Leading Impactful Math Instruction Through Elevated Student Experiences

Resources and Supports for the Math Core Package

LEAD THE WAY

Agenda

- Engage
  - Which one doesn’t belong?
- Explore & Apply
  - Leading Impactful Math Instruction – Math Institute Overview
  - Math Core Package Enhancements
- Reflect
  - Math Supports & Resources

LEAD THE WAY

The Goal in Mind:
What is your school's math goal for next year?

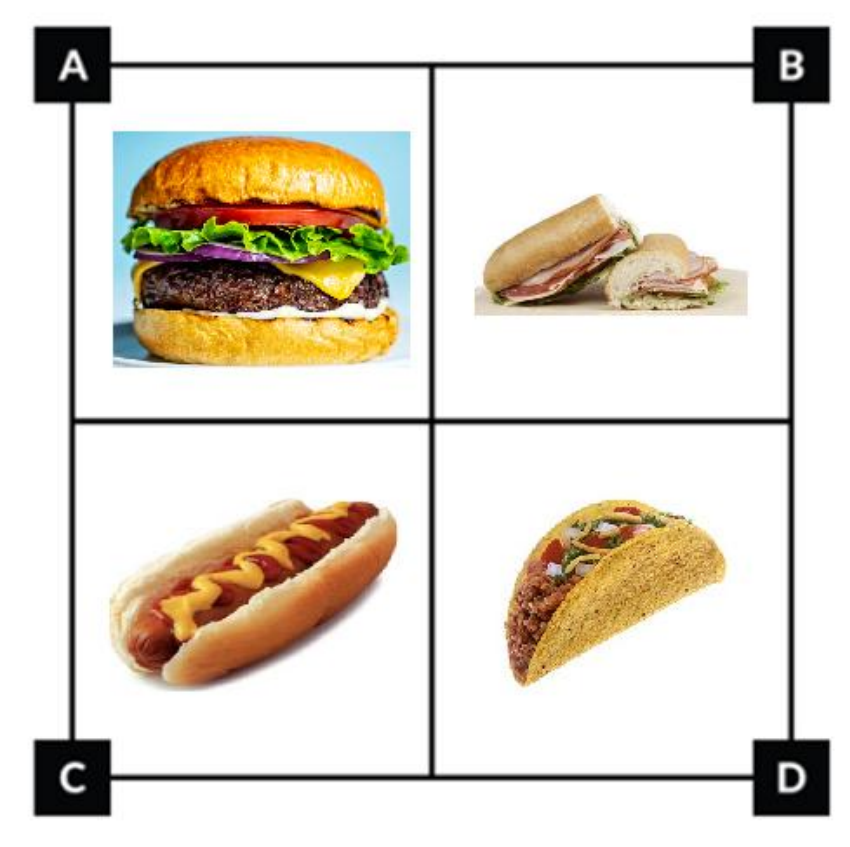
LEAD THE WAY

LEADERSHIP TASK FORCE

Leading Impactful Math Instruction

- Before Instruction (CCC):
  - Utilizing Moving the Needle documents
  - K-12 Balanced Math Framework Reflective Planning Guide
- During Instruction:
  - Alignment to the Instructional Framework
  - Implementation of components of the Core Package
  - Incorporating multiple mathematical representations
  - Utilizing Milestone Minute for EOC/EOG readiness
  - K-12 Math Walkthrough Form

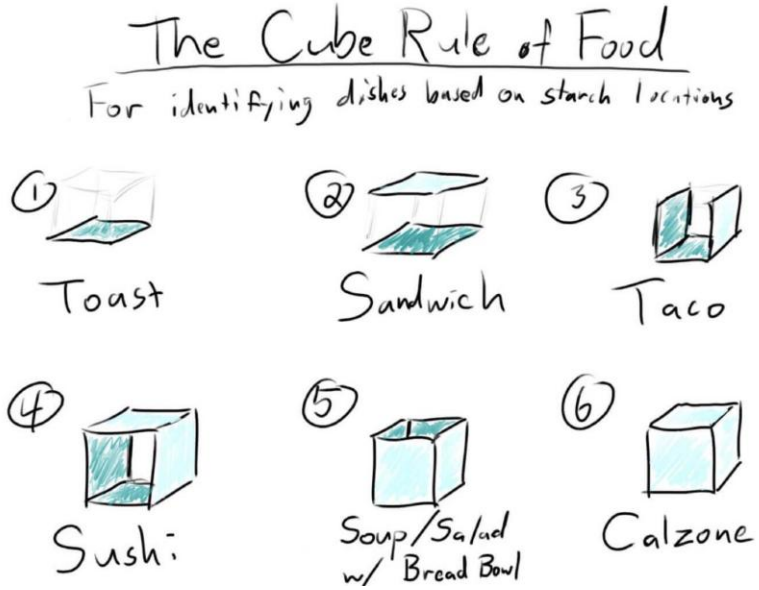
Which one doesn’t belong?



LEAD
THE WAY

The Cube Rule of Food

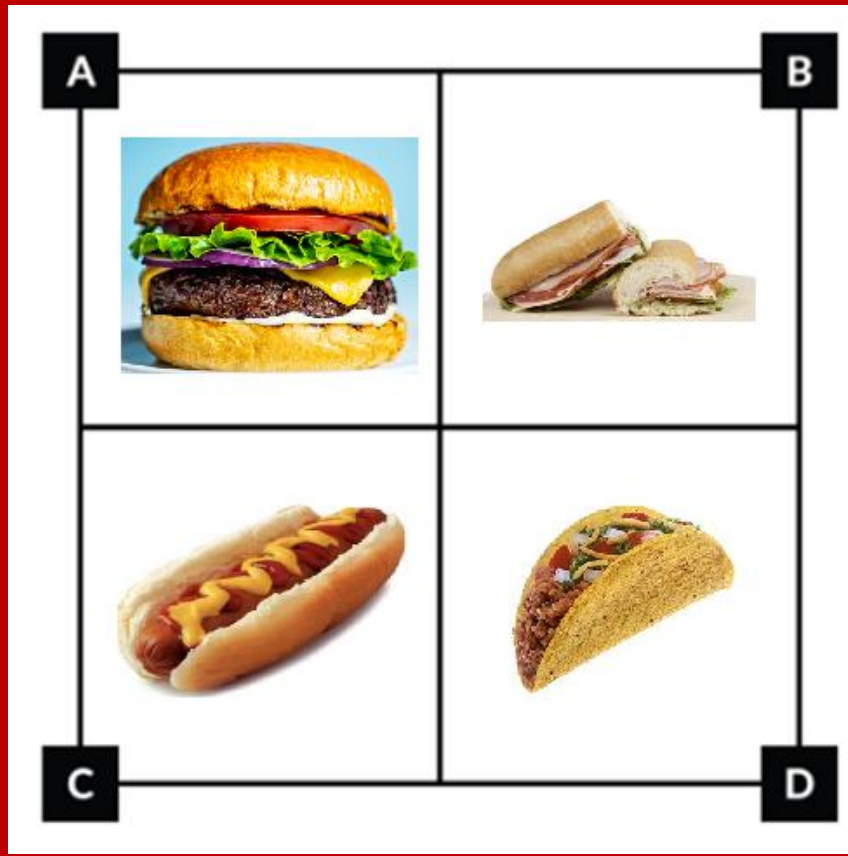
- How would the discourse change if I had presented rules first?



Which one doesn't belong?

② Sandwich

③ Taco

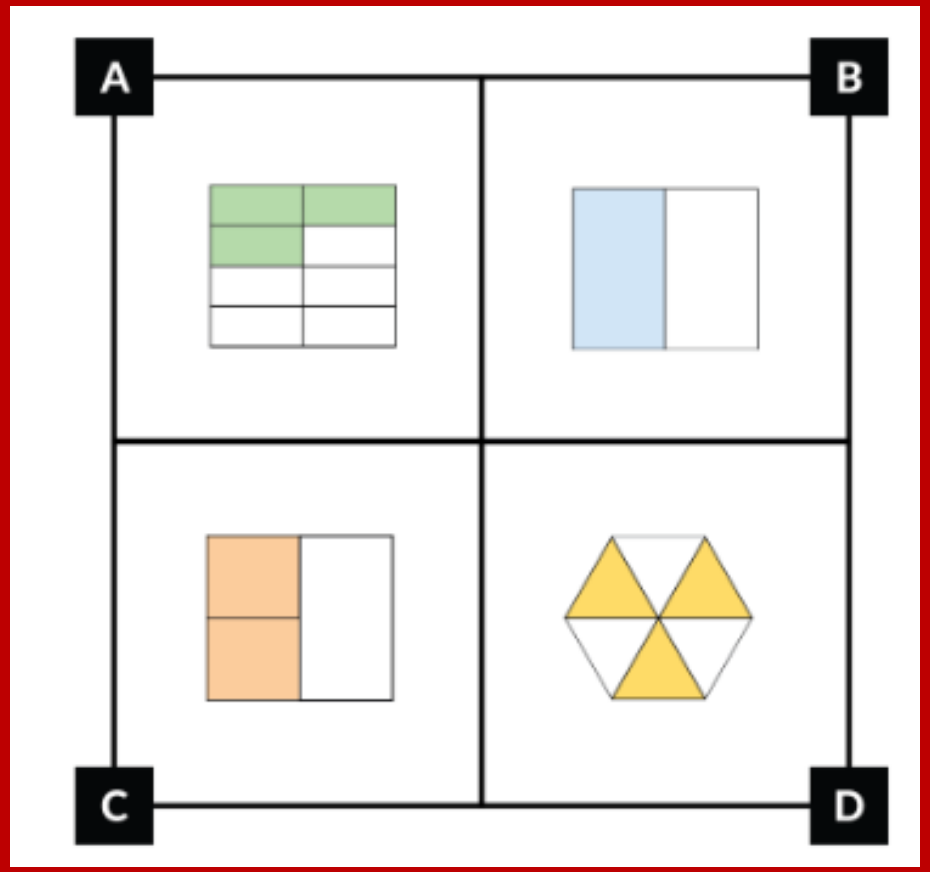


③ Taco

③ Taco

LEAD THE WAY

Which one doesn’t belong?



LEAD
THE WAY

Impacting Conceptual Understanding

- Look for activities that:
  - Foster a sense of curiosity and exploration
  - Encourage collaborative discussions and peer learning
  - Develop a deeper understanding of mathematical concepts
  - Promote a growth mindset and reduce math anxiety

Math Institute Overview: Impacting Students Through Elevated Math Experiences

LEADERSHIP TASK FORCE

Monitoring Impactful Math Instruction

- What do you look for in an impactful math class?
- Using your sticky notes, write down 3 - 5 teacher actions you see in impactful math classrooms in your building.
- Partner 1 will share their actions for 30 seconds and Partner 2 will have 30 seconds to respond. Switch roles and repeat!

IMPACT: The Vision for Math Instruction

I — Innovate with fresh strategies to deepen student engagement

M — Master state standards with confidence and clarity

P — Problem solve creatively and critically in every classroom

A — Anchor instruction in the district's Core Package to ensure consistency and rigor

C — Collaborate across K-12 to share best practices and insights

T — Transform student experiences to make math meaningful, fun, and accessible

LEAD THE WAY

Monitoring Impactful Math Instruction

- Take your sticky notes and place it under the IMPACT letter you feel is most closely aligned to your action. Be sure to include your initials on the note.

