



## Foundations for *Inspiring Connections* – Day 4

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# Opening

Foundations for *Inspiring Connections* – Day 4



**Door Question:** *If you could have an all-access pass to a musical performer/group, who would you choose?*



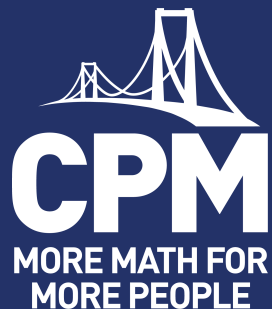
Sign in and share your answer to the Door Question.



Select a playing card and match the number on the card to find your team.

#MoreMath

# Foundations for *Inspiring Connections* – Day 4



Name  
[email@cpm.org](mailto:email@cpm.org)



@CPMEducationalprogram



@CPMmath



@CPMmath

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# Opening

## Housekeeping



- + Feedback
- + Bathrooms
- + 8:00 AM – 4:00 PM
- + Breaks scheduled and as needed
- + Lunch at ~12 PM
- + Parking Lot poster
- + Supply/resource table



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# Opening

## Outcomes



## Participants will...

- + Become familiar with the CPM Mixed, Spaced Practice learning research pillar.
- + Learn how the design of *Inspiring Connections* supports and develops mixed, spaced practice.
- + Explore and experience *Inspiring Connections*.
- + reflect on current practices and assessment beliefs to develop a plan for the implementation of *Inspiring Connections*.

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# Opening

Feedback – Day 3



## Questions and Wonderings...

+ Insert feedback here

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# Opening

## Agenda and Learning Target



- + **Opening & Icebreaker**
- + Research Connections
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing
- + Lunch
- + Assessment
- + Break
- + Chapter Closure
- + W.I.N. Time
- + Closure

**Learning Target:** I can use multiple strategies to get to know my students.

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# Opening

Icebreaker – IC2 Lesson 1.2.7 Closure – Dakabibi



$$\square \left( \square \right) + \square = \square \square$$

## Dakabibi

*A puzzle with a set of numbers and several empty boxes that need to be filled while meeting certain conditions.*

### Your Task:

- + Introduce yourself to your team.
- + Use the digits 0 through 9 to make the equation true.
  - + Each number can only be used once.
- + Share strategies at your team's VNPS.



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# Opening

## Working Agreements



Be willing to take **risks**.

Have a **visionary** mindset.

Stay **engaged**.

Explore and reflect on your **beliefs**.

Give **grace** to others and yourself.

**Change takes time, effort, and support!**

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# Research Connections

## Agenda and Learning Target



- + Opening & Icebreaker
- + **Research Connections**
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing
- + Lunch
- + Assessment
- + Break
- + Chapter Closure
- + W.I.N. Time
- + Closure

### Learning Targets:

- + I can identify an assessment belief that I would like to be more intentional with in my practice.
- + I can explain the role of Mixed, Spaced Practice in the curriculum.

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# Research Connections

## Team Roles



### Assign team roles:

Count the number of letters in your first and last name.

**Representative**

Lowest number of letters

**Investigator**

Second lowest number of letters

**Coordinator**

Third lowest number of letters

**Organizer**

Greatest number of letters

# Research Connections

## Belief Sort



With your team, sort the 12 beliefs on a continuum.

Less Productive

More Productive



### Representative

Ask a team member to read their statement aloud and discuss it as a team.

### Investigator

Get the materials for the sort for your team and deal out the slips to your teammates.

### Coordinator

Ask everyone to justify their reasoning as they place the slips on the continuum.

### Organizer

Write two sticky notes for your spectrum labeled “Less Productive” and “More Productive”.

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# Research Connections

## NCTM's Productive Beliefs about Assessment

**Learning Target:** I can identify a belief that I would like to be more intentional with in my practice.

The primary purpose of assessment is to inform and improve the teaching and learning of mathematics.

Assessment is an ongoing process that is embedded in instruction to support student learning and make adjustments to instruction.

Mathematical understanding and processes can be measured through the use of a variety of assessment strategies and tasks.

Multiple data sources are needed to provide an accurate picture of teacher and student performance.

Assessment is a process that should help students become better judges of their own work, assist them in recognizing high-quality work when they produce it, and support them in using evidence to advance their own learning.

Ongoing review and distributed practice within effective instruction are productive test preparation strategies.

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# Research Connections

## Beliefs about Mathematics Assessment



*“It is important to note that these beliefs should **not be viewed as good or bad**. Instead, beliefs should be understood as **productive** when they **support effective teaching and learning** or **unproductive** when they **limit student access** to important mathematics content and practices.”*

(NCTM, 2014, p. 91)

# Research Connections

## CPM's Guiding Principles



Students deepen their mathematical understanding when they are engaged with concepts over time.



Students have significantly better retention of mathematics when concepts are grounded in context.



Students' involvement in effective study teams increases their ability to learn mathematics.



Effective study teams are guided, supported, and summarized by a reflective, knowledgeable teacher.



Assessing what students understand requires more than one method and more than one opportunity.



When students and stakeholders embrace a growth mindset, they understand that mastery takes time, effort, and support.

