

EUREKA MATH²®

GRADES 6–8 • ALGEBRA I

Pathways to Mastery

Data and Differentiation



Deeper Thinking.
Greater Growth.



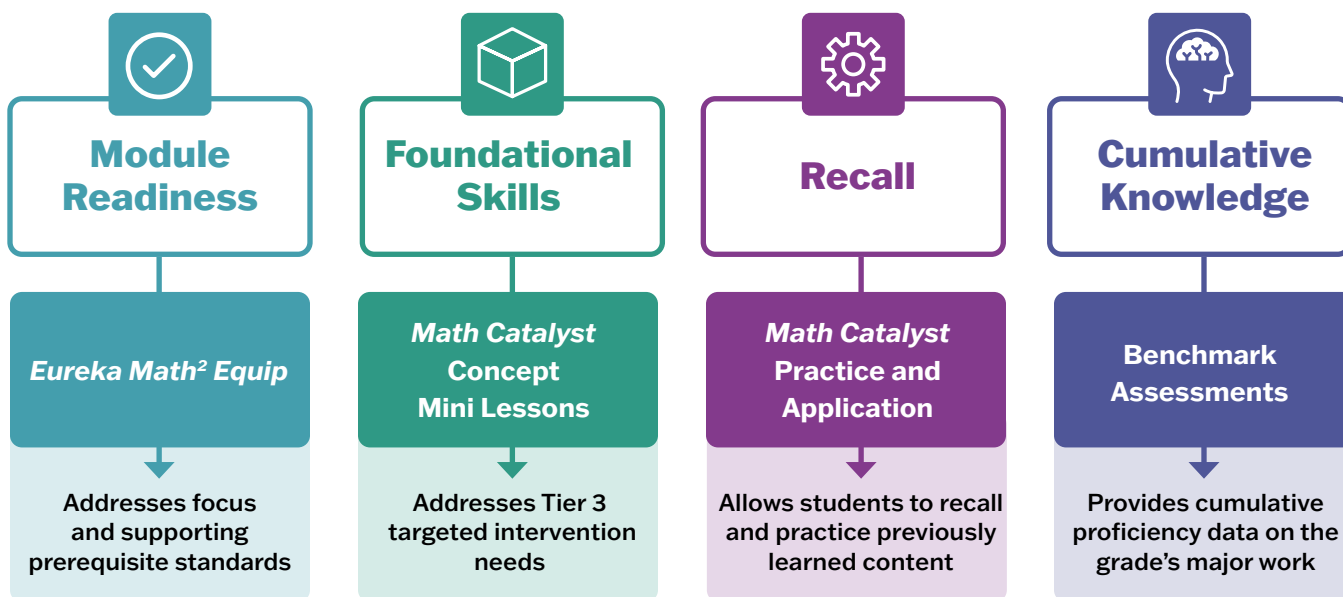
Multiple Pathways, One Goal: Mastery.

A Flexible System for Turning Assessment into Action

Every student's pathway to math proficiency is different, and effective assessment data makes those paths visible. In middle school classrooms, some students may arrive with varied levels of readiness because of interrupted learning and unfinished prerequisite skills from earlier grades. *Eureka Math² Pathways to Mastery™* provides simple, flexible assessment pathways designed to meet the realities of grades 6–8 and Algebra I classrooms while giving educators the insight they need to respond with confidence.

Pathways to Mastery extends the embedded module, topic, and lesson assessments within *Eureka Math²*, bringing together three complementary components that support continued student growth.

Pathways to...



- **Eureka Math² Equip** diagnoses readiness by assessing key foundational prerequisites for upcoming modules.
- **Math Catalyst** delivers targeted intervention that is foundational to middle school grade-level learning.
- **Benchmark Assessments** provide a cumulative view of proficiency and knowledge development over time.