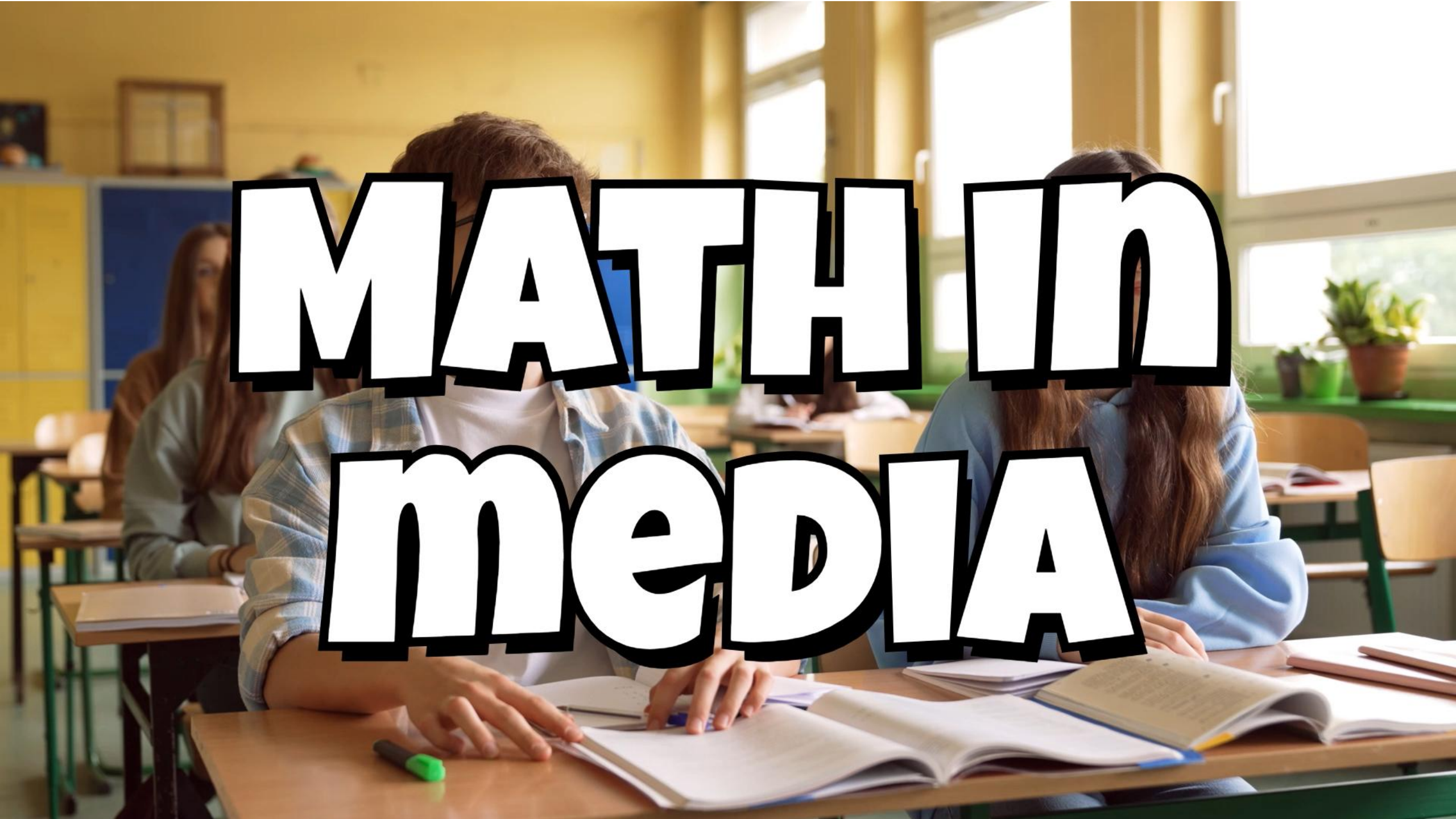
- Where do you see the most emphasis on IMPACT from our items?
  - Stand under the letter that matches your answer

- What could have the most IMPACT on your school's math goal?
  - Stand under the letter that matches your answer

LEAD THE WAY

Learning Targets for the Math Institute

- I can articulate the big idea of Numerical Reasoning.
- I can identify the vertical alignment and progression of key numerical reasoning concepts.
- I can deepen my content knowledge of Numerical Reasoning standards.
- I can identify high quality instructional activities to support conceptual understanding of key mathematical concepts at my grade level.


MATH IN
MEDIA

K-12 Numerical Reasoning Progression

K-12 MATHEMATICS LEARNING PROGRESSION - GEORGIA

Key Concepts	ELEMENTARY SCHOOL (K-5)						MIDDLE SCHOOL (6-8)			HIGH SCHOOL (9-12)			
	K	1	2	3	4	5	6	7	8	Algebra: Concepts & Connections	Geometry: Concepts & Connections	Advanced Algebra: Concepts & Connections	Courses beyond Advanced Algebra
NUMERICAL REASONING													
Numbers	• Whole numbers to 100	• Whole numbers to 120 • Partition shapes into halves and quarters/fourths (fourths) with no shading	• Whole numbers to 1000 • Partition shapes into halves, thirds and quarters (fourths) with no shading	• Whole numbers to 10,000 • Unit fractions with denominators of 2, 3, 4, 6, and 8 • Represent fractions • Equivalence of simple fractions • Introduce shading to identify and compare fractional parts	• Whole numbers to 100,000 • Non-unit fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100 • Fractions with like denominators • Decimal fractions (tenths and hundredths)	• Multi-digit whole numbers • Fractions with unlike denominators • Fractions greater than 1 • Decimal fractions to thousandths	• Rational numbers as a concept ○ Integers ○ Fractions ○ Decimal numbers	• All rational numbers • Simple probability	• All rational numbers • Scientific notation • Numerical expressions with integer exponents • Approximate rational and irrational numbers (radicals) on a number line	• All rational numbers • Operations with radicals	• All numbers in The Real Number System	• All numbers in The Real Number System • Complex numbers	• Application of all numbers in the real number system • The Complex Number System (Precalculus and beyond)

Vertical Progression: Algebra Readiness

Students who fail algebra are significantly *less likely* to graduate on time.

Heppen, J., et. al., 2017

How did you learn to swim?

Observing from the pool deck?

Mimicking arm and leg motions?

Reading a manual about swimming?

LEAD THE WAY

FRACTIONS

K12345

EXPLORING EQUAL PARTS

GaDOE Instructional Learning Plans for 1st Grade, Unit 3: Fractions! Easy as Pie.

LEADERSHIP TASK FORCE

A FAIR SHARE

This sheet of paper represents a cake that four students won at the county fair. I'm going to give four people a piece of the cake.

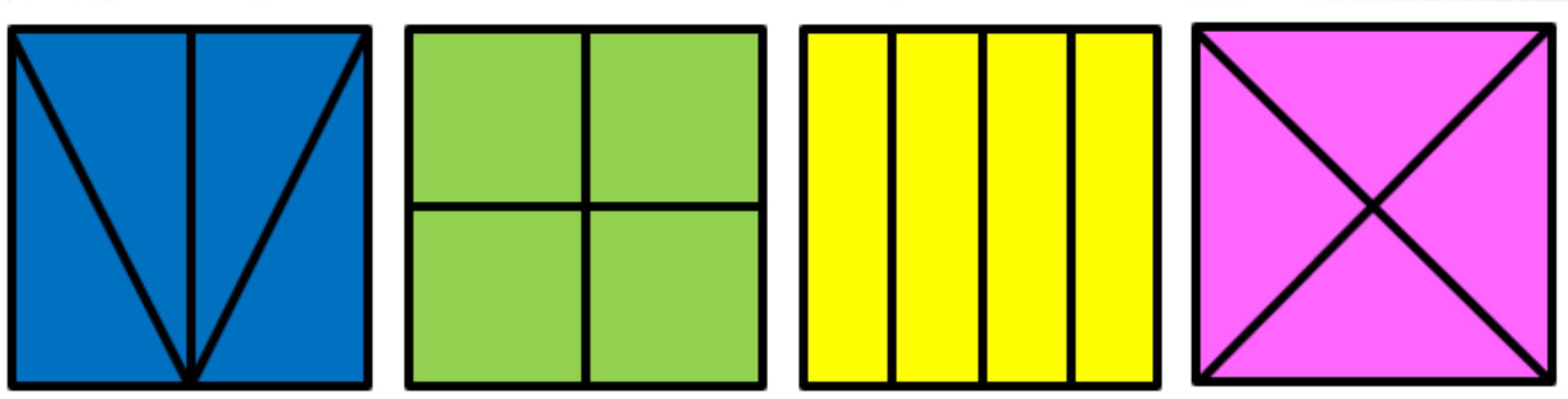
Did each student receive a fair share of the cake? Why or why not?

What should I do to make it fair? How should I cut the cake?

I'm going to give you a sheet of paper. Can you fold the paper to represent a fair way to share the cake?

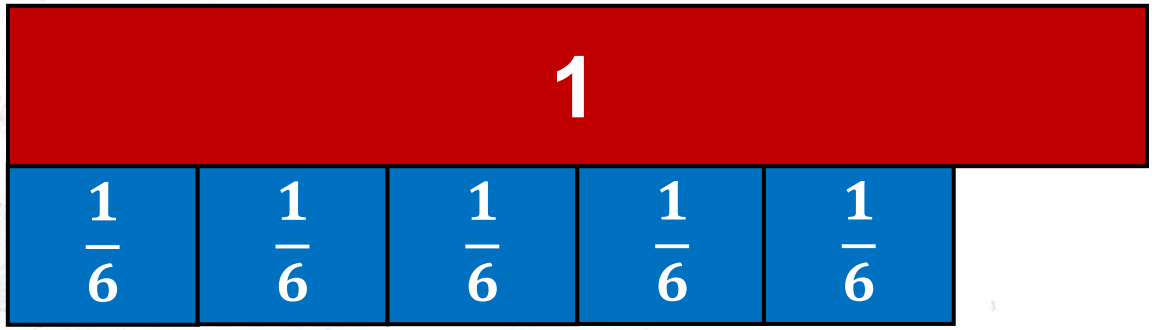
EQUAL AREAS

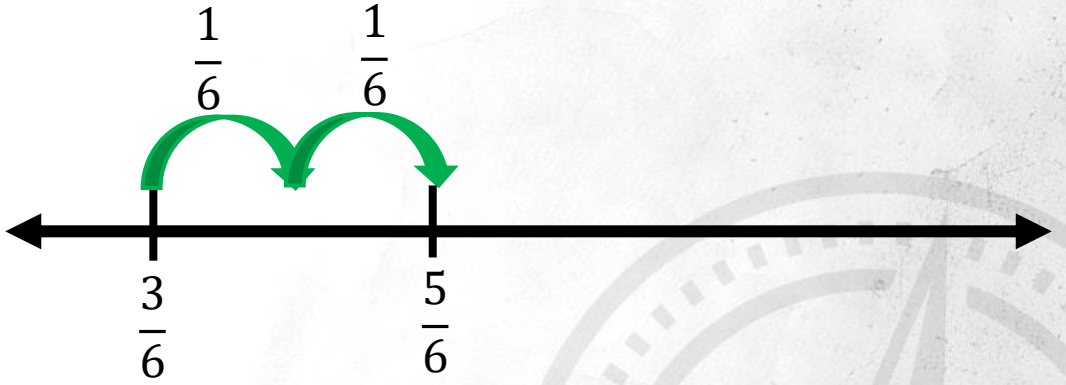
Each square is partitioned into four equal parts. Each part is ¼ of the whole. If the wholes are the same size, do the blue triangle, green square, yellow rectangle, and pink triangle have the same area? Explain your reasoning.



ADDING FRACTIONS

Mandy is planting a vegetable garden. She planted 3/6 of the garden with cucumbers and 2/6 of the garden with potatoes. What fraction of the garden did Mandy plant?