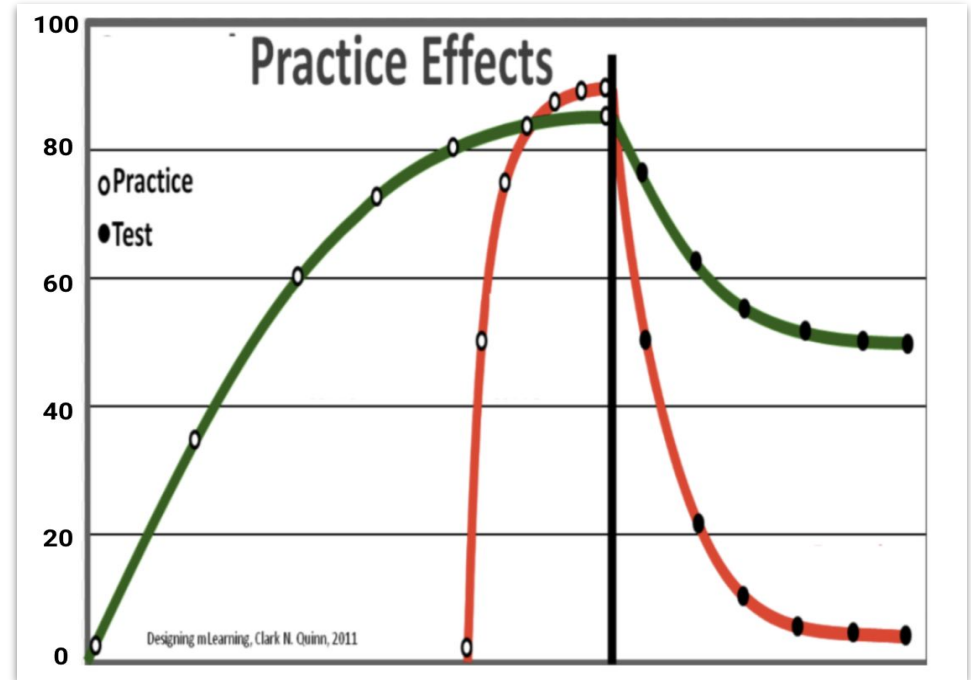
# Research Connections

## Research Connections



### Notice and Wonder

1. What do you notice?  
What do you wonder?  
(30 seconds)
2. Share what you notice  
and wonder with your  
teammates.



Thalheimer, W. (2006, February). *Shaping learning events over time: What researchers say*. A Work-Learning Research Incorporated.



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# Research Connections

## Reading Protocol



## Six-Word Synthesis

While reading the article:

- + Read and markup the text to gain an understanding of the ideas and applications.
- + Synthesize your ideas about the reading into only six words. Your six words could be a sentence, phrase, connection, personal learning, or realization (“aha” moment).
- + Record your six words for presentation to your team.
- + Be prepared to connect your six words to content in the text.

---

# Research Connections

Why?



## Professional Learning Portal:

- + Click on your name dropdown to access **File Cabinet**
- + **Foundations for *Inspiring Connections***
- + **In Person and Days 1-4 Resources**
- + Select **06. Mixed, Spaced Practice Executive Summary.**

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# Research Connections

## Six-Word Synthesis

A digital timer showing 7:00 in white text on a black background with a colorful, abstract pattern.

**Focus** on the **blue boxes**:

*“CPM infers from this research that...”*

While reading the article:

- + **Read** and markup the text to gain an understanding of the concepts.
- + **Synthesize** your ideas into only six words.  
*A sentence, phrase, connection, personal learning, or realization (“aha”).*
- + **Record** your six words to present.
- + **Prepare** to connect your six words to content in the text.



p. 44–45

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# Research Connections

Debrief: Why?



**Share** your six-word synthesis with your team members.

**Representative**

Decide who shares first and make sure everyone has a chance to share.

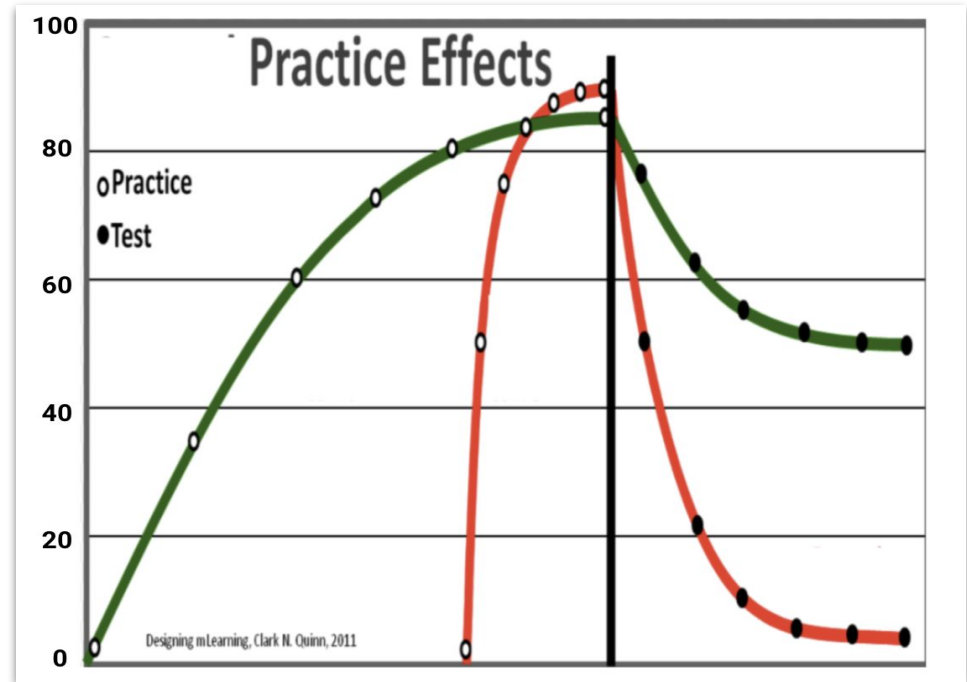
# Research Connections

## Practice Effects



## Think-Pair-Share

In light of the reading, interpret the graph.