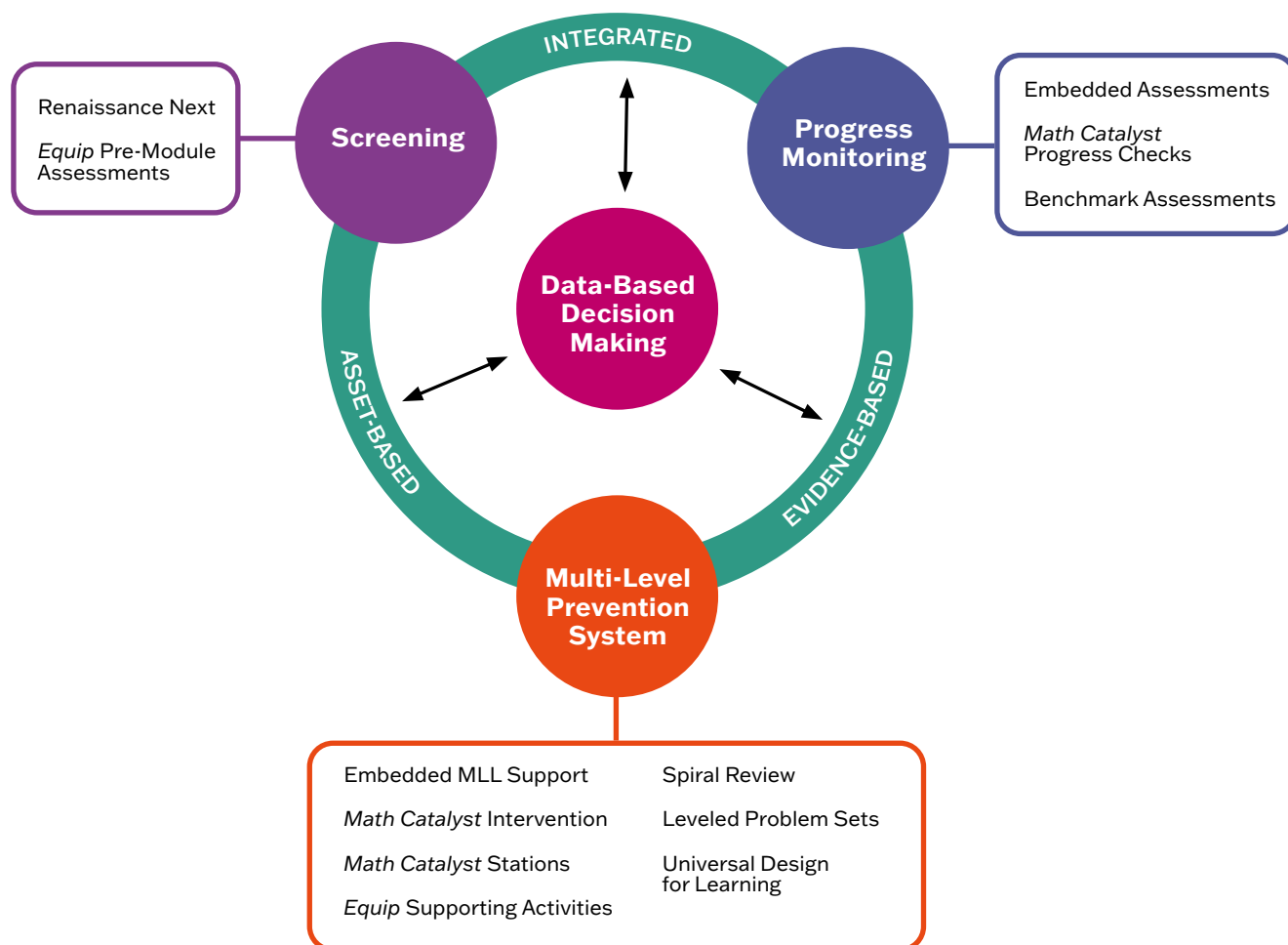
Collectively, these pathways create a connected approach to readiness, progress monitoring, and responsive instruction, empowering teachers to put every student on a path to mastery.

Multi-Tiered System of Supports

A strong Multi-Tiered System of Supports (MTSS) requires actionable data and high-quality instruction for every student. Successful MTSS implementation requires a flexible system that connects assessment results with consistent instructional practices across grade levels and aligns core curriculum with evidence-based intervention materials.

Eureka Math² Pathways to Mastery provides timely, standards-aligned data that helps educators identify learning needs and make informed instructional decisions that support continued student growth.