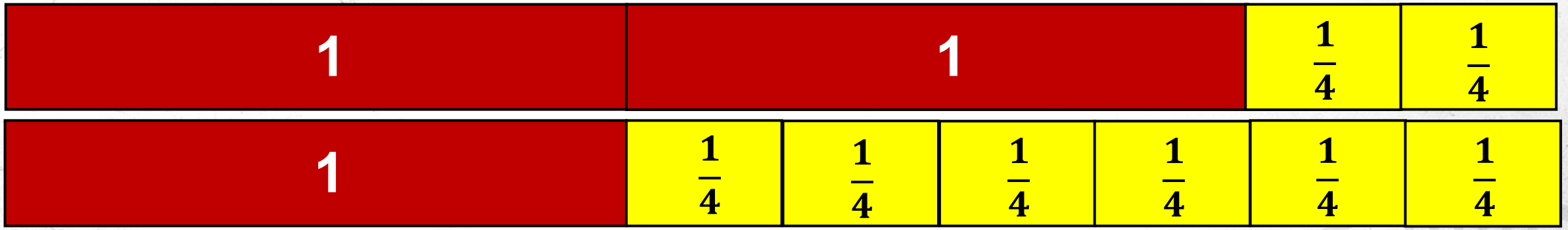
$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

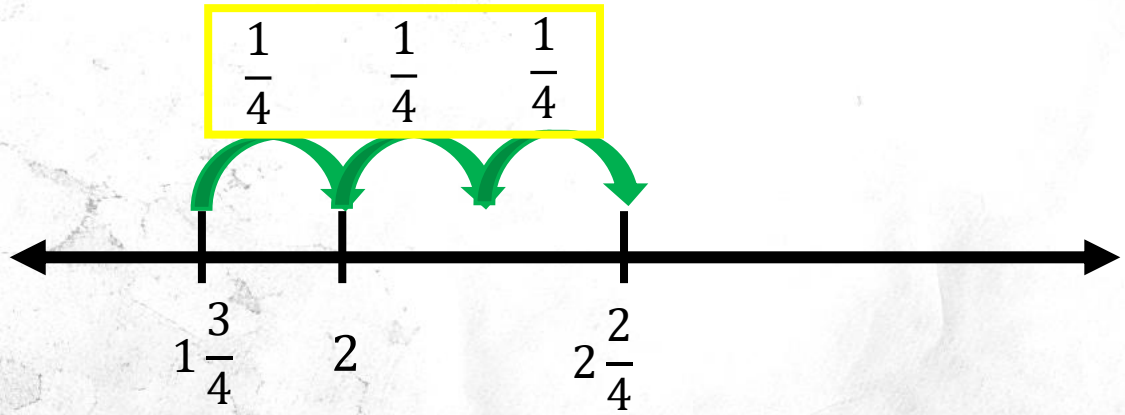
Mandy planted 5/6 of the garden.

K12345

ADD/SUBTRACT WITH UNLIKE DENOMINATORS

Mary ran $2\frac{2}{4}$ miles on Monday, and $1\frac{3}{4}$ miles on Tuesday. How much further did Mary run on Monday than on Tuesday?





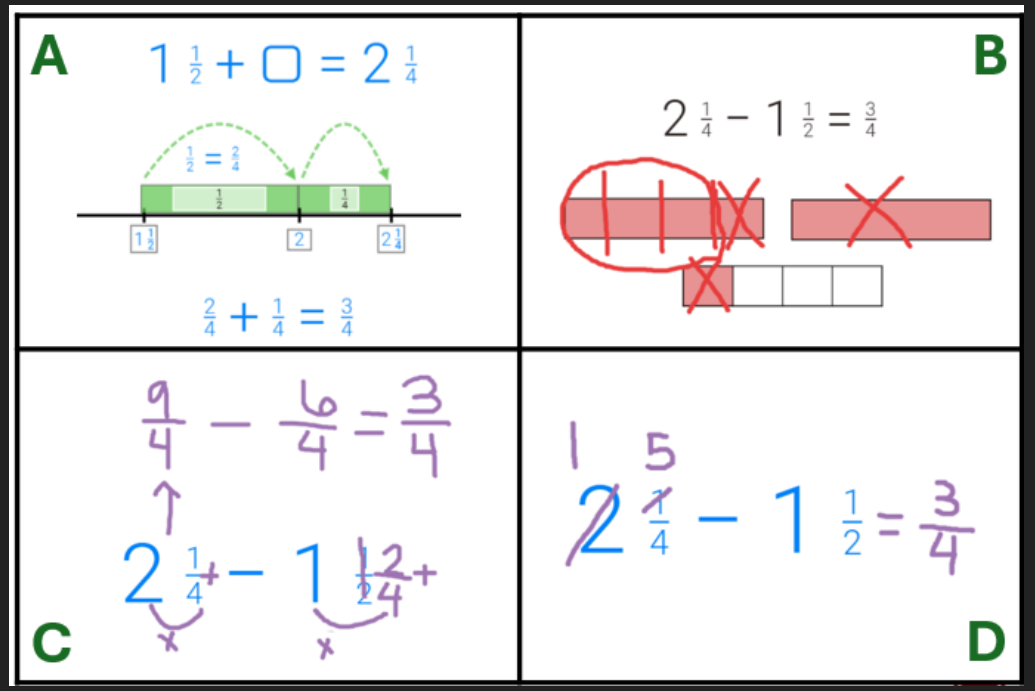
Mary ran $\frac{3}{4}$ of a mile further on Monday than on Tuesday.

LEADERSHIP TASK FORCE

YOUR TURN
How far is Temperance Avenue from the end of the freeway?

LEAD THE WAY

YOUR TURN
Which strategy did you use?



Impact on Instruction

- Which of these practices do you see most frequently in math classrooms at your school?
  1. Use of manipulatives
  2. Multiple strategies and representations
  3. Math reasoning instead of algorithms
  4. Real-world applications

- Which of these practices would you like to see more in classrooms?

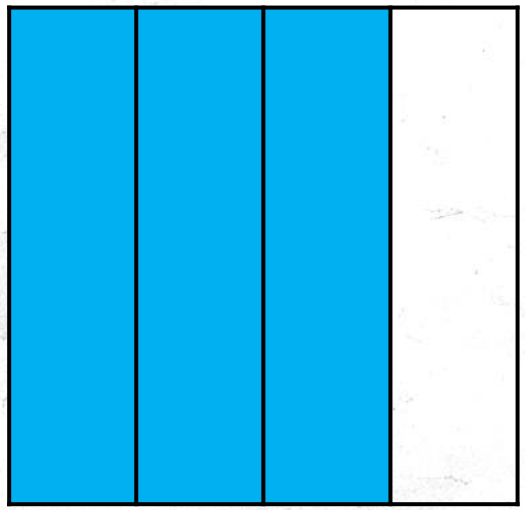
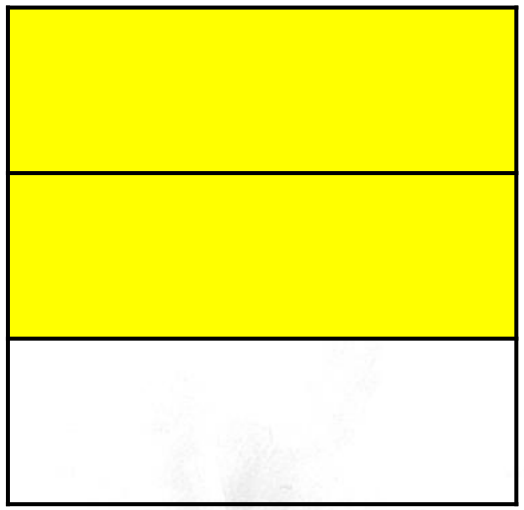
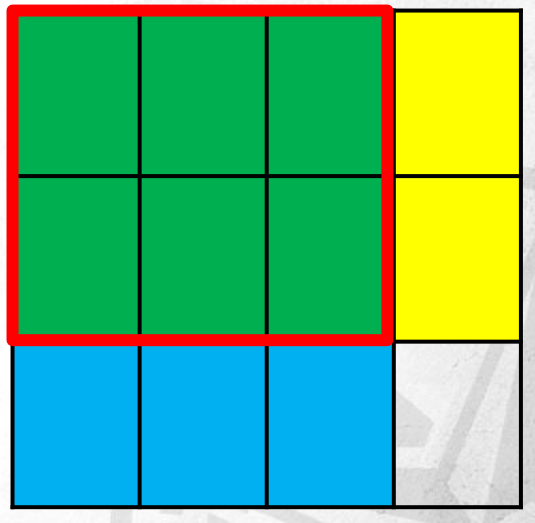
1	2
3	4

LEAD THE WAY

6 7 8

FRACTION MULTIPLICATION

Three-fourths of the class is boys. Two-thirds of the boys are wearing tennis shoes. What fraction of the class are boys wearing tennis shoes? Use grid paper and colored pencils to represent the problem.

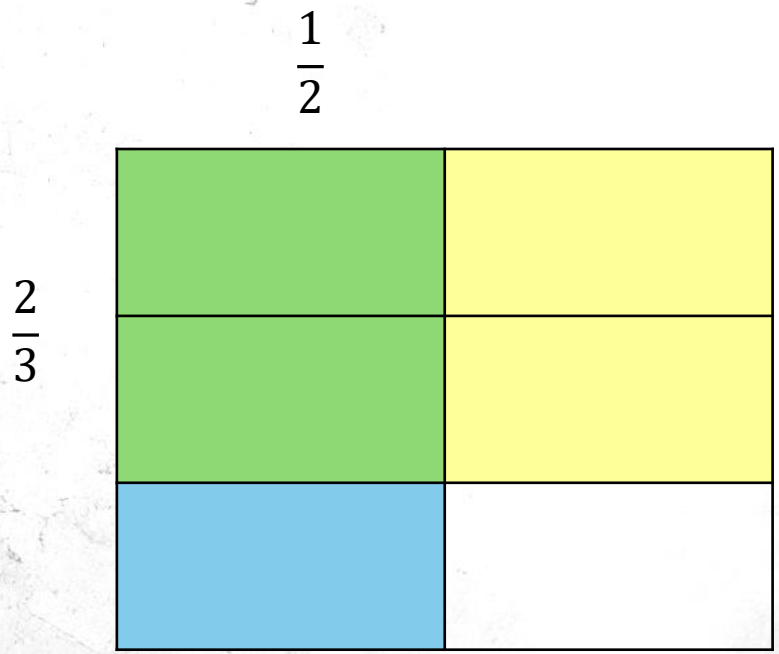
$\frac{3}{4}$  X $\frac{2}{3}$  = $\frac{6}{12}$ 

$\frac{6}{12}$ or $\frac{1}{2}$ of the class are boys wearing tennis shoes.

