboration
- Synchronizes with the Interactive Student Edition and Student Dashboard, so students can work **online or offline** without missing a beat



CLASSROOM COLLABORATION

Within *HMH Player*, students can collaborate in the classroom by messaging the teacher.

- Students see the content the teacher is moving through on their own device to easily follow along in the lesson.
- Students can “raise a hand” within the app to ask or answer questions.
- Teachers can provide activities that foster synergy among students and classes and send notifications and immediate feedback to the whole class or to individual students.

ASSIGNMENTS

HMH Player offers a teacher-friendly assignment feature that enables teachers to select HMH lessons and **Personal Math Trainer** activities and assign the content to one or more students within a class.

- Start date, due date, assignment title, and notes are all that are required to create a lesson.
- Assignments include homework, in-class work, or any other application to track student progress against a specific lesson, assignment, or standard.



TWO REPORTING VIEWS

The teacher has two reporting views in *HMH Player*: Assignments and Progress.

- The Assignment view provides the teacher with a streamlined “gradebook” style view showing assignments in each column and students in each row.
- The Export option allows teachers to choose “Selected Student” or “All Students” to view the entire class of individual assignment results with item analysis.

GO Math! Mobile Convenience for 21st-Century Teaching and Learning

FOR THE STUDENT

Access program content and resources 24/7, online and offline with *HMH Player*.

Use QR codes to gain instant access to *Math on the Spot* videos.

Learn and reinforce concepts with step-by-step interactive examples supported by video tutorials.

Check comprehension of new concepts and skills and get individualized support automatically with **Personal Math Trainer**.

FOR THE TEACHER

Access a full suite of teaching resources when and where you need them.

Customize and present course materials with collaborative activities and integrated formative assessments.

Plan, present, and manage classes, assignments, and activities through the Digital Teacher Experience.

View professional development videos by program authors for instructional support for each module.

Comprehensive Strategies and Resources for the Teacher

Print and digital resources provide teachers with substantial guidance and professional learning. The Teacher Edition supports instruction by explaining and implementing mathematical processes and detailing how to effectively incorporate components, such as digital resources, at point of use plus leveled questions for every example.

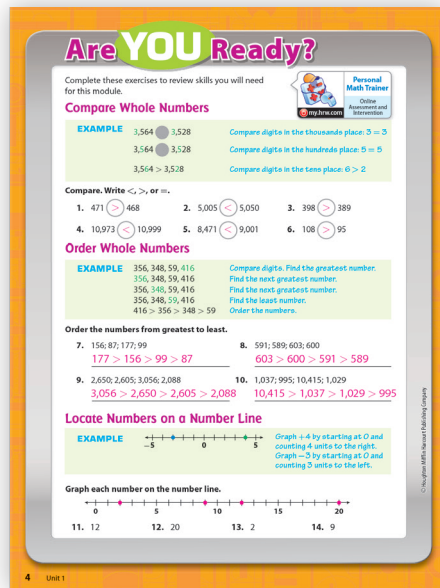
5E instructional design empowers teachers to deliver instruction with the focus, coherence, and rigor demanded by today's standards.

The collage displays several pages from the Teacher Edition, illustrating the 5E instructional design and differentiated instruction components.

- Lesson 6.1 Algebraic Expressions:** Shows the Engage, Explore, and Explain phases. The Engage section includes an Essential Question: "How do you add, subtract, factor, and multiply algebraic expressions?" and a Math Talk prompt: "This allows you to use properties of addition to simplify the expression further." The Explore section includes an Essential Question: "How do you add, subtract, factor, and multiply algebraic expressions?" and a Math Talk prompt: "In Part A, why is it helpful to write subtraction as adding the opposite?"
- Differentiated Instruction:** Shows leveled questions for Lesson 6.1, categorized by DOK 1 (Recall), DOK 2 (Skills/Concepts), and DOK 3 (Strategic Thinking). For example, DOK 1 asks "Who is paid a higher project fee? Who is paid more per hour?" and DOK 3 asks "Explain how the Distributive Property was used to simplify the expression for the amount the company will pay to hire both Jill and Kyle."
- Practice and Problem Solving:** Shows three pages of practice problems, categorized by A, B, and C. Each page includes a "Personal Math Trainer" section with a 6.1 Homework and Standards-Based Intervention 7.EE.1.
- Mathematical Processes:** Shows a section titled "Mathematical Processes" with a Math Talk prompt: "This allows you to use properties of addition to simplify the expression further." and a list of processes: Add, Subtract, Multiply, Divide, Factor, and Simplify.
- Teacher to Teacher:** Shows a section titled "Teacher to Teacher" with a prompt: "Manipulatives: Algebra tiles that represent negative variables and numbers will be introduced on page 185 of this module, but you may want to show them to students before beginning Example 2, instead. Then write the expression $(-4x + 2) - (x + 6)$ on the board."