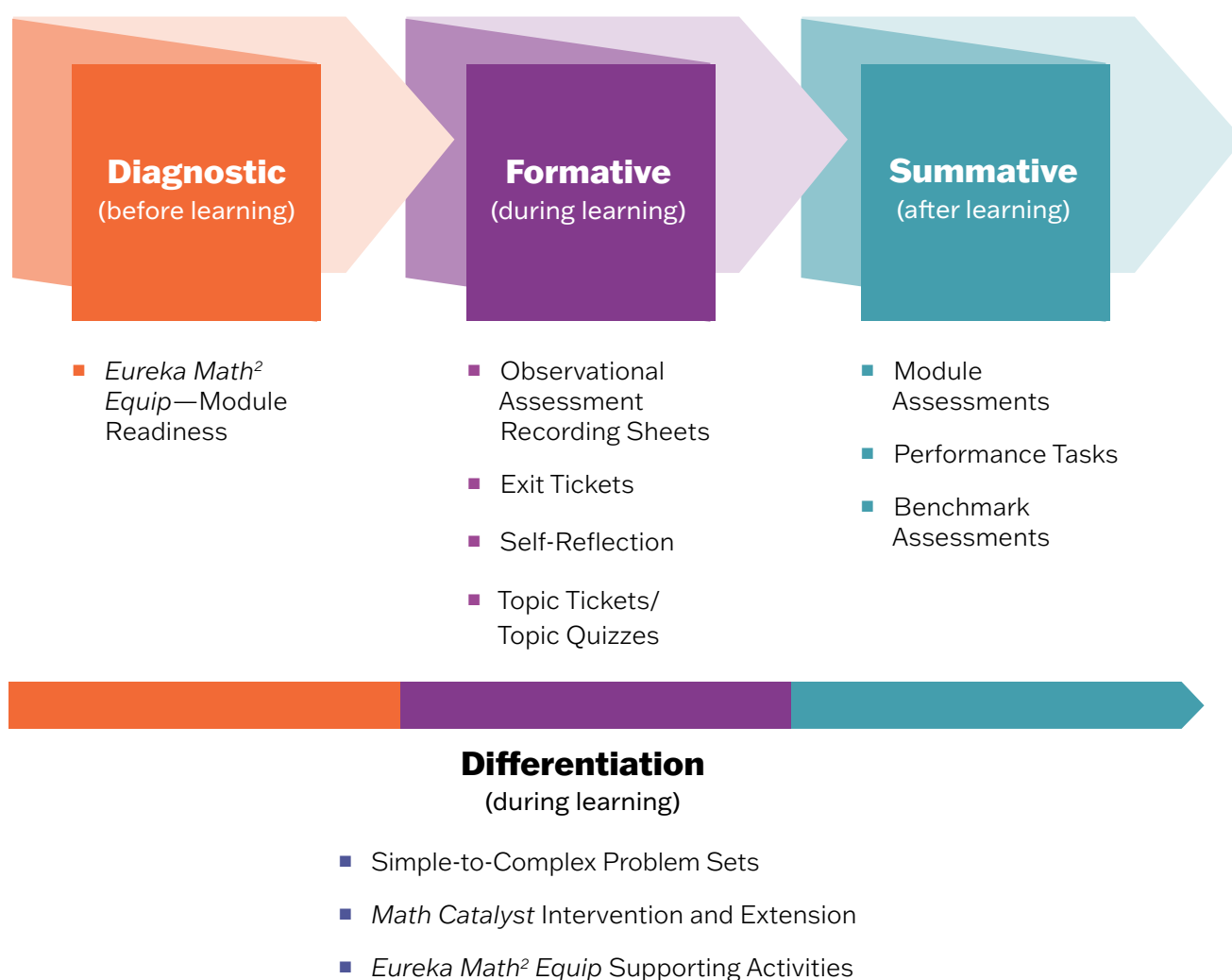
Eureka Math² Alignment with the MTSS Framework



Assessment Overview

*Eureka Math*² assessments strengthen instruction in middle school classrooms by clarifying key learning goals and providing teachers with actionable, trustworthy data. Assessments are an integral part of the coherent *Eureka Math*² curriculum, elevating and contributing to instructional goals for all students.

Assessment Journey





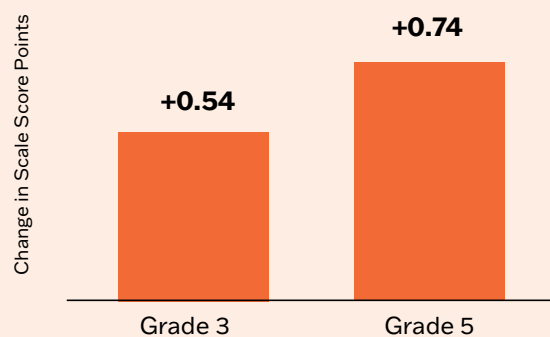
Evidence of Impact on Student Achievement

A University of Southern California-conducted study found that schools using *Eureka Math*² saw statistically significant gains in state assessment math scores compared to similar non-adopting schools.

Achievement gains were observed in Grades 3 and 5 and strengthened with continued implementation.

Eureka Math*² Improves Student Achievement

Compared to Similar Non-Adopting Schools



Source: Silver, D., & Polikoff, M. S. (2024). *Eureka Math*² Efficacy Study. University of Southern California. Study meets ESSA Tier II standards.

*As measured on state assessments

Insight into Student Understanding

To make assessment meaningful, *Eureka Math*² provides clear expectations and clear evidence of the learning journey through Achievement Descriptors and Proficiency Indicators.

A Achievement Descriptors— Defining What Students Should Know

Achievement Descriptors make standards-based instruction clear, accessible, and actionable. This coherence ensures teachers understand exactly what proficiency looks like for the lesson or module.

B Proficiency Indicators— Measuring How Deeply Students Understand

Proficiency Indicators interpret levels of understanding, giving teachers insight into how fully students demonstrate grade-level standards.

Together, Achievement Descriptors and Proficiency Indicators make student understanding visible and turn assessment into meaningful insight into what students understand and how deeply they understand it.