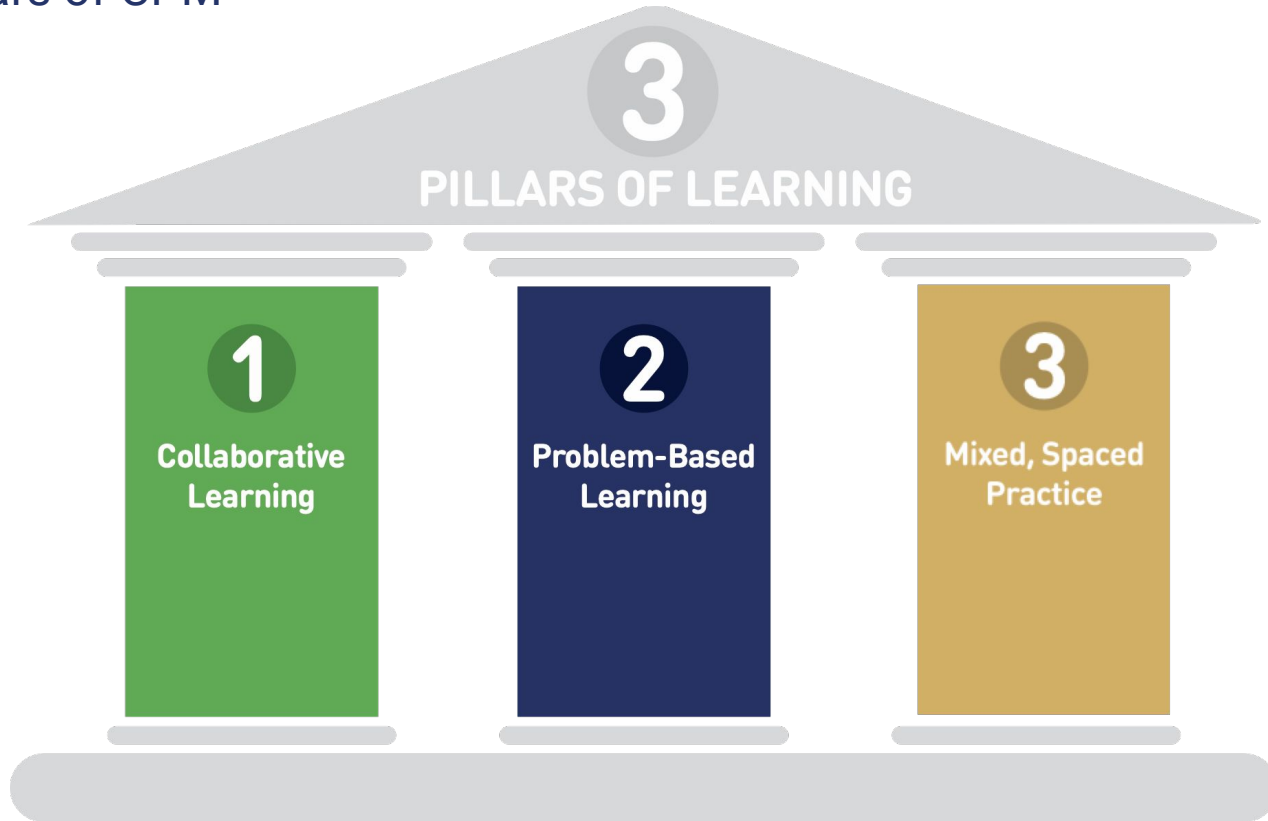


Thalheimer, W. (2006, February). *Shaping learning events over time: What researchers say*. A Work-Learning Research Incorporated.

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# Research Connections

## Three Pillars of CPM



# Research Connections

## CPM Guiding Principles



Students deepen their mathematical understanding when they are engaged with concepts over time.



Students have significantly better retention of mathematics when concepts are grounded in context.



Student's involvement in effective study teams increases their ability to learn mathematics.



Effective study teams are guided, supported and summarized by a reflective knowledgeable teacher.



Assessing what students understand requires more than one opportunity.



When students and stakeholders embrace a growth mindset, they understand that mastery takes time, effort and support.

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# Research Connections

## Embedded Supports



**How** does *Inspiring Connections* support mixed, spaced practice?

**Lesson Launches &  
Chapter Closures**

**Threads  
(Course & Vertical)**

**Reflection & Practice  
Assignments  
(Methods & Meanings)**

**Assessments**

**Reflection & Goal  
Journals**

**Learning Targets  
("I can" statements)**



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# Research Connections

## Intentional Design



### Authors' Vision

*Inspiring Connections* features an intentional design of threads within each course and vertical threads throughout courses.



# Research Connections

## Vertical Threads

**Learning Target:**  
I can explain the role of Mixed, Spaced Practice in the curriculum.

**Inspiring Connections Courses 2 - Topics**

Chapters	Ratios and Proportional Relationships	Expressions and Equations	The Number System	Geometry	Statistics and Probability
1	Proportional Relationships, Proportions & Graphs		Integer Operations		
2			Fraction & Decimal Conversions	Scale Drawings, Cross-Sections	Probability
3	Proportional Relationships				Data & Statistics (Sampling)
4	Unit Rate			Area of a Circle	
5			Integer Operations		Probability
6		Expressions			Statistics
7	Interest, Tax, Tip, Commission, Fees, Percents	Percent Expressions	Absolute Value		
8		Equations, Inequalities	Multiply & Divide Rational Numbers		
9		Equations for Angle Relationships		Angle Relationships in Triangles, Volume & Surface Area	

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**Inspiring Connections Courses 2 - Topics**

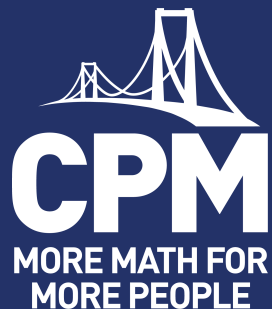
Chapters	Ratios and Proportional Relationships	Expressions and Equations	The Number System	Geometry	Statistics and Probability
1	Proportional Relationships, Proportions & Graphs		Integer Operations		
2			Fraction & Decimal Conversions	Scale Drawings, Cross-Sections	Probability
3	Proportional Relationships				Data & Statistics (Sampling)

*Ongoing review and distributed practice within effective instruction are productive test preparation strategies.*