6 7 8

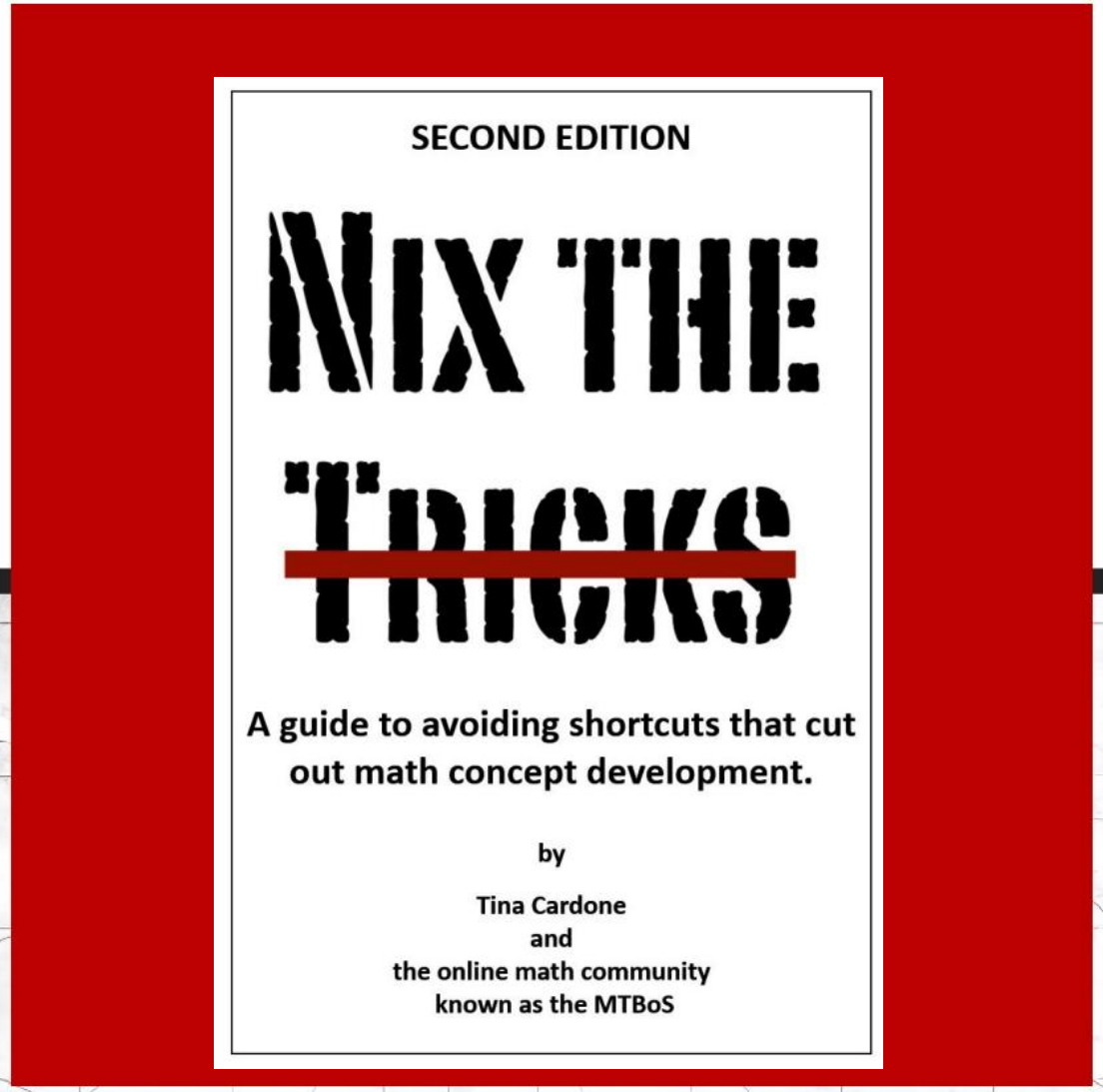
FRACTION MULTIPLICATION

A local Italian restaurant donated a pan of lasagna for math club. When Tonya went to eat, there was $^2/_3$ of the pan of lasagna left. She ate ½ of what was left. How much did she eat?



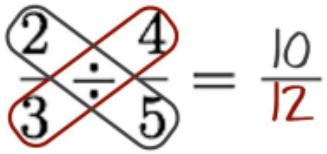
$$\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$$

Nix the Tricks



3.5 Nix: Cross Multiply (Fraction Division)

Because:



Division and multiplication are different (albeit related) operations; one cannot magically switch the operation in an expression. Plus, students confuse "cross" (diagonal) with "across" (horizontal). Not to mention, where does the answer go? Why does one product end up in the numerator and the other in the denominator?

Please, never tell students the phrase, "Ours is not to reason why; just invert and multiply." A student's job in math class is to reason, and a teacher's job is to convince the students that math makes sense.

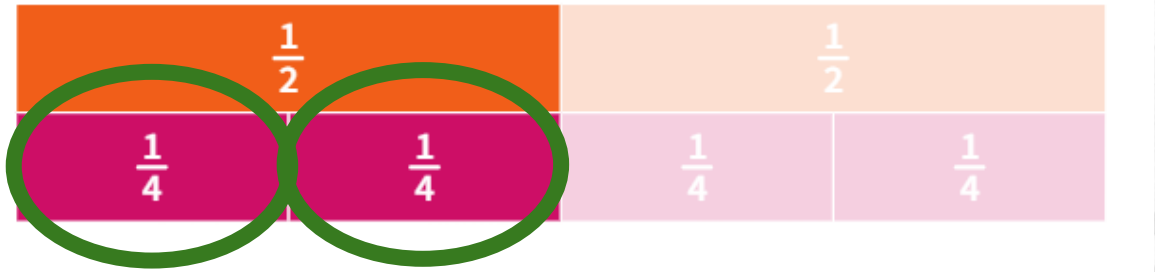
LEAD THE WAY

6 7 8

FRACTION DIVISION

$$\frac{1}{2} \div \frac{1}{4}$$

How many groups of ¼ are in ½?



2

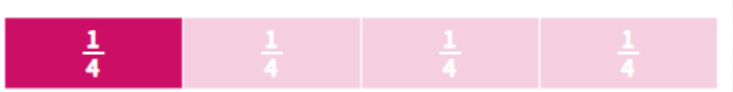
https://mathigon.org/polypad#fraction-bars

6 7 8

FRACTION DIVISION

A batch of bread requires ¼ cup of sugar. How many batches can you make with ¾ cup? Create a diagram and division expression to represent this situation.

|---------- 1 cup ----------|



|---------- 1 cup ----------|

Notice: Common denominators.

|---------- 1 cup ----------|

What size is your group?
How many ¼ are in ¾?

You can make 3 batches of bread.

6 7 8

FRACTION DIVISION

A baker has 12 $^{2}/_{3}$ pounds of sugar to make batches of cookies. The number of batches of cookies requires ¾ pound of sugar. Write and solve a division equation that represents the batches of cookies the baker can make.

$$12\frac{2}{3} \div \frac{3}{4}$$

$$= \frac{38}{3} \div \frac{3}{4}$$

$$= \frac{38}{3} \times \frac{4}{3}$$

$$= \frac{152}{9} \text{ or } 16\frac{8}{9}$$

batches of cookies

Vertical Progression: Algebra Readiness

- How does instruction and strategies in elementary classes support student learning in middle school?
- If students are not presented with multiple strategies or representations, how might that impact their readiness for Algebra?

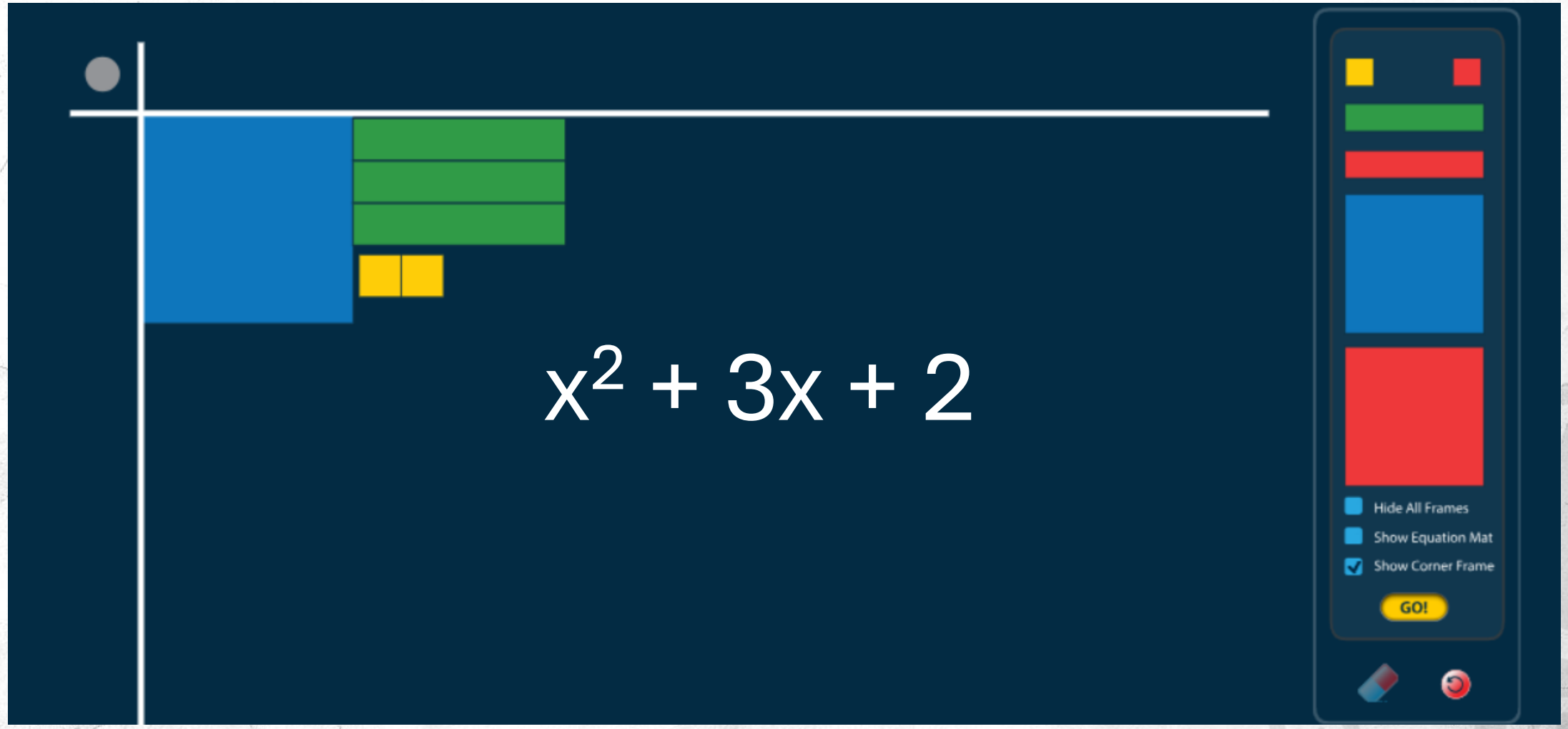
TEACHING & LEARNING
PLAN.INSTRUCT.ASSESS.REFLECT.