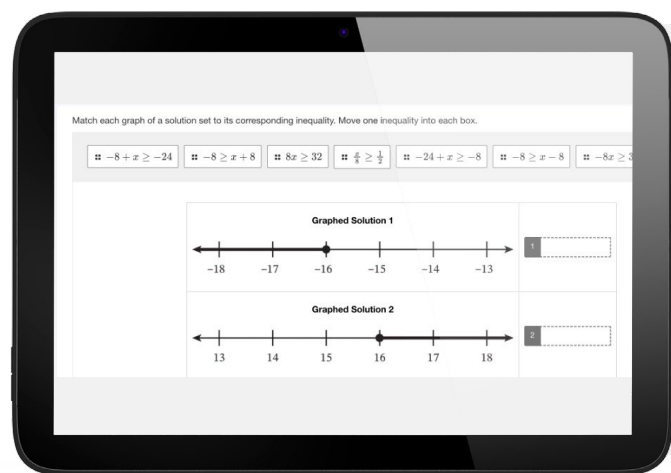
7.Mod1.AD4 Represent proportional relationships given in contexts with equations.			
Partially Proficient		Proficient	Highly Proficient
Identify which equation represents a proportional relationship given in context. <i>Marcus finds an old, empty piggy bank. He puts \$0.75 into the piggy bank each week. Which equation represents the amount of money m in dollars in Marcus's piggy bank after w weeks?</i> A. $w = 0.75 \cdot m$ B. $m = 0.75 \cdot w$ C. $w = m + 0.75$ D. $m = 0.75 + w$		Represent proportional relationships given in contexts with equations. <i>A streaming service rents digital movies for \$3.99 each. Write an equation to represent the total cost c to rent d movies from the streaming service.</i>	
Partially Proficient		Proficient	Highly Proficient
Identify which equation represents a proportional relationship given in context. <i>Marcus finds an old, empty piggy bank. He puts \$0.75 into the piggy bank each week. Which equation represents the amount of money m in dollars in Marcus's piggy bank after w weeks?</i> A. $w = 0.75 \cdot m$ B. $m = 0.75 \cdot w$ C. $w = m + 0.75$ D. $m = 0.75 + w$		Represent proportional relationships given in contexts with equations. <i>A streaming service rents digital movies for \$3.99 each. Write an equation to represent the total cost c to rent d movies from the streaming service.</i>	

Data-Rich Digital Platform

The Great Minds® Digital Platform delivers assessments closely tied with *Eureka Math*² instructional milestones. With automated scoring and visual reporting, flexible administration for remote or hybrid contexts, and feature accommodations, the digital platform provides the data that teachers can leverage to set their classroom up for success.

Digital Tools for Teachers

Teachers can distribute assignments, assign and score assessments, monitor progress, and analyze student data within the platform. Reports provide clear visibility into class performance, individual student results, and progress against standards and Achievement Descriptors. These descriptive, actionable reports can support responsive instruction and inform next steps.



Digital Access for Students

Students can easily launch digital assessments and engage with a suite of interactive, technology-enhanced item types. Drag-and-drop tools, graphing features, equation builders, and constructed response items allow students to practice the question types found on state assessments.

Prepping for New Learning

Measure Prerequisite Skills with *Eureka Math² Equip*

Before learning begins, diagnostic assessment powered by *Eureka Math² Equip* supports teachers with identifying where students need support in their foundational knowledge, which is essential for upcoming modules.

Eureka Math² Equip provides the following benefits:

- Pre-Module Assessments measure prerequisite skills needed for the upcoming module
- Robust reporting with recommendations for grouping
- Just-in-time supporting activities to help students access core grade-level instruction
- Available for Grade 1–Algebra I in English and Spanish
- Available digitally and as PDFs for download