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Break

**#MoreMath**



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@CPMmath



@CPMmath

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# Team Challenge

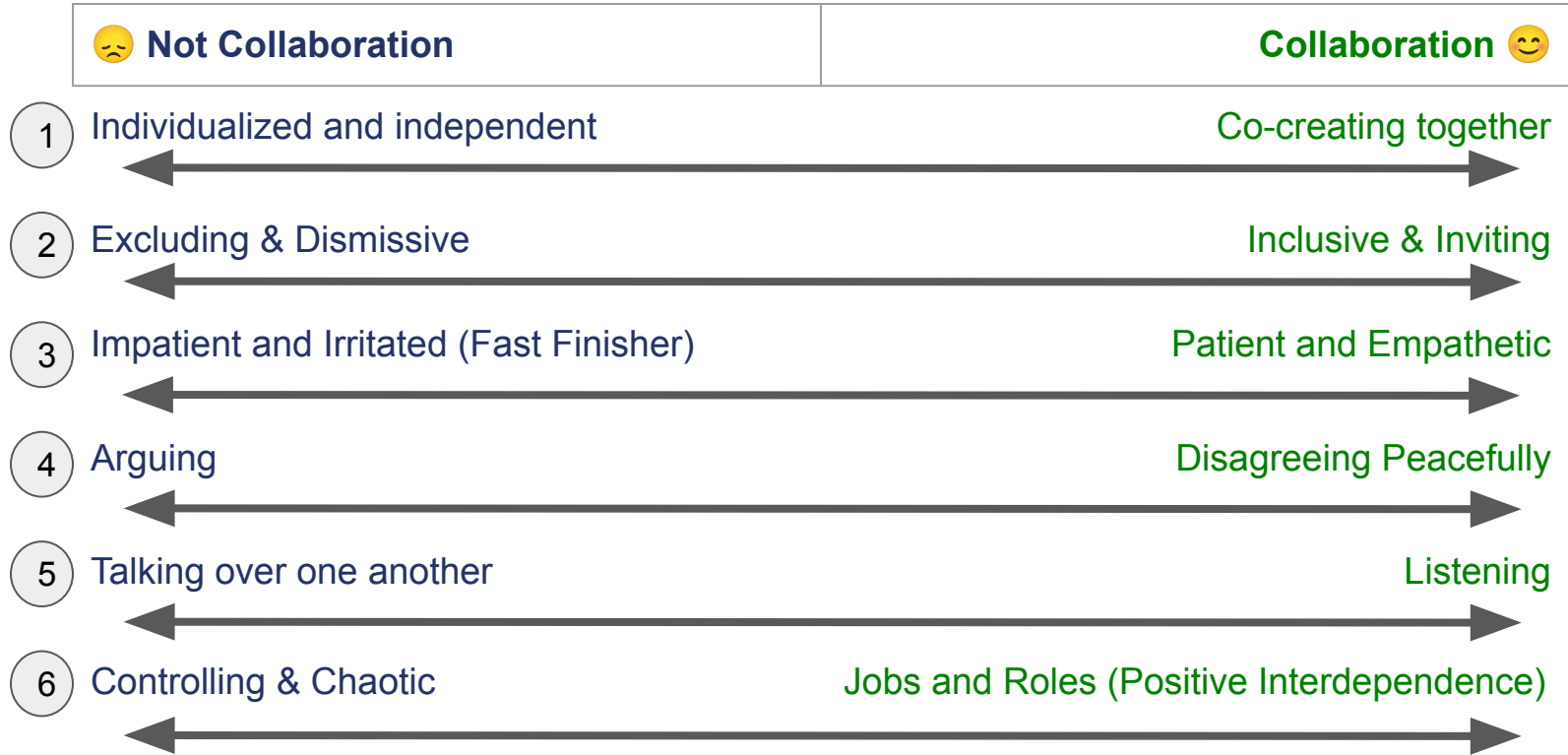
## Agenda and Learning Target



- + Opening & Icebreaker
- + Research Connections
- + Break
- + **Team Challenge**
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing
- + Lunch
- + Assessment
- + Break
- + Chapter Closure
- + W.I.N. Time
- + Closure

**Learning Target:** I can describe the purpose of a team challenge.

# Team Spotlight



# Team Challenge

## IC1 Chapter 2 Team Challenge



Proficient		Not Yet Proficient	
Thorough	Fundamental	Developing	Emerging
Shows thorough understanding and use of the central mathematical concept(s).	Shows fundamental understanding and use of the central mathematical concept(s).	Shows developing understanding and use of the central mathematical concept(s).	Shows emerging understanding or use of the central mathematical concept(s).
Communicates thinking, reasoning, and justification clearly and concisely.	Communicates thinking, reasoning, and justification sufficiently.	Thinking, reasoning, and justification may be incomplete, misdirected, and/or not clearly presented.	Thinking, reasoning, and justification is absent or barely comprehensible.
Fully accomplishes the purpose of the task.	Adequately accomplishes the purpose of the task.	Partially accomplishes the purpose of the task.	Makes little to no progress toward accomplishing the purpose of the task.

*Mathematical understanding and processes can be measured through the use of a variety of assessment strategies and tasks.*



p. 46

# Team Challenge

## Authors' Vision



## Authors' Vision

*Inspiring Connections* incorporates Team Challenges.



**two to four rich problems**

**fun and engaging**

**assess mathematical knowledge, problem-solving, perseverance, willingness to take risks, & collaboration**

---

# Team Challenge

## Things to Discuss...

### Learning Target:

I can describe the purpose of a team challenge.



*How did you feel about your Team Challenge experience?*



*How will you honor that team challenges are intended for formative assessment and providing feedback on the SMPs?*



*How do you envision facilitating Team Challenges?*



Add questions, comments, good ideas to share, and burning issues to the Parking Lot.