Cobb Readiness Pathway to Success: Algebra

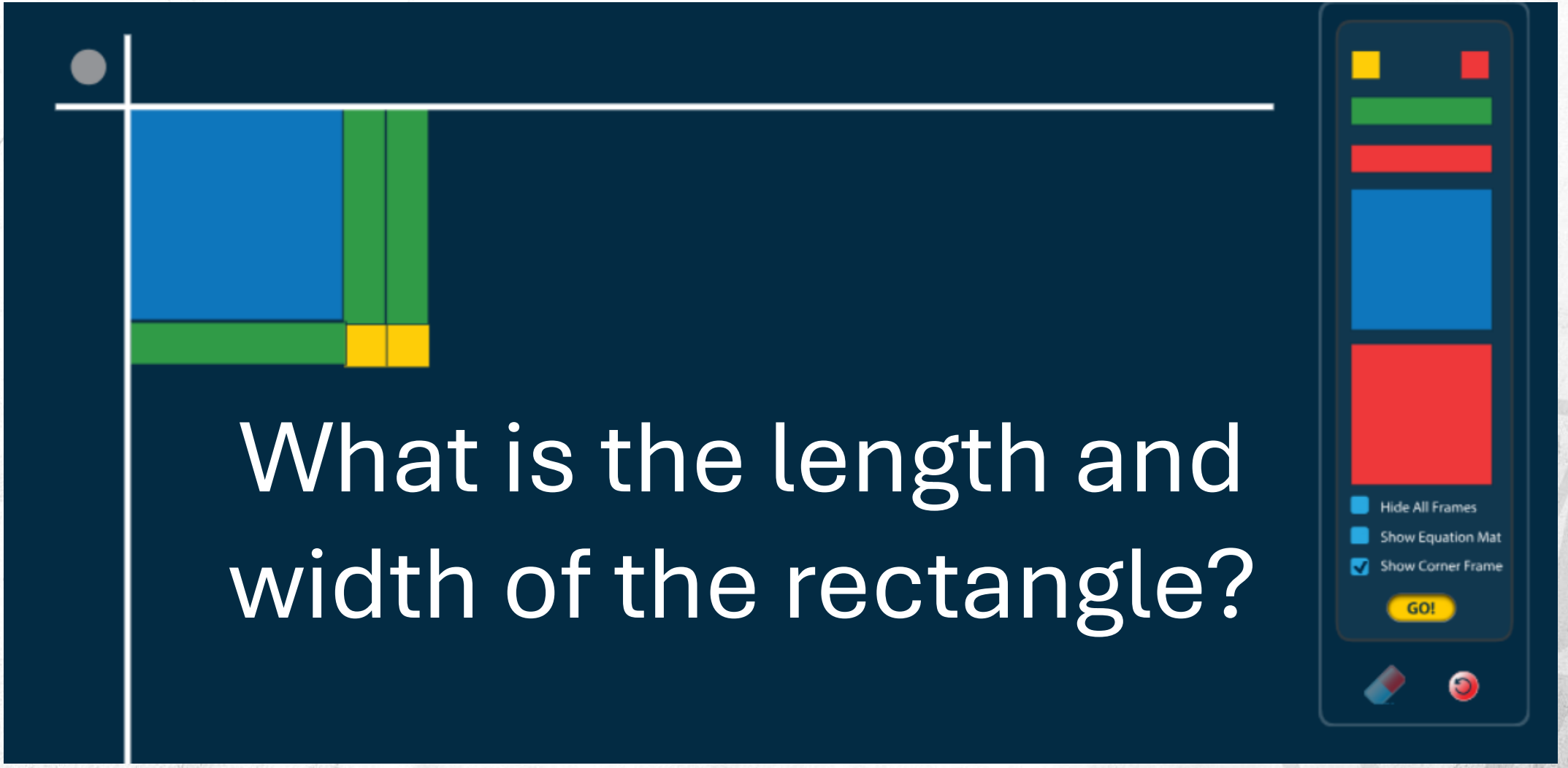
MATHEMATICS
STRATEGIC COMPETENCE: BALANCING THE HOW, WHY, AND WHEN.

Key Concepts	K	1	2	3	4	5	6	7	8
Numbers K.NR.2 1.NR.1 1.GSR.4 2.NR.1 2.GSR.7 3.NR.1 3.NR.4 4.NR.1 4.NR.5 5.NR.2 5.NR.3 5.NR.4 6.NR.1 6.NR.2 7.NR.1 8.NR.1 8.NR.2	• Whole numbers to 100	• Whole numbers to 120 • Partition shapes into halves and quarters/fourths (fourths) with no shading	• Whole numbers to 1000 • Partition shapes into halves, thirds, and quarters (fourths) with no shading	• Whole numbers to 10,000 • Unit fractions with denominators of 2, 3, 4, 6, and 8 • Represent fractions • Equivalence of simple fractions • Introduce shading to identify and compare fractional parts	• Whole numbers to 100,000 • Non-unit fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100 • Fractions with like denominators • Decimal fractions (tenths and hundredths)	• Multi-digit whole numbers • Fractions with unlike denominators • Fractions greater than 1 • Decimal fractions to thousandths	• Rational numbers as a concept o Integers o Fractions o Decimal numbers	• All rational numbers	• All rational numbers • Numerical expressions with integer exponents • Approximate rational and irrational numbers (radicals) on a number line
Counting K.NR.2 1.NR.1 2.NR.2 3.NR.1 4.NR.4 5.NR.4	• Counting forward to 100 • Counting backward from 20 • Counting objects to 20	• Counting forward and backward within 120 • Skip counting by 2s, 5s, and 10s • Counting objects to 120	• Counting forward and backward within 1000 • Skip counting by 2s, 5s, 10s, 25s, and 100s • Counting objects to 1000	• Counting unit fractions	• Counting non-unit fractions	• Counting decimal numbers			
Place Value K.NR.4 1.NR.2 2.NR.1 3.NR.1 4.NR.1 4.NR.4 5.NR.1 5.NR.4	• Compose and decompose numbers within 20 • Identify and write numerals to 20	• Compose and decompose 2-digit numbers	• Hundreds, tens, and ones in 3-digit numbers	• Round numbers to 1000 to nearest 10 or 100 • Read & write multi-digit whole numbers to thousands	• Magnitude of place value • Multi-digit whole numbers to 100,000 • Round multi-digit whole numbers • Fractions with denominators of 10 or 100	• Magnitude of place value extended to decimal numbers • Powers of 10 to 10^3 • Read & write decimal numbers to thousandths place • Round decimal numbers to hundredths place			

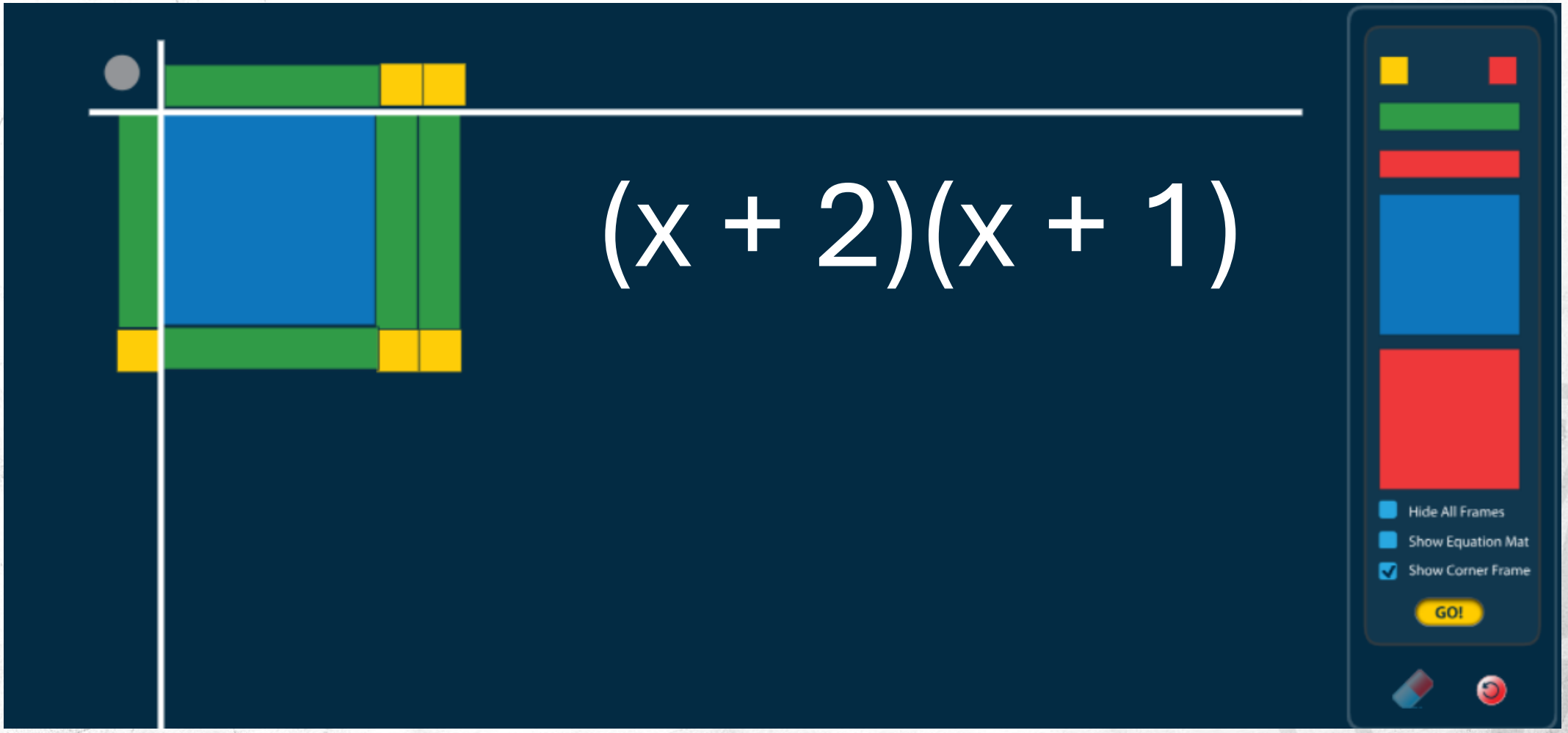
LET'S TRY: Algebra Tiles A.PAR.6



LET'S TRY: Algebra Tiles A.PAR.6



LET'S TRY: Algebra Tiles A.PAR.6



Monitoring Impactful Math Instruction

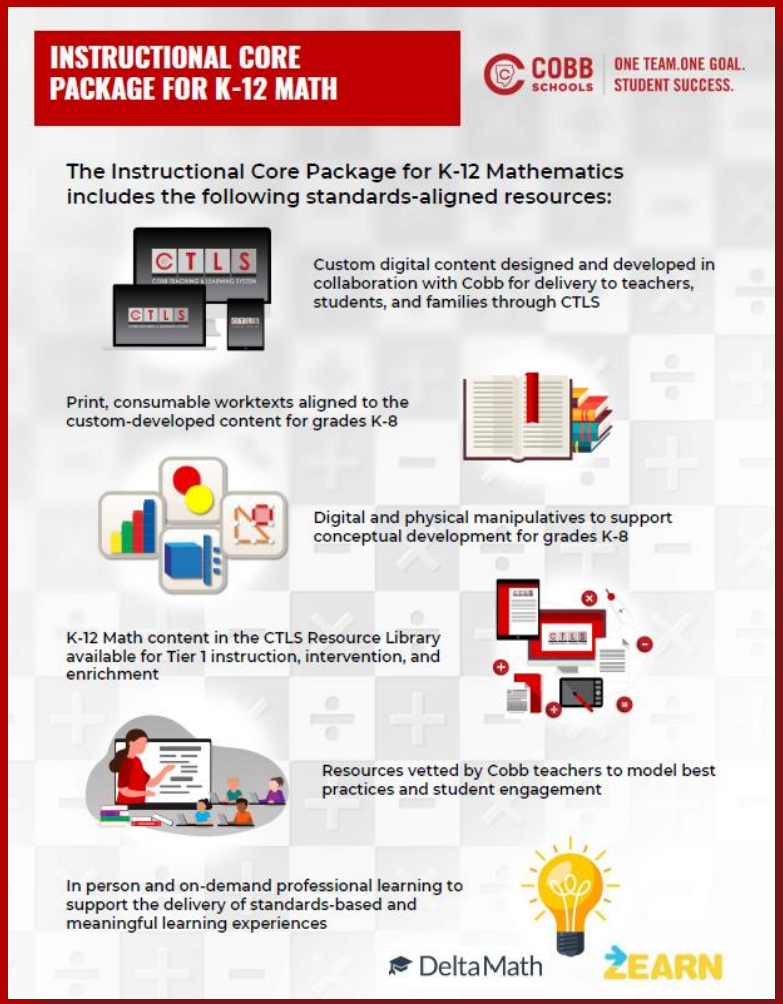
- Components of impactful math instruction to **look for** in the classroom include:
  - Use of various strategies and representations, not just a single procedure
  - Problems rooted in real-world scenarios, not problems without context
  - Opportunities for students to explore and engage in discourse, not teacher-centered instruction
  - Use of formative data throughout the lesson to reflect and self-assess, not just formal assessments at the end of the unit