EUREKA MATH² EQUIP
7 • M1 • Pre-Module Assessment

Pre-Module Assessment
 Name _____ Date _____

1. Consider the figure.



14 cm

Square A



7 cm

Square B

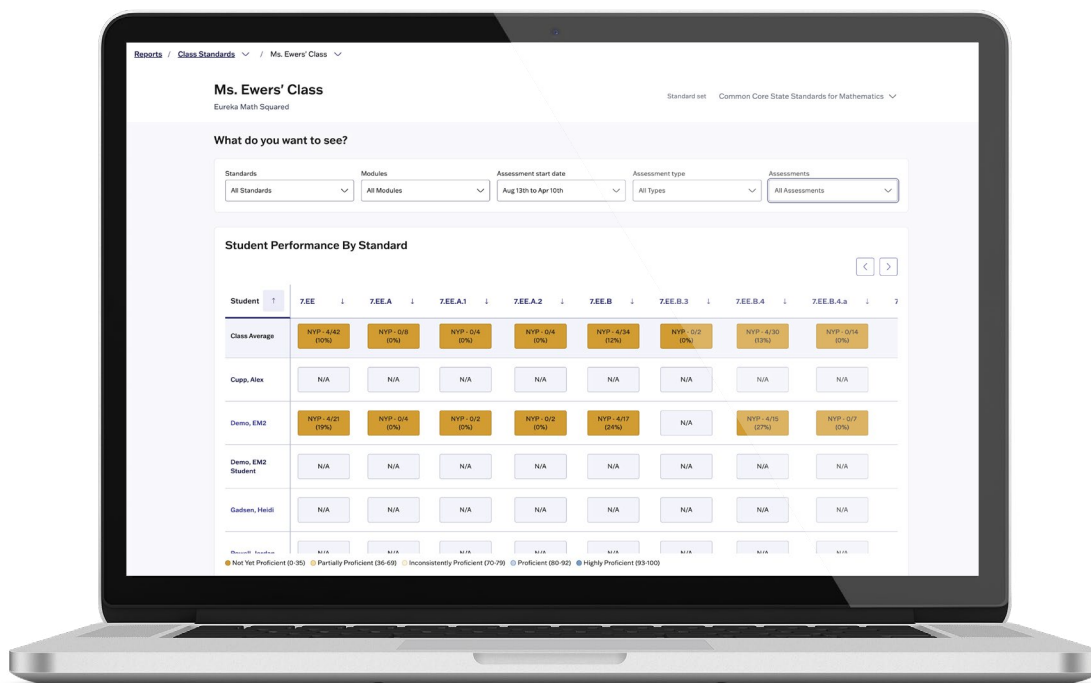
Which is a ratio of the side length of square A to the side length of square B? Choose **all** that apply.

A. 1:2
 B. 2:1
 C. 7:14
 D. 14:7
 E. 14:28
 F. 28:14

2. For every 15 black beads on a necklace, there are 5 gold beads. What is the unit rate associated with the ratio of the number of black beads to the number of gold beads?

The unit rate is _____.

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Formative Assessment During Learning

All *Eureka Math*² assessments are formative in nature, designed to monitor progress and inform instruction so teachers can make real-time course corrections to support grade-level proficiency.

Observational Assessment Recording Sheets

include checklists to assess, reflect, and respond to student progress on learning goals within each topic.

- 1 per topic for all grades
- Available in the *Teach* book

Exit Tickets assess proficiency for each lesson and include a self-reflection so students can think critically about their understanding and progress.

- 1 per lesson for Grade 1–Algebra I
- Available in the *Learn* book

Topic Quizzes measure proficiency at the topic level and include Sample Solutions within the *Teach* book to better understand expected student responses.

- 3 analogous versions per topic for Grade 3–Algebra I
- Available for download and to take digitally for Grade 3–Algebra I
- May also be used as a summative assessment

The image displays three sample assessment forms from the Eureka Math² curriculum. The top form is an 'Observational Assessment Recording Sheet' for Grade 7, Module 1, Topic A, focusing on Ratios and Proportional Relationships. It includes a table for recording observations for three achievement descriptors: 7.Mod1.AD1 (Compute unit rates), 7.Mod1.AD2 (Recognize proportional relationships), and 7.Mod1.AD3 (Identify the constant of proportionality). The middle form is an 'EXIT TICKET' for the same topic, featuring a table showing the cost of daisies purchased and a question about proportionality. The bottom form is a 'Topic Quiz A-1' for the same topic, featuring a table showing the area of tiled floors and a question about writing an equation for the area.

Observational Assessment Recording Sheet

Grade 7 Module 1 Topic A Ratios and Proportional Relationships Understanding Proportional Relationships

Student Name _____

Achievement Descriptors	Dates and Details of Observations
7.Mod1.AD1 Compute unit rates associated with ratios of fractions given within contexts.	
7.Mod1.AD2 Recognize proportional relationships.	
7.Mod1.AD3 Identify the constant of proportionality in proportional relationships.	

EXIT TICKET

Name _____ Date _____

I can determine whether relationships represented in tables are proportional by calculating unit rates.

1. The table shows the cost in dollars for different numbers of daisies purchased.

Number of Daisies Purchased	3	6	9	12	15
Cost (dollars)	6	10.50	11.25	15	18.75

Is the cost proportional to the number of daisies purchased? Explain how you know.

The cost is not proportional to the number of daisies purchased. Dividing each cost by the corresponding number of daisies purchased, \$6 for 3 daisies is a price of \$2 per daisy.

Topic Quiz A-1

Name _____ Date _____

1. The table shows a proportional relationship between the number of floor tiles and the area of a tiled floor.

Number of Floor Tiles	Area of Tiled Floor (square feet)
6	27
14	63
26	117
40	180

Write an equation that represents the area A in square feet of a floor covered by t tiles.

Summative Assessment

Measure proficiency with major concepts, skills, and applications against standards over time with summative assessments. These assessments include a variety of technology-enhanced items found on annual state tests, including fill-in-the-blank, short answer, multiple-choice, and constructed response. All assessments are designed for use formatively, but they may also be used as summative assessments at the teachers' discretion.



Module Assessments evaluate student proficiency with the major concepts, skills, and applications at the end of each module.