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# Algebra Tiles

## Agenda and Learning Target



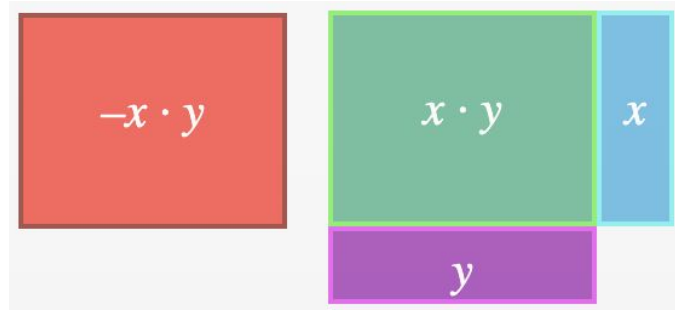
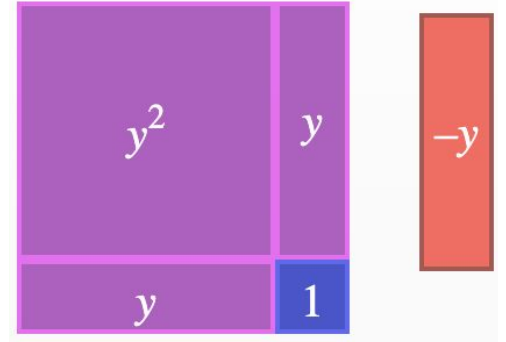
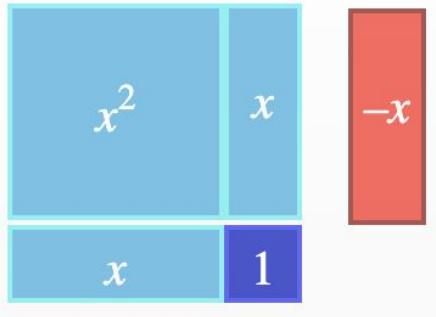
- . Opening & Icebreaker
- . Research Connections
- . Break
- . Team Challenge
- . **Algebra Tiles**
- . Walkthrough & Planning
- . Digital Platform: Pacing
- . Lunch
- . Assessment
- . Break
- . Chapter Closure
- . W.I.N. Time
- . Closure

### Learning Target:

- + I can use Algebra Tiles to compare expressions and solve equations.

# Algebra Tiles

## Naming of the Tiles



# Algebra Tiles









## Expression Mat – Building with Opposite Space



One expression mat, two regions

Value  $-3$  can be shown  
many different ways

Expression Mat

+			
	The tile's value is what you see		
			
	-----		
			
	The tile's value is the OPPOSITE of what you see		
-			

---

# Algebra Tiles

## Building with Opposite Space, Practice 1



**Use** the Expression Mat to **create** a representation of the following expressions with algebra tiles. Make sure that each member of the team has a **different** representation.

$$-3x + 4$$

$$5x - (3 - 2x)$$

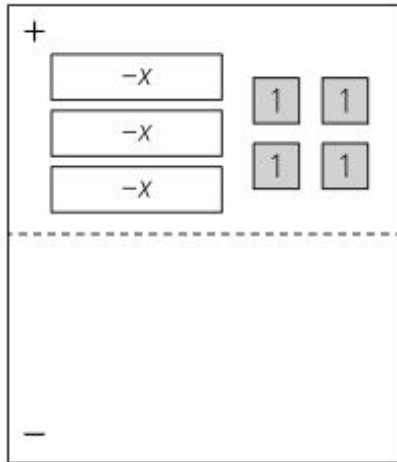
# Algebra Tiles

## Expression Mat – Building with Opposite Space, Practice 2

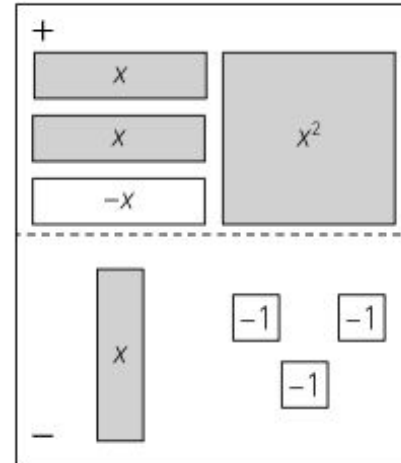


Write an algebraic expression for each representation below.

a)



b)



# Algebra Tiles

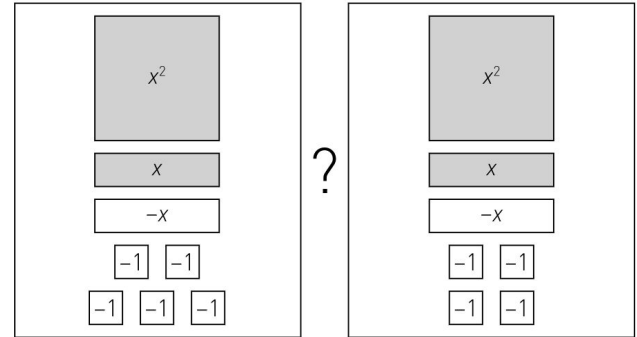
## Comparison Mats, Practice



As a team, complete:

**IC2: Lesson 8.2.1, Problem 8-49**

**IC3: Lesson 3.2.2, Problem 3-37**

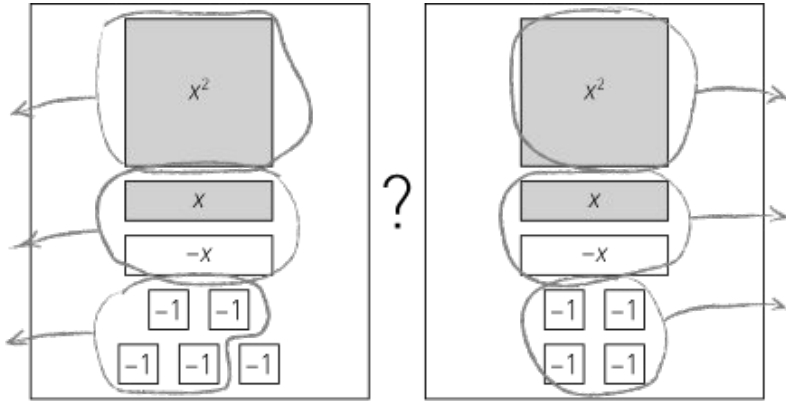


# Algebra Tiles

## Comparisons Mat



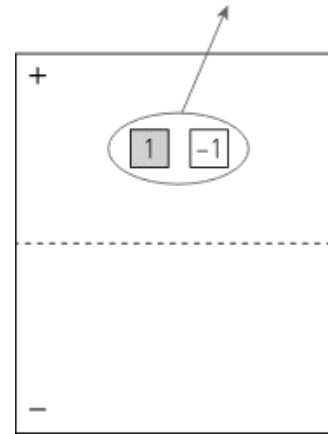
**IC2**



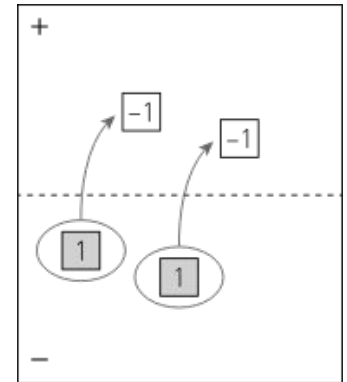
Removing Zeros

Removing Balanced Sets

**IC3**



Zero Pairs



Flip

---

# Algebra Tiles

Comparison Mats, Practice



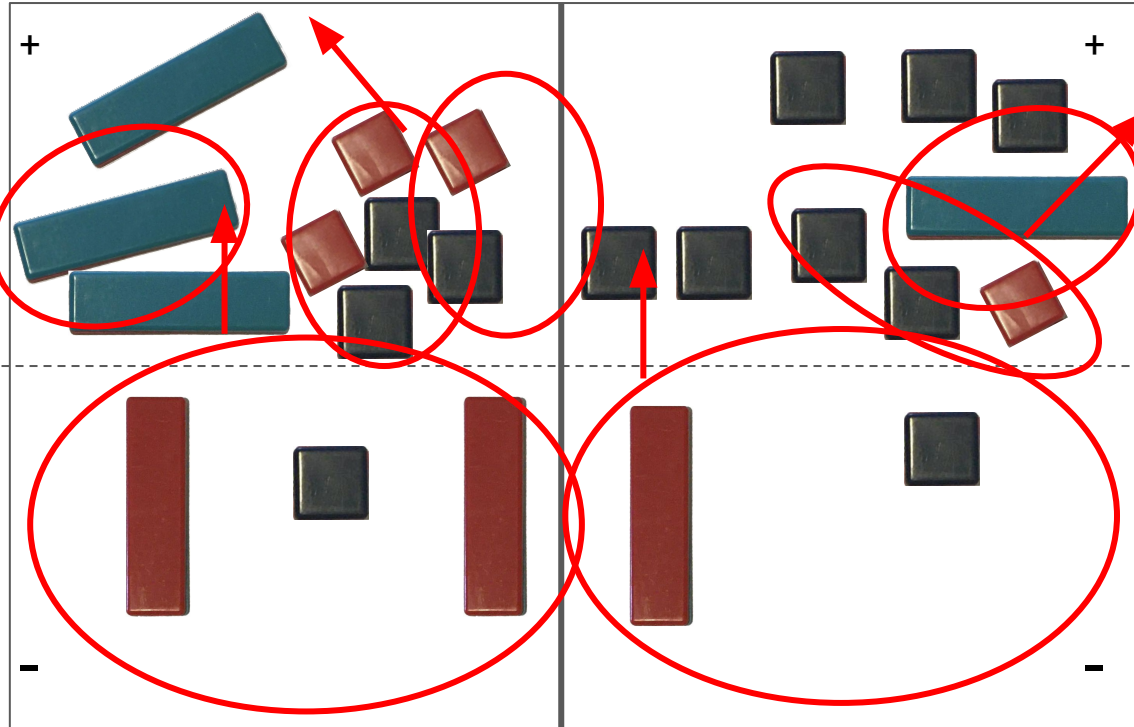
**As a team, complete:**

IC3: Lesson 3.2.3  
Problem 3-45a



# Algebra Tiles

## Equation Mats – Solving Equations



Move	Equation
	$x - 2 + 1 - (-2x + 1) = 5 - (-x + 1)$
<b>Distribute the Negative</b>	$x - 2 + 1 + 2x - 1 = 5 + x - 1$
<b>Remove Zero Pairs</b>	$x + 2x - 2 = 4 + x$
<b>Remove Balanced Sets</b>	$2x - 2 = 4$
<b>Add equal amounts, remove zero pairs</b>	$2x = 6$
<b>Divide into equal amounts</b>	<b><math>x = 3</math></b>

---

# Algebra Tiles

## Reflection Journal



Reflect on the Algebra Tile Thread by **completing** a 3-2-1 entry.

*3 things that I learned*  
*2 connections to my curriculum*  
*1 question I still have*



**Standards for Mathematical Practice:** Use appropriate tools strategically.

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# Walkthrough & Planning

## Agenda and Learning Target



- . Opening & Icebreaker
- . Research Connections
- . Break
- . Team Challenge
- . Algebra Tiles
- . **Walkthrough & Planning**
- . Digital Platform: Pacing
- . Lunch
- . Assessment
- . Break
- . Chapter Closure
- . W.I.N. Time
- . Closure

### Learning Targets:

- + I can experience and explain the development of classroom community and mathematics content in my course.
- + I can identify Mixed, Spaced Practice in the curriculum.



## Choose one of the following options:

### **Continue the walkthrough.**

- + Complete as many of the Chapter 1 activities as possible.
- + *What student responses might you expect?*

### **Begin planning for the school year.**

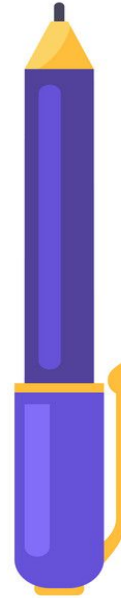
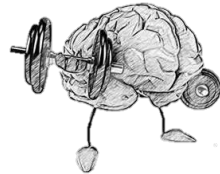
- + *What things might you need to consider when preparing to teach an Inspiring Connections lesson?*
- + *What might a daily checklist or routine look like for you?*

---

# Walkthrough & Planning

## Brain Break

1. Stand up and get a pen or pencil.
2. Take the pen(cil) and flip it 360°, end to end.
3. Now do the same thing with your other hand.
4. Next, get another pen(cil) and flip with both hands.
5. If you can do that, then throw both pen(cil)s up and catch them with the opposite hand.