Supporting Impactful Math Instruction

- As we explore the resources available to math teachers, consider how each could **support** teachers with implementing impactful practices
  - Use of various strategies and representations, not just a single procedure
  - Problems rooted in real-world scenarios, not problems without context
  - Opportunities for students to explore and engage in discourse, not teacher-centered instruction
  - Use of formative data throughout the lesson to reflect and self-assess, not just formal assessments at the end of the unit

Math Core Package Enhancements

Math Core Package

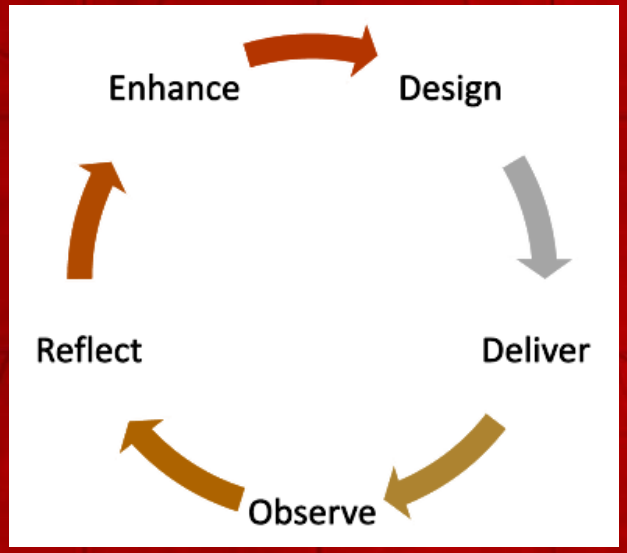


- District Coursework
- Worktexts
- Manipulatives
- Resource Library
- State Learning Plans
- Supporting Unit Resources

LEAD THE WAY

LEAD THE WAY

LEADERSHIP TASK FORCE



Core Package Enhancement Project

- **3 Year Project**
  - Phase 1 (2025-26): Grades 3 – 8
  - Phase 2 (2026-27): K-2, Algebra, Geometry, and Advanced Algebra
  - Phase 3 (2027-28): Supports and Extensions Kindergarten -Advanced Algebra
- **Purpose of project**
  - To ensure the Cobb Core Package provides teachers with comprehensive, standards aligned, instructional materials aligned to mathematics best teaching practices.

Core Package Enhancement Project: Authentic Problems

- In mathematics teaching and learning, we encourage students to see mathematics in the world around them, to think like mathematicians, to look at numbers before they calculate, to think rather than to perform rote procedures. This helps them make sense of the math.

- *Each lesson contains a connection to a relevant, real-world authentic situation.*

In Georgia's K-8 Standards

- ✓ *"Authentic"* is used 63 times
- ✓ *"Real"* is used 58 times
- ✓ *"Everyday"* is used 36 times

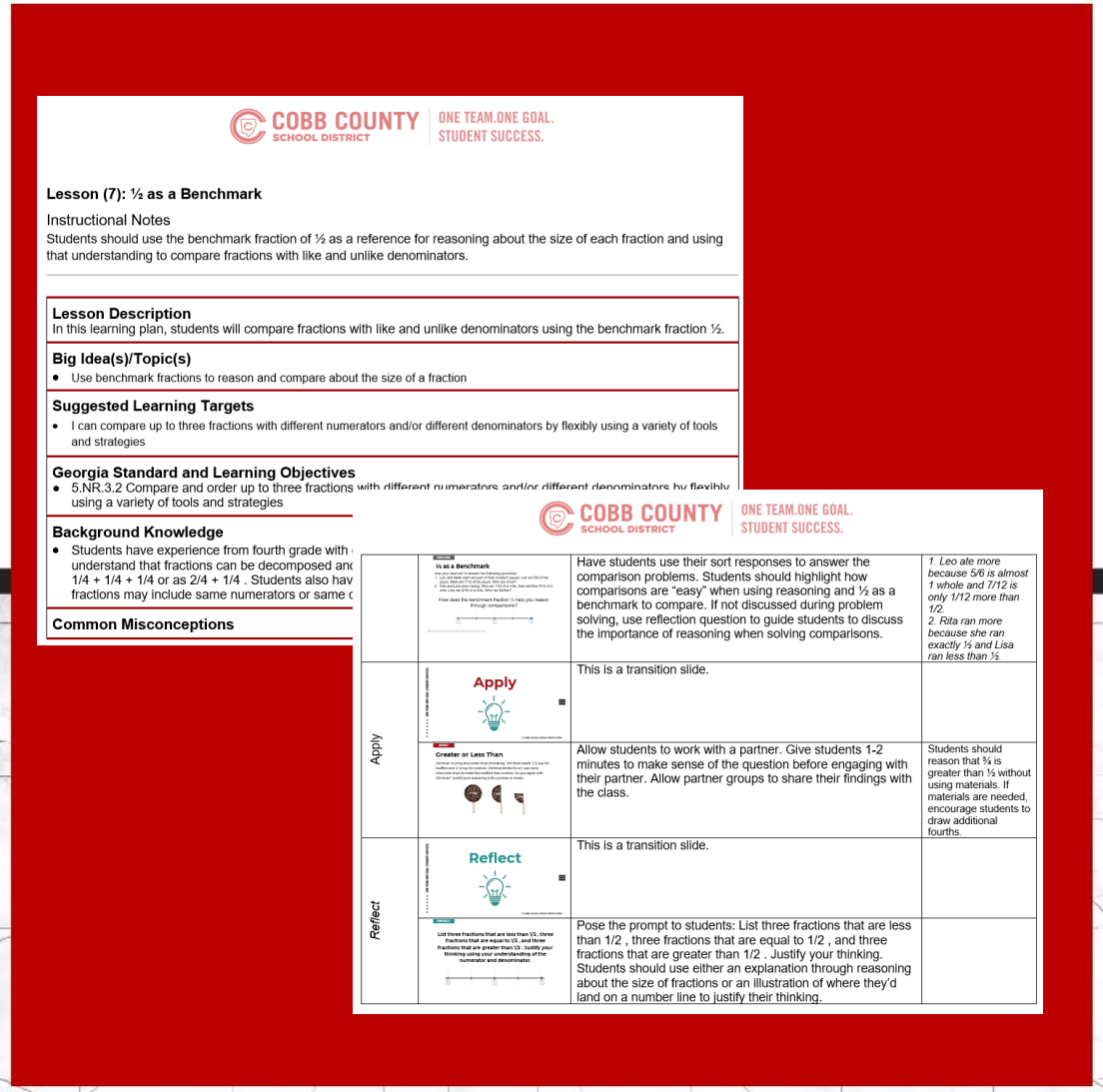
Consistent Practices and Strategies

This list highlights practices and strategies that are evidence-based to enhance student's learning of mathematics and are embedded throughout the enhanced resources.

Evidence-based Strategies for Instruction
3- Read Protocol
Polya's 4-step problem solving
Math talks (which one doesn't belong, problem strings, etc.)
Numberless Word Problems
Notice & Wonder

How to Support Teachers: Teacher Guide

- Includes important lesson information such as standards, description, suggested learning targets
- Provides script and suggested answers along with snippets from daily slides



COBB COUNTY SCHOOL DISTRICT | ONE TEAM.ONE GOAL. STUDENT SUCCESS.

Lesson (7): ½ as a Benchmark

Instructional Notes

Students should use the benchmark fraction of ½ as a reference for reasoning about the size of each fraction and using that understanding to compare fractions with like and unlike denominators.

Lesson Description

In this learning plan, students will compare fractions with like and unlike denominators using the benchmark fraction ½.

Big Idea(s)/Topic(s)

- Use benchmark fractions to reason and compare about the size of a fraction

Suggested Learning Targets

- I can compare up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies

Georgia Standard and Learning Objectives

- 5.NR.3.2 Compare and order up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies

Background Knowledge

- Students have experience from fourth grade with
  understand that fractions can be decomposed and
  1/4 + 1/4 + 1/4 or as 2/4 + 1/4 . Students also hav
  fractions may include same numerators or same

Common Misconceptions

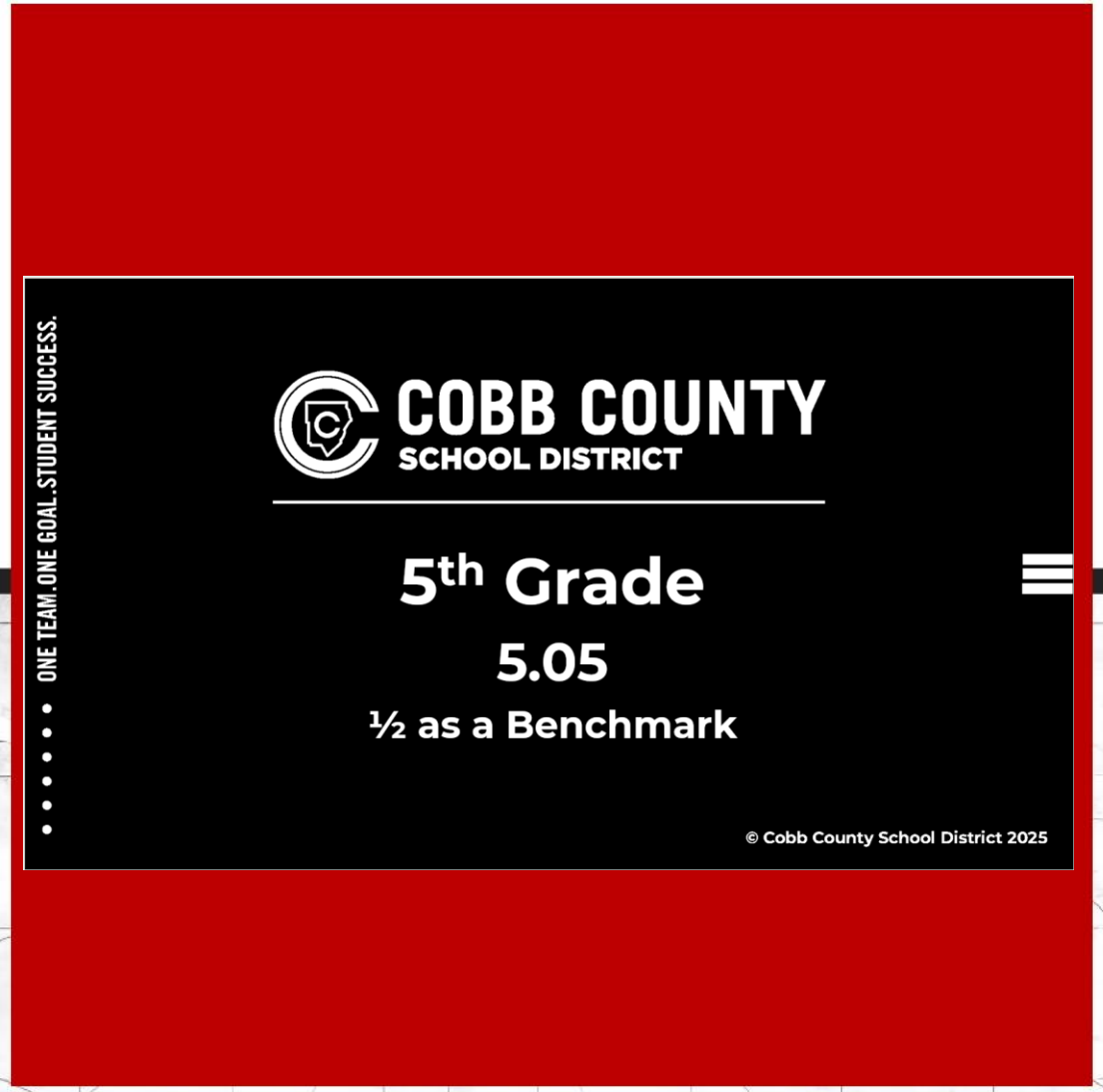
COBB COUNTY SCHOOL DISTRICT | ONE TEAM.ONE GOAL. STUDENT SUCCESS.