- Choice of 2 analogous versions per module
- Available in the *Teach* book and for download in Grade 1–Algebra I
- Available to take digitally in Grade 1–Algebra I
- Available in Spanish

EUREKA MATH² 7 • M1 • Module Assessment 1

Module Assessment Name _____ Date _____

1. Pedro opens a savings account. He deposits \$15 into the account each month. Which equation represents the number of dollars d in Pedro's savings account after m months?

A. $d = 15 \cdot m$
 B. $d = m + 15$
 C. $m = 15 \cdot d$
 D. $m = 15 + d$

2. Eve is mixing paint to match a specific shade of orange. She uses 2 ounces of red paint and 3 ounces of yellow paint. The color matches best when Eve uses 2 ounces of red paint and 3 ounces of yellow paint.

Eve has 1 ounce of red paint left. How many ounces of yellow paint does she need to match the same shade of orange?

_____ ounces of yellow paint

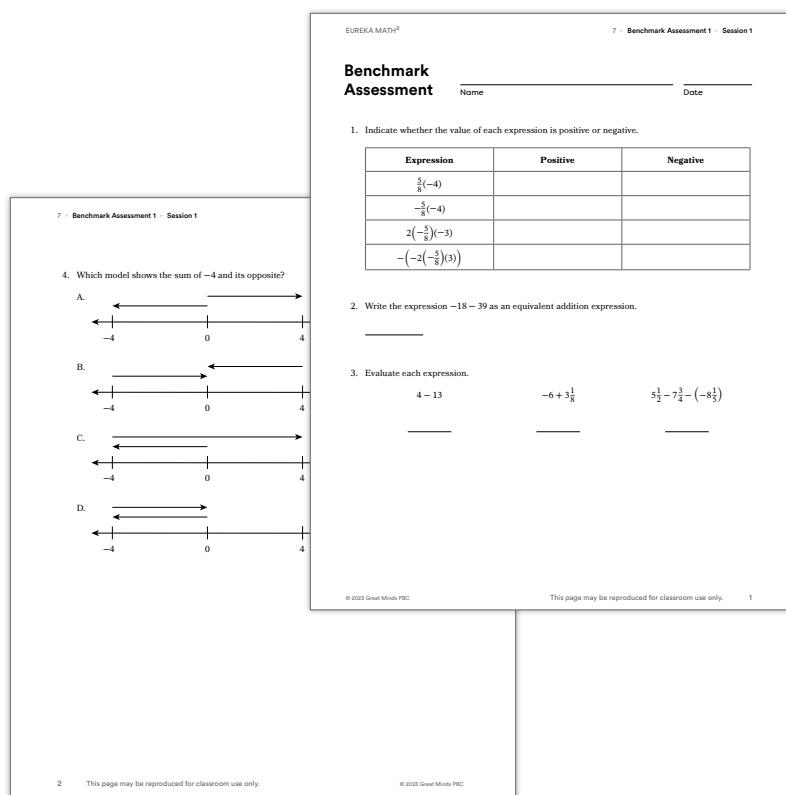
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EUREKA MATH² 7 • M1 • Module Assessment 1

3. Determine whether each of the following relationships is proportional or not proportional.

	Proportional	Not Proportional										
<table border="1"> <tr> <td>x</td> <td>0</td> <td>0.5</td> <td>2</td> <td>4</td> </tr> <tr> <td>y</td> <td>0</td> <td>3</td> <td>6</td> <td>12</td> </tr> </table>	x	0	0.5	2	4	y	0	3	6	12		
x	0	0.5	2	4								
y	0	3	6	12								
<table border="1"> <tr> <td>x</td> <td>3</td> <td>5</td> <td>8</td> </tr> <tr> <td>y</td> <td>5.1</td> <td>8.5</td> <td>13.6</td> </tr> </table>	x	3	5	8	y	5.1	8.5	13.6				
x	3	5	8									
y	5.1	8.5	13.6									
$y = 2x + 5$												
$y = \frac{1}{2}x$												

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Benchmark Assessments assess student proficiency with math skills and concepts from the previous modules to review skills that reflect the major work of the grade.

- Administered 3 times per year to assess cumulative learning
- Available for download in Grade 1–Algebra I
- Available to take digitally in Grade 3–Algebra I
- Available in Spanish

Performance Tasks are activities that assess students on content and practice standards by asking them to apply their understanding and skills to solve knowledge-rich context problems. These activities emphasize real-world application, problem-solving skills, and critical thinking, allowing teachers to evaluate how students apply their knowledge in various contexts.

- Leverages mathematical practices
- 6 tasks per grade
- Suggests next steps in student learning based on responses
- Available in Spanish
- Available for download in the digital platform

Name _____

Electric, Gas, or Hybrid?

Ms. Banks wants to buy a car that has low carbon emissions, and she wants to minimize costs as much as possible. Ms. Banks plans to drive about 13,500 miles per year.