---

# Walkthrough & Planning

## Reflection



### Learning Targets:

I can experience and explain the development of classroom community and mathematics content in my course.

I can navigate the curriculum materials.



**Share Around:** Share one thing you noticed or wondered.



*Add questions, comments, good ideas to share, and burning issues to the Parking Lot!*

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# Digital Platform: Pacing

## Agenda and Learning Target



- + Opening & Icebreaker
- + Research Connections
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + **Digital Platform: Pacing**
- + Lunch
- + Assessment
- + Break
- + Chapter Closure
- + W.I.N. Time
- + Closure

**Learning Target:** I can pace a lesson in the Digital Platform.

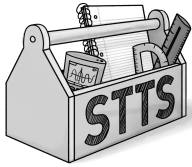
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# Digital Platform: Pacing

Features of *Inspiring Connections*



*What do you already know about the Digital Platform?*



## Partner: Turn & Talk

- + **Individually:** Consider the Digital Platform.
- + **Partner:** Discuss the features of the Digital Platform.



---

# Digital Platform: Pacing

## Features of *Inspiring Connections*



### Your Task:

Select a lesson from right with your elbow partner.

1. Review the lesson using the student view.
2. Review the Lesson at a Glance.
3. Complete the lesson as a student. (*Previously completed.*)
4. Read the Authors' Vision. **Note pacing suggestions.**

When prompted, check with your elbow partner to verify pacing.

*IC1*

Lesson 1.1.4

*IC2*

Lesson 1.1.2

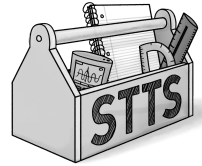
*IC3*

Lesson 1.1.4

---

# Digital Platform: Pacing

Features of *Inspiring Connections*



## Red Light, Green Light

### Learning Target:

I can pace a lesson in the Digital Platform.

### Your Task:

1. Participant 1: Login as the teacher to practice pacing.
2. Participant 2: Login as the teacher's student to experience the learner-facing lens.
3. Switch roles and repeat the process.

*IC1*

Lesson 1.1.4

*IC2*

Lesson 1.1.2

*IC3*

Lesson 1.1.4

# Digital Platform

## Pacing Practice Access – Login Information



1. [my.cpm.org](https://my.cpm.org)
2. [cpmplteacher#@cpm.org](mailto:cpmplteacher#@cpm.org)  
+ Assigned Number: 1-16
3. Password: CPMpl###



1. [my.cpm.org](https://my.cpm.org)
2. [plstudent#@cpm.org](mailto:plstudent#@cpm.org)  
+ Assigned Number: 1-16  
+ IC1: 1/2/3 IC2: 4/5/6 IC3: 7/8/9
3. Password: CPMpl###



- + Register and get a 20% off code for online purchases.
- + Enter to win a reusable flipchart! A winner will be drawn after every 20 entries!



Go to [wipebook.com/cpm](https://wipebook.com/cpm)

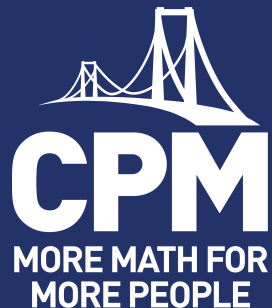
<input type="text" value="Work Email"/>	
<input type="text" value="First Name"/>	<input type="text" value="Last Name"/>
<input type="text" value="Select Job"/>	<input type="button" value="ENTER"/>

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# Lunch

**#MoreMath**

- + Move into your new Visibly Random Teams
- + Please return by



@CPMeducationalprogram



@CPMmath




@CPMmath

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# Welcome Back!




## Check out dakabibi.org



Excite your brain with daily math puzzles!

by: [CPM Educational Program](#)



### Today's Puzzle

Use the tiles to create the smallest value possible.

$$\left( \square - \square \square \right) \cdot \square + \frac{\square}{\square}$$

Options:

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Check

---

# Assessment

## Agenda and Learning Target



- + Opening & Icebreaker
- + Research Connections
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing

- + Lunch
- + **Assessment**
- + Break
- + Chapter Closure
- + W.I.N. Time
- + Closure

**Learning Target:** I can access *Inspiring Connections* resources that support Mixed, Spaced Practice.

# Assessment

## CPM's Guiding Principles



Students deepen their mathematical understanding when they are engaged with concepts over time.



Students have significantly better retention of mathematics when concepts are grounded in context.



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Effective study teams are guided, supported, and summarized by a reflective, knowledgeable teacher.



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# Assessment

## IC Chapter 2 Test









 **Course Overview**

 **Teacher Materials**

 **Sample Assessments**

Course ▾ Chapter 2 ▾ Version ▾ Individual Test ▾ [Reset Filters](#)

IC1	Chapter 2	Student	Individual Test	
IC1	Chapter 2	Teacher	Individual Test	
IC2	Chapter 2	Student	Individual Test	
IC2	Chapter 2	Teacher	Individual Test	
IC3	Chapter 2	Student	Individual Test	
IC3	Chapter 2	Teacher	Individual Test	

# Assessment

## Individual Test



## Think-Ink-Share: What do you *notice*? What do you *wonder*?

**Chapter 2 Individual Test** Inspiring Connections Course 1

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

Read everything carefully. After completing a problem, fill in the face to reflect your confidence level. The rubric below will be used to assess your level of understanding.

**Level of Understanding**

Proficient		Not Yet Proficient	
Thorough	Fundamental	Developing	Emerging
Shows thorough understanding and use of the central mathematical concept(s).	Shows fundamental understanding and use of the central mathematical concept(s).	Shows developing understanding and use of the central mathematical concept(s).	Shows emerging understanding or use of the central mathematical concept(s).
Communicates thinking, reasoning, and justification clearly and concisely.	Communicates thinking, reasoning, and justification sufficiently.	Thinking, reasoning, and justification may be incomplete, misdirected, and/or not clearly presented.	Thinking, reasoning, and justification is absent or barely comprehensible.
Fully accomplishes the purpose of the task.	Adequately accomplishes the purpose of the task.	Partially accomplishes the purpose of the task.	Makes little to no progress toward accomplishing the purpose of the task.