	½ as a Benchmark	Have students use their sort responses to answer the comparison problems. Students should highlight how comparisons are "easy" when using reasoning and ½ as a benchmark to compare. If not discussed during problem solving, use reflection question to guide students to discuss the importance of reasoning when solving comparisons.	*1. Leo ate more because 5/6 is almost 1 whole and 7/12 is only 1/12 more than 1/2.* *2. Rita ran more because she ran exactly ½ and Lisa ran less than ½.*
Apply	Apply	This is a transition slide.	
	Greater or Less Than	Allow students to work with a partner. Give students 1-2 minutes to make sense of the question before engaging with their partner. Allow partner groups to share their findings with the class.	Students should reason that ¾ is greater than ½ without using materials. If materials are needed, encourage students to draw additional fourths.
Reflect	Reflect	This is a transition slide.	
	List three fractions that are less than 1/2 , three fractions that are equal to 1/2 , and three fractions that are greater than 1/2 . Justify your thinking using your understanding of the numerator and denominator.	Pose the prompt to students: List three fractions that are less than 1/2 , three fractions that are equal to 1/2 , and three fractions that are greater than 1/2 . Justify your thinking. Students should use either an explanation through reasoning about the size of fractions or an illustration of where they'd land on a number line to justify their thinking.	

LEAD THE WAY

What to Look For in the Classroom: Daily Slides

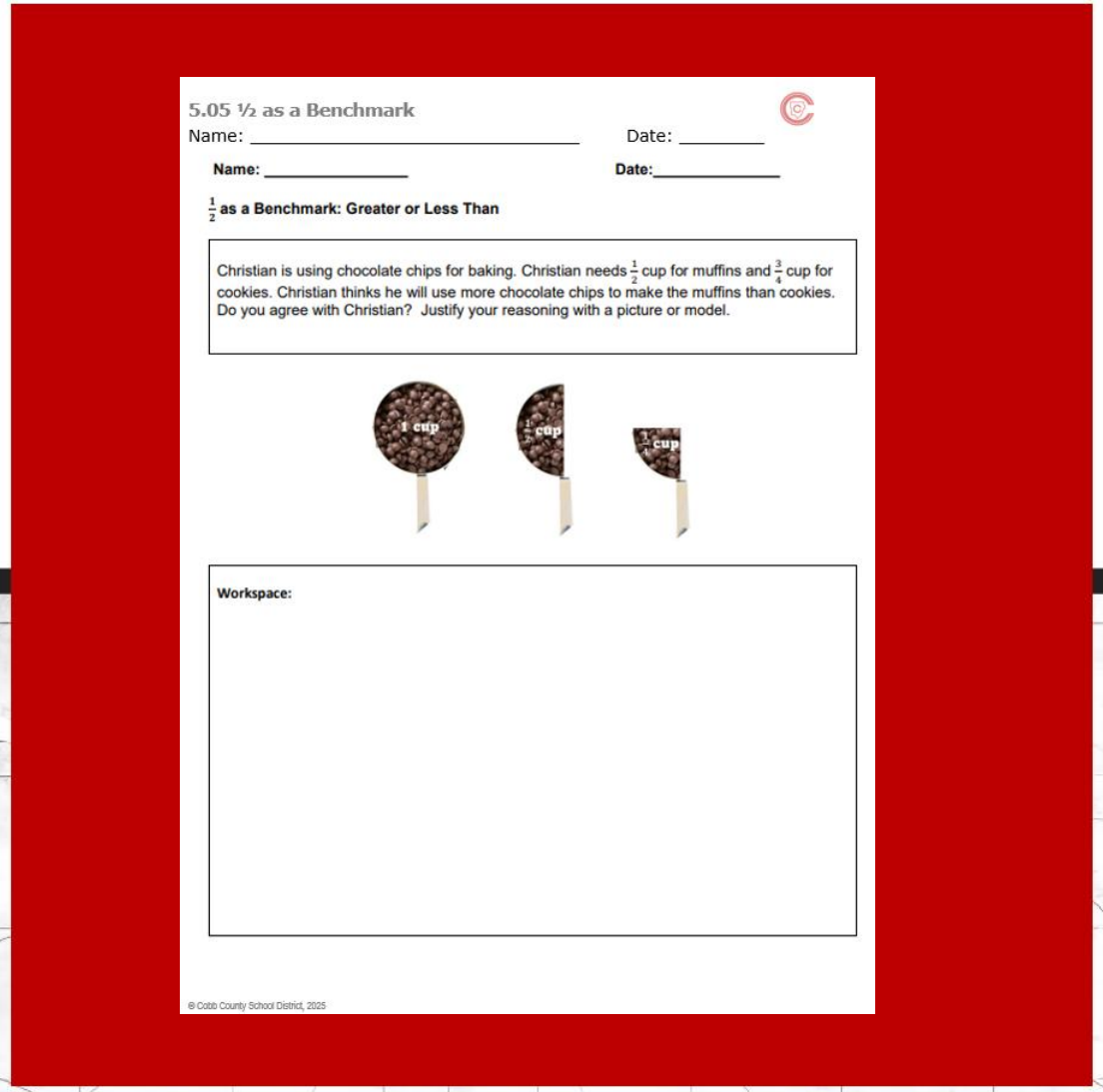
- Neutral coloring to distinguish previous versions (red and blue)
- Alignment to the GaDOE instructional framework (Diagnostic, Engage, Explore, Apply, Reflect)
- 3-Read protocol embedded



LEAD THE WAY

What to Look For in the Classroom: Student Practice

- Daily practice activities aligned to the daily slides
- Includes everything a student would need to complete the lesson
- Used as the source for the enhanced worktext



5.05 ½ as a Benchmark

Name: _____ Date: _____

Name: _____ Date: _____

$\frac{1}{2}$ as a Benchmark: Greater or Less Than

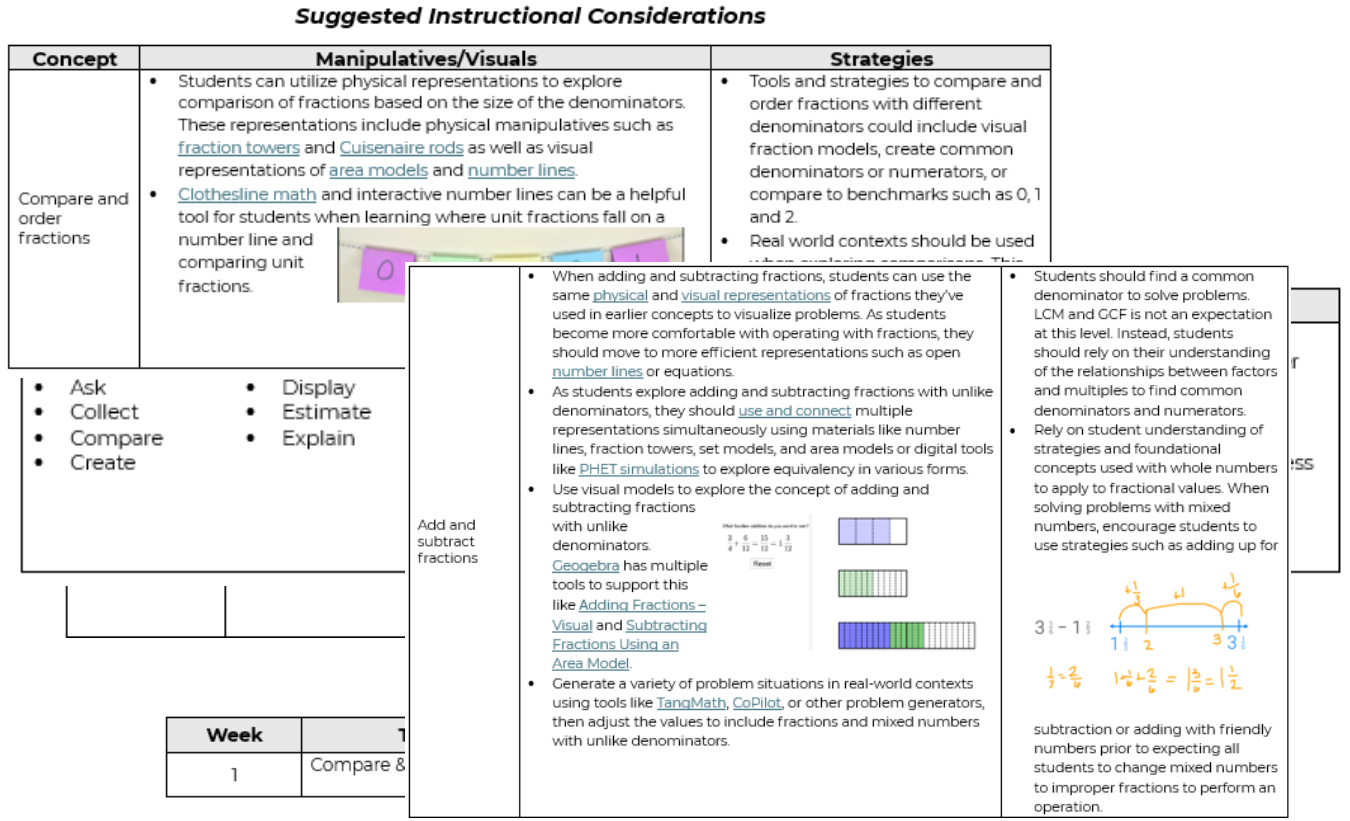
Christian is using chocolate chips for baking. Christian needs $\frac{1}{2}$ cup for muffins and $\frac{3}{4}$ cup for cookies. Christian thinks he will use more chocolate chips to make the muffins than cookies. Do you agree with Christian? Justify your reasoning with a picture or model.

Workspace:

Math Expanded Frameworks

The Expanded Framework

- Provided for each unit by grade-level
- Includes links to overview of the entire standard
- Suggested learning arc aligned to the core package
- Suggested vocabulary that should be explicitly taught and/or referenced
- Suggested instructional considerations
  - Background knowledge and supports for teachers
  - Links to supporting resources
  - Visuals and explicit strategies/manipulatives



Suggested Instructional Considerations

Concept	Manipulatives/Visuals	Strategies
Compare and order fractions	• Students can utilize physical representations to explore comparison of fractions based on the size of the denominators. These representations include physical manipulatives such as fraction towers and Cuisenaire rods as well as visual representations of area models and number lines. • Clothesline math and interactive number lines can be a helpful tool for students when learning where unit fractions fall on a number line and comparing unit fractions.	• Tools and strategies to compare and order fractions with different denominators could include visual fraction models, create common denominators or numerators, or compare to benchmarks such as 0, 1 and 2. • Real world contexts should be used
Add and subtract fractions	• When adding and subtracting fractions, students can use the same physical and visual representations of fractions they've used in earlier concepts to visualize problems. As students become more comfortable with operating with fractions, they should move to more efficient representations such as open number lines or equations. • As students explore adding and subtracting fractions with unlike denominators, they should use and connect multiple representations simultaneously using materials like number lines, fraction towers, set models, and area models or digital tools like PHET simulations to explore equivalency in various forms. • Use visual models to explore the concept of adding and subtracting fractions with unlike denominators. Geogebra has multiple tools to support this like Adding Fractions – Visual and Subtracting Fractions Using an Area Model. • Generate a variety of problem situations in real-world contexts using tools like TangMath, CoPilot, or other problem generators, then adjust the values to include fractions and mixed numbers with unlike denominators.	• Students should find a common denominator to solve problems. LCM and GCF is not an expectation at this level. Instead, students should rely on their understanding of the relationships between factors and multiples to find common denominators and numerators. • Rely on student understanding of strategies and foundational concepts used with whole numbers to apply to fractional values. When solving problems with mixed numbers, encourage students to use strategies such as adding up for subtraction or adding with friendly numbers prior to expecting all students to change mixed numbers to improper fractions to perform an operation.