She researches and narrows her choices to 3 different cars that have comparable sizes and features: an electric car, a gas car, and a hybrid car. An electric car is powered by a rechargeable battery, and a gas car is powered by a gas engine. The hybrid car Ms. Banks likes is powered by both a self-charging battery and a gas engine.

She organizes her research in tables and graphs.

Part A

The table shows the average carbon dioxide emissions in grams per mile for each type of car when driven at a constant speed of 55 miles per hour.

Type of Car	Carbon Dioxide Emissions at 55 miles per hour (grams per mile)
Electric	0
Gas	239
Hybrid	189

For each type of car, is there a proportional relationship between the average carbon dioxide emissions in grams per mile and the number of miles driven? Justify your answer.

Part B

The cost to own a car is the sum of the initial cost and the total fuel, electric, and maintenance costs.

The initial cost to buy the hybrid car is \$33,745. Ms. Banks finds that the initial cost of the electric car is 15.8% more than the hybrid car. The initial cost of the gas car is 1.7% less than the hybrid car.

The verbal description, table, and graph show the average fuel and electricity costs for the different types of cars based on the market prices.

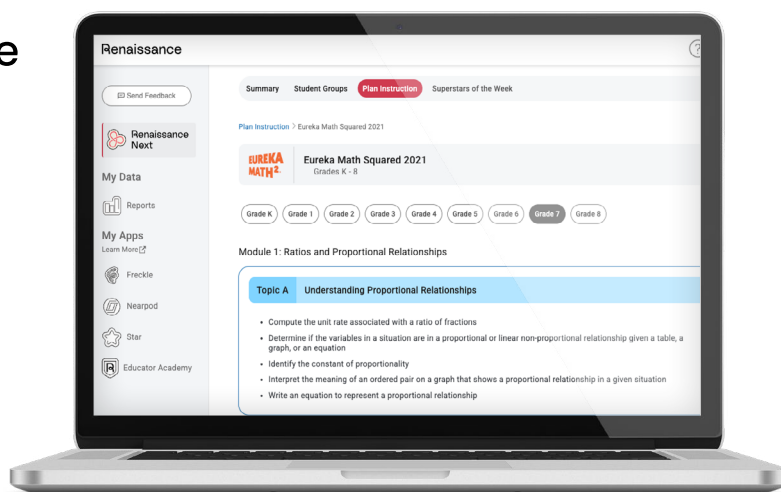
PERFORMANCE ASSESSMENT | © 2020 Great Minds[®] PBC

7 | Electric, Gas, or Hybrid? 1

Renaissance Data Alignment



Renaissance and Great Minds have partnered to unify data with differentiation on Renaissance Next®, an AI-powered experience. This integration connects lesson and intervention materials from *Eureka Math*² with data from Star Math® assessment and Freckle®, reducing teacher planning time and streamlining workflows.

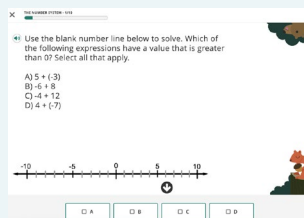


Renaissance Next and *Eureka Math*² users can

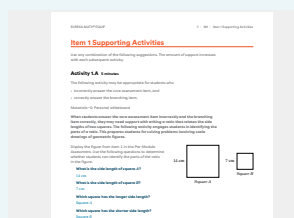
- maximize learning outcomes using direct links from Renaissance Next to recommended *Eureka Math*² content,
- support the screening, progress monitoring, and data-based decision-making required for a Multi-Tiered System of Supports (MTSS), and
- propel learning forward with Tier 2, and Tier 3 resources recommended from one consolidated data source.



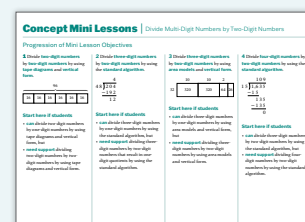
Renaissance Nearpod
Teacher-led topic-level lessons



Renaissance Freckle
Adaptive digital practice and ongoing data



Eureka Math² Equip
Supporting Activities
Pre-requisite skill activities



Math Catalyst
Tier 3 Intervention Concept
Mini Lessons

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Data-Driven Differentiation with *Math Catalyst*

Math Catalyst provides teachers with targeted resources that reinforce *Eureka Math*² learning. Spanning seven strands, *Math Catalyst* supports students through targeted Tier 2 and Tier 3 intervention that aligns with K–5 standards and through spaced retrieval practice. This online resource can be used during small group instruction, during dedicated What I Need (WIN) blocks, study hall, and after-school tutoring.

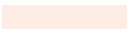
Components

Concepts are organized into progressions within each strand. Every concept includes components that work seamlessly in teacher-led small groups or independent and collaborative stations. These components include all student materials in Spanish.