QUESTIONING STRATEGIES aligned to specific practices are included in the Teacher Edition, along with suggestions for integrating the mathematical processes.

DIFFERENTIATED HOMEWORK OPTIONS are determined by Proficiency Level and clearly identified at point-of-use and with enhanced visuals.



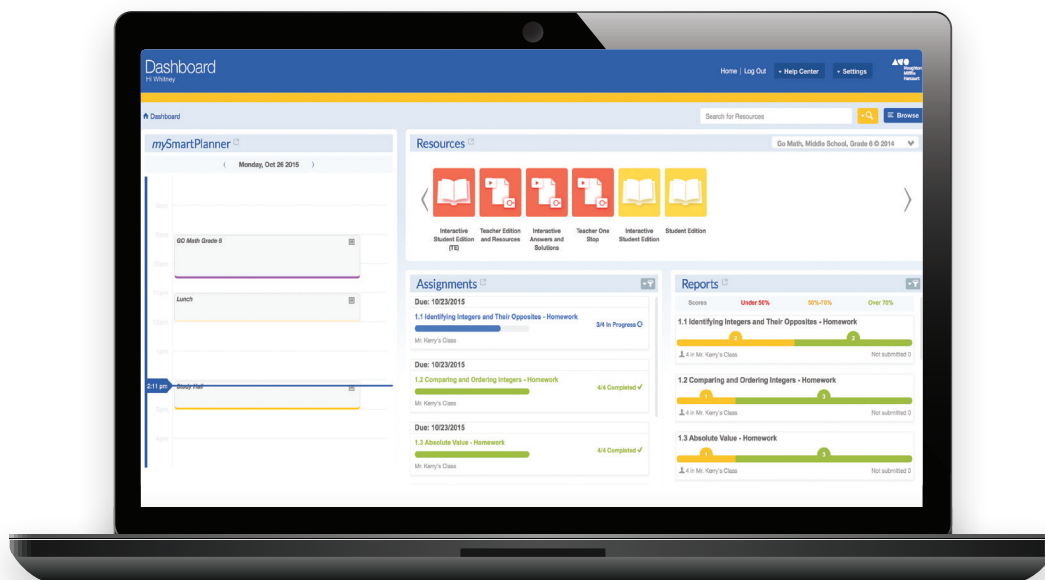
ARE YOU READY? formative diagnostic pieces help teachers determine if students need intensive or strategic intervention for the module's prerequisite skills.

LEARNING PROGRESSIONS ACROSS THE GRADES		
Before	In this Module	After
Students understand rational numbers: <ul style="list-style-type: none">one-step, one-variable equationshow to solve one-step, one-variable equations that contain addition or subtractionhow to solve one-step, one-variable equations that contain multiplication or division	Students will learn how to: <ul style="list-style-type: none">write two-step equations to represent real-world problems, and write a real-world problem to represent an equationsolve two step equations	Students will connect: <ul style="list-style-type: none">two-step equations and equations with variables on both sides and rational number coefficients and constants.

LEARNING PROGRESSIONS give teachers a better sense of the scope of curriculum across and within grade levels.

Plan and Manage Your Classroom Online

TEACHER DASHBOARD provides quick access to the Teacher Edition and Resources, Interactive Student Edition, Reports, Assignments, mySmartPlanner, and more. All student work and grades are synced with the Teacher Dashboard.