- Ask
- Collect
- Compare
- Create
- Display
- Estimate
- Explain

Week	1
1	Compare &

Milestone Minute

LEAD THE WAY

Milestone Minute:
Daily questions pulled from DOE resources to expose students to milestone-type questions.

Question 1

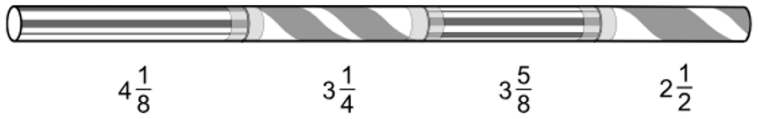
Four straws have been taped together at the ends by STEM students for a project. What is the total length of the straws?

A. 13

B. 13½

C. 13⅞

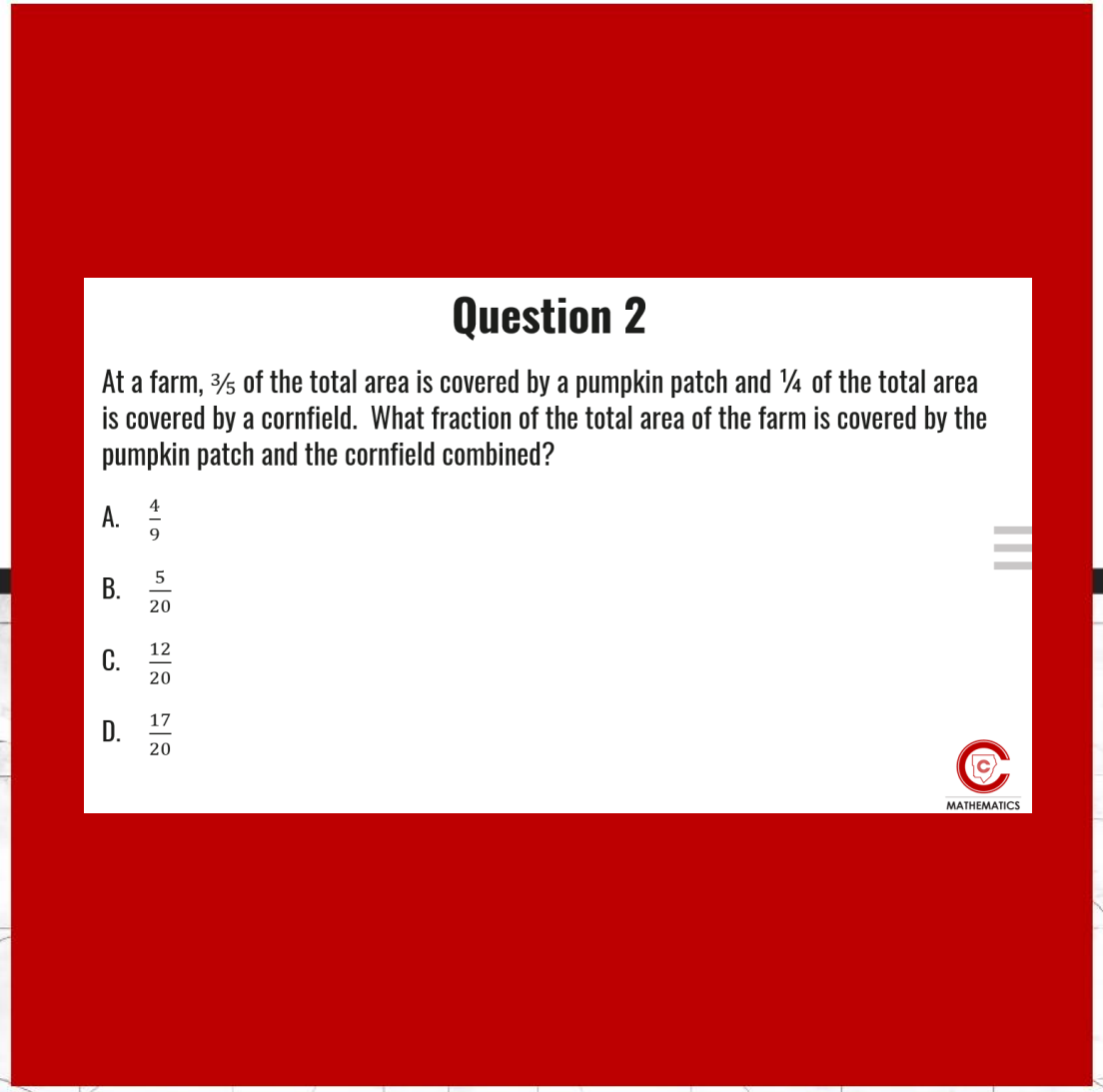
D. 14½



MATHEMATICS

Milestone Minute: Implementation

- 1-2 questions per day.
- Students work independently using only their formula sheet and Desmos (no additional notes).
- Set a time limit of 3 minutes per question (e.g., 2 questions = 6 minutes).



LEAD THE WAY

Moving the Needle

Moving the Needle

Available for all grades, all standards!

Moving the Needle – 6.NR.1

Standard
6.NR.1: Solve real-life, mathematical problems involving operations with whole numbers, fractions and decimal numbers. Professional Learning Video by the GaDOE.

Achievement Level Descriptors

Students who score PROFICIENCT (level 3) on EOG can...
• Add and subtract any combination of fractions to solve relevant problems. • Multiply and divide any combination of whole numbers, fractions, and mixed numbers to solve and interpret relevant problems. • Perform operations with multi-digit decimal numbers to solve relevant problems.

Key Vocabulary

• Difference • Dividend • Divisor	• Factor Measurement Model of Division • Multiple	• Partitive Model of Divisions Product • Quotient	• Reciprocal • Subtrahend • Sum

Key Concepts and Skills

Key Concept/Skill	Recommended Strategies and Supports
Addition and Subtraction of Fractions	• Students may solve problems in different ways and have the flexibility to choose a mathematical strategy that allows them to make sense of and strategically solve problems using efficient methods that are most. • Double-number line or fraction bars best methods to model fractions. • Digital options such as Polypad, GeoGebra, Toy Theater, Didax, Math Learning Center
Multiplication and Division of Whole Numbers, Fractions, & Mixed Numbers	• Multiplication of fractions is really about scaling. This scaling concept can enhance students' ability to decide whether their answers are reasonable. • Students should be able to use a variety of part-whole strategies to compute efficiently (area model, partial product, partial quotient). • The part-whole strategies used should be flexible and extend from previous computation strategies and future work with computation. • Students should be able to utilize fractions with denominators including 2, 3, 4, 5, 6, 8, 10, and 12. • Hands2Mind video multiplying fractions using a grid. • PhET Simulation Area Model for decimals • Hands2Mind video dividing fractions using equivalency cubes. • Use area models and common denominator for dividing.
Student-Select Strategies for Operations with Multi-digit Decimals	• Fluency with a strategy denotes an ability that is efficient, accurate, appropriate and flexible. • Opportunities to determine when to use paper-pencil algorithms, mental math, or a computing tool are also necessary and should be provided in problem solving situations. • Computation with fractions is best understood when it builds upon the familiar understandings of whole numbers and is paired with visual representations such as decimal grids and base ten blocks.

MATHEMATICS

6.NR.1 CCC Support

Vertical Alignment

5th Grade	7th Grade
5.NR.3.3 Model and solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators. **5.NR.3.4** Model and solve problems involving multiplication of a fraction and a whole number. **5.NR.3.6** Model and solve problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. **5.NR.4.4** Solve problems involving addition and subtraction of decimal numbers to the hundredths place using a variety of strategies.	**7.NR.1** Solve relevant, mathematical problems, including multi-step problems, involving the four operations with rational numbers and quantities in any form (integers, percentages, fractions, and decimal numbers).

CCC Question 1: What is it we expect students to learn?

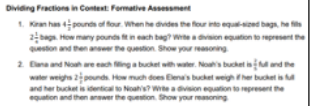
When reviewing expectations, it's important to consider the priority standard, learning objectives, evidence of student learning, and supporting teacher resources to get a full picture of what we want our students to learn. Click here to access the entire standards document. *Georgia Testing Desmos Calculators:* Four Function and Scientific. Grade 6 Formula Sheet.

CCC Question 2: How will we know when they have learned it?

Unit Assessments are in Unit Resources in CTLS. (2.01-2.02 PDF versions).

From the GaDOE Online Assessment Guide Grade 6, Unit 2, Question 10.
Keisha makes individual servings of nuts by dividing 4 ½ cups of nuts into induvial 3/8 cup servings. How many individual servings can Keisha make?

Evidence of Student Success can be found in each State Learning Plan. Example. Modeling with Fraction Division.


Dividing Fractions in Context: Formative Assessment

1. Kiran has 4 1/2 pounds of flour. When he divides the flour into equal-sized bags, he fills 2 1/2 bags. How many pounds fit in each bag? Write a division equation to represent the question and then answer the question. Show your reasoning.
2. Elena and Noah are each filling a bucket with water. Noah's bucket is 1/4 full and the water weighs 2 1/2 pounds. How much does Elena's bucket weigh if her bucket is full and her bucket is identical to Noah's? Write a division equation to represent the equation and then answer the question. Show your reasoning.

CCC Question 3: How will we respond when they don't learn?

Standard	*Learning Objectives*	*Name of Intervention Task/Activity*	*Skills Addressed*
6.NR.1	*6.NR.1.1*	*Addition, Subtraction, and Equivalent Fractions*	*Use a range of additive and simple multiplicative strategies with whole numbers, fractions, decimals, and percentages*
	6.NR.1.3	*Adding in Parts*	

Intervention Tasks provided by GaDOE p. 30

CCC Question 4: How will we respond when they already know it?

- *Interdisciplinary Connections Unit 2 "The Cost of Protecting Our Environment"*
  Overview: Students will explore three types of environmental issues (acid rain, air pollution, and nuclear disaster) and calculate the financial impact on human-made structures in three locations.
- GaDOE's Assessment Item Bank, Unit 2, Items 3 & 5, DOK 3

Algebra Readiness Connection

This standard supports algebra readiness by strengthening students' numerical fluency and problem-solving skills. Mastering operations with fractions, decimals, and mixed numbers ensures students can confidently manipulate quantities, an essential skill for working with algebraic expressions and equations. These foundational arithmetic skills also help students recognize patterns, estimate solutions, and apply logical reasoning, all of which are critical for success in algebra.

MATHEMATICS

- ✓ Vocabulary
- ✓ Key Concepts and Skills
- ✓ Vertical Alignment
- ✓ Resources aligned to 4 CCC questions

LEADERSHIP TASK FORCE

Supporting Impactful Math Instruction

- Take back your sticky notes from the IMPACT letters and move to your Moving the Needle grade-band poster.
  - 3rd Grade
  - 8th Grade
  - Algebra

- Review the components of the Moving the Needle document. Which one could support each of your impactful look-fors?
  - Place each sticky note next to the section that could impact math instruction in your school.

LEAD THE WAY

Leading Impactful Math Instruction

- What is one resource from today that you believe could impact your school's math goal for next year?
- How will you support your math team with using the resource?

LEAD THE WAY

Thank you from the CCSD Math Department!

Thank you for attending our session!

***

Have a great day!

LEAD
THE WAY


LEADERSHIP
TASK FORCE