Concept Guide	Includes preparation material, student misconceptions, language supports, and family support	
Progress Check	Measures student proficiency to guide instructional decisions	
Concept Mini Lessons	Provides small-group instruction on 76 concepts across nearly 300 mini lessons	
Practice	Provides spaced retrieval, repetition, and spiral review opportunities	
Application	Provides opportunities for extension and building fluency and automaticity	

Math Catalyst content is arranged into seven strands. Teachers have access to all content and can leverage it from any grade to meet their students' needs.

Strand	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Early Numeracy								
Place Value								
Addition								
Subtraction								
Multiplication								
Division								
Fractions as Numbers								

-  Address on-level practice, remediation, and advanced learning
-  Address learning gaps in any grade

Collecting Assessment Data with *Math Catalyst*

Assessments within *Math Catalyst* Concept Mini Lessons provide regular checkpoints for students to show their understanding and for teachers to determine the next steps in students' learning pathway. These assessments empower students to take ownership of their progress, engage in self-reflection, analyze mistakes, and celebrate their success.

Analyze Student Progress

Each Concept Mini Lesson includes Analyze Student Progress questions and prompts, helping teachers quickly gauge understanding and plan effective small-group activities.

Concept Mini Lessons

Multiplication of a Decimal by a Decimal

Progression of Mini Lesson Objectives

1 Multiply decimals with tenths by using a **hundredths grid**.

Start here if students

- can represent tenths on a hundredths grid, but
- need support representing the multiplication of tenths on a hundredths grid, and
- need support determining the product represented on a hundredths grid.

2 Multiply decimals with tenths by using **area models**.

10 tenths	6 tenths
40 hundredths	24 hundredths
10 tenths	60 hundredths

Start here if students

- can apply the break apart and distribute property to decompose factors, and
- can use an area model to multiply whole numbers, but
- need support multiplying tenths by using area models.

3 Multiply decimals with tenths by using **place value reasoning**.

$0.3 \times 0.3 = 0.09$
 $3 \text{ tenths} \times 3 \text{ tenths} = 9 \text{ hundredths}$

Start here if students

- can efficiently rename ones and tenths as tenths, and
- can multiply one-digit by up to two-digit whole numbers, but
- need support determining the product by using place value reasoning.

4 Relate decimal multiplication to the **multiplication of whole numbers**.

36 tenths
$\times 25 \text{ tenths}$
$\hline 180$
$+ 720$
$\hline 900 \text{ hundredths}$

Start here if students

- can multiply whole numbers by using the standard algorithm, but
- need support relating decimal multiplication to the multiplication of whole numbers.

MATH CATALYST | © 2005 Great Minds PBC

Concept Mini Lessons | Teacher Guide 1

NAME _____ DATE _____

Progress Check Tool

Multiplication of Decimals by Decimals

1 Which hundredths grid represents 0.5×0.3 ? Circle the letter of the correct answer.

A

B

C

D

Shade the hundredths grid to multiply. Then complete the equation.

2 $0.7 \times 0.2 =$ _____

3 $0.4 \times 0.6 =$ _____

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Progress Check | Student Page 3

Progress Check Tool

The Progress Check Tool assesses proficiency with the skills and concepts aligned with each Mini Lesson objective. They can be used before, during, or after direct instruction.

Targeted Intervention, Practice, and Application

Math Catalyst strengthens *Eureka Math*² outcomes by providing teacher-led Tier 2 and Tier 3 intervention, aligned games, activities, and practice that bridge connections while giving students opportunities for collaboration and fluency.



Concept Mini Lessons

Teachers can address student learning gaps and misconceptions with 10-minute targeted Concept Mini Lessons that can be delivered for individual or small-group Tier 2 and Tier 3 intervention.

Practice

Multiple practice pages are provided per concept that are sequenced from simple to complex for differentiation. These tiered practice pages include Practice Helpers, which provide students with support during their independent work. In addition, these practice pages can be utilized for spiral review to support students with their mathematical fluency.

Application

Teachers can create meaningful opportunities by using Application activities as independent or collaborative work. These activities create opportunities for students to communicate mathematically, engage in self-directed learning, and practice with spiral review opportunities.

Students can engage in multiple types of problem-solving experiences, such as the following:

- Solve a Problem
- Play a Game
- Study a Solution
- Solve a Task

Application Solve a Problem

Word Problem Cards

1. Leo needs 0.8 pounds of mixed berries for a muffin recipe. 0.4 pounds of the mixed berries are blueberries. How many pounds of blueberries does Leo need?

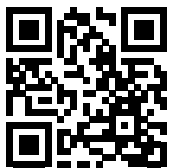

2. Yuna drinks 3.2 bottles of water. Each bottle of water contains 0.9 liters of water. How many liters of water does Yuna drink in all?


3. Mr. Perez buys a rectangular rug that is 2.4 meters wide and 3.4 meters long. What is the area of the rug?



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EUREKA MATH²®



To learn more visit
greatminds.org/math/eurekamathsquared