The **Support You Need**— When You Need It

Our comprehensive Professional Learning solutions for leaders, teachers, and families are data- and evidence-driven, mapped to your goals, centered around your students, and delivered by master educators. These tailored, flexible solutions were designed with one goal in mind: to help you more effectively prepare students for college and careers.

Start Strong, Finish Stronger

A **Getting Started with GO Math!** course will orient you to the program materials and technology, examine the instructional routines, help you support differentiation, and provide effective whole and small group instruction.



You'll find this course in your Teacher Dashboard. Additionally, program-embedded Professional Development Videos, featuring program authors Dr. Juli Dixon and Dr. Matt Larson, model successful teaching practices and strategies in actual classroom settings.

These videos are accessible via the Teacher Dashboard and QR codes in the print Teacher Edition.



Build Capacity, Ensure Success with In-Classroom Support

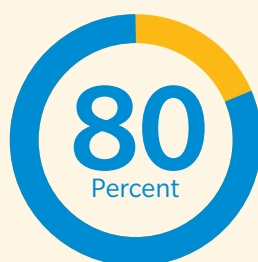
Our Professional Learning will provide you with deeper knowledge of Mathematical standards, in-class support to facilitate instructional strategies and routines, and confidence to teach mathematics.

You'll get even more personalized support with our **Team and Individual Coaching**.

We'll be there to help you plan your lessons and model effective mathematics instruction.

- Deliver focused, coherent, and rigorous lessons
- Connect learning across the grade levels
- Provide equal intensity to conceptual understanding, fluency, and application

Proven Results



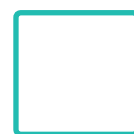
In 2014, 80% of teachers reported that coaching significantly strengthened their classroom instruction.

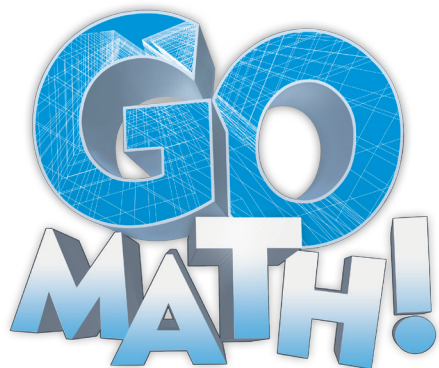
Based on national survey data collected from teachers who received coaching from HMH® during the 2014–2015 school year

Our deep bench of thought leaders from **Math Solutions®** make innovative approaches to teaching mathematics a reality. Created by renowned mathematics educator Marilyn Burns, **Math Solutions Professional Learning** services help teachers focus on developing mathematical processes, differentiation, and using formative assessments to impact student learning.

Need additional support with technology? Our **technical services team** can help you plan, prepare, implement, and optimize your technology so you can get the most out of **GO Math!** digital tools. We can help enhance your technology with learning management system interoperability, rostering, and single sign on within your environment.

For more information regarding HMH Professional Services,
visit hmhco.com/professionalservices





PROGRAM FEATURES

Online Student Edition

Online Student Edition
Student Dashboard

Online Teacher Edition

Online Teacher's Edition
Teacher Dashboard

Print Student Edition

Write-in Student Edition

Print Teacher Edition

Teacher Edition (Hardbound)

Other Print Resources:

Differentiated Instruction Resources
Solutions Key
Assessment Resources
Planning and Pacing Guide

Teacher Dashboard

Personal Math Trainer Powered by
Knewton mySmartPlanner

To complete your Middle School Curriculum,
HMH provides three pathways:

REGULAR

Grade 6
Grade 7
Grade 8

ACCELERATED

Grade 6
Accelerated 7
*Algebra 1: Analyze,
Connect, Explore*

ADVANCED

Advanced 1
Advanced 2
*Algebra 1: Analyze,
Connect, Explore*

Contact your HMH® Account Executive for more
information about **GO Math! Middle School Grades 6–8**
© 2018 and to preview resources as they are available.

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