**Teacher Feedback**

Cluster	Feedback and Next Steps
6.G.A Solve real-world and mathematical problems involving area, surface area, and volume. (from Chapter 1)	
6.EEA Apply and extend previous understandings of arithmetic to algebraic expressions. (from Chapter 1)	
6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples. (from Chapter 1)	
6.RPA Understand ratio concepts and use ratio reasoning to solve problems. (from Chapter 2)	

6.G.A Solve real-world and mathematical problems involving area, surface area, and volume. (from Chapter 1)

1. What is the area of the shape shown? Show and explain how you got your answer.

# Assessment

## Individual Test



All sample tests are based on the CPM philosophy that students should not be assessed until after they have had time to meaningfully engage with the material in both the lessons and in the Reflection & Practice. The table below shows where the concepts on this sample test were introduced and practiced. You know what concepts your students have meaningfully engaged with and may now be ready to be assessed on. If you choose to create your own test rather than use this sample test, making a similar table can help you decide what types of problems you should include.

Test Question	Cluster	Concept Introduced	Engagement of Concept in Reflection & Practice
1	RPA	Lesson 2.2.2	Problems 2-38, 2-39, 2-46, 2-64, 2-71, 2-83, 2-101, CU 2-113, 3-7, 3-66, 4-61, 4-78, 4-102
2	RPA	Lesson 4.3.2	Problems 4-86, 4-87, 4-95, 4-102, 4-103, 4-110, 5-45, 5-97, 5-118, CL 5-131, 6-32, 6-89, CU 6-118
3	NS.C	Lesson 3.4.1	Problems 3-119, 3-120, 3-127, 3-128, 3-134, 3-135, 4-8, 4-18, 4-47, 4-71, 4-97, CU 4-120, CU 4-121, 5-27, 5-34, 5-69, 5-81, 5-98
4	NS.C	Lesson 3.4.2	Problems 3-128, 3-134, 3-135, 4-8, 4-18, 4-47, 4-71, 4-82, 4-97, CU 4-120, CU 4-121, 5-27, 5-34, 5-69, 5-81, 5-98, CU 5-128
5	G.A	Lesson 1.2.4	Problems 1-81, 1-93, 2-19, 2-56, 2-74, CU 2-106, 4-46, 4-82
6	G.A	Lesson 5.2.5	Problems 5-77, 5-78, 5-88, 5-95, 5-96, 5-107, 5-117, CU 5-137
7	SPA	Lesson 1.1.3	Problems 1-39, 1-40, 1-41, 1-49, 1-58, 1-66, 1-116, CU 1-125, CU 1-126, 2-22, CU 3-139, 5-17, 5-31, 5-44, 5-62, 5-115, CU 5-134
8	SPA	Lesson 3.1.3	Problems 3-6, 3-55, 3-75, CU 3-140, 4-62, 5-32, 5-80, CU 5-134

## Potential Notices:

- + Rubric
- + Feedback and Next Steps
- + Clusters
- + Standards (NS, EE, etc...)
- + Table of Topic Introduction
- + Self-Assessment
- + Notes to Teacher

---

# Assessment

## Teacher Tips for Assessment



Complete the assessment before beginning the chapter.

Assessments should focus on the big ideas not all the ideas.

Assessments should be flexible.

Assessments should balance skills with problem solving.

Assessments should honor that mastery takes time, effort, and support.

# Assessment

## Individual Test – Mixed, Spaced Practice



Sample Assessment Cluster Overview

	Ratios and Proportional Relationships	The Number System			Expressions and Equations			Geometry	Statistics and Probability	
	6.RP.A	6.NS.A	6.NS.B	6.NS.C	6.EE.A	6.EE.B	6.EE.C	6.G.A	6.SP.A	6.SP.B
Chapter 1			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Chapter 2	<input checked="" type="checkbox"/>		✓		✓			✓		
Chapter 3	✓			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	✓
Chapter 4	<input checked="" type="checkbox"/>		✓	✓	✓					
Chapter 5	✓			✓				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Chapter 6	✓		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			✓		
Chapter 7		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		✓				✓	✓
Chapter 8		✓	✓		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Chapter 9	<input checked="" type="checkbox"/>			✓	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Chapter 10				<input checked="" type="checkbox"/>		✓	✓	<input checked="" type="checkbox"/>		<input type="checkbox"/>

= Cluster is covered in chapter

✓ = Cluster appears on assessment

*Multiple data sources are needed to provide an accurate picture of teacher and student performance.*

– NCTM’s Productive Assessment Beliefs

# Assessment

## Jigsaw and Stop & Scan



**Reflection &  
Practice**  
MNB

**Assessment  
Clusters**  
Course Overview  
(Level of  
Proficiency)

**Learning  
Targets**  
MNB

**Reflection &  
Goal Journals**  
MNB

### **Your Task (4 min):**

- + Examine your assigned topic.
- + *How does this resource connect to Mixed, Spaced Practice and the Assessment Beliefs?*

### **Team Task (10 min):**

- + Share your answer at your team's VNPS.
- + Stop & Scan other teams' VNPSs.
- + Add to your Participant Notebook.

---

# Assessment

## Self-Assessment



## Authors' Vision

*Inspiring Connections* features many opportunities for students to self-assess.

**Assessment**  
**Reflection & Practice**  
**Learning Targets**  
**Reflection & Goal Journals**  
**Assessment Clusters**  
**Others...**



---

# Assessment

## Reflection

### Learning Target:

I can access IC resources that support Mixed, Spaced Practice.

*What do you want to remember about...*

- + **Reflection & Practice**
- + **Individual Assessments**
- + **Reflection & Goal Journals**
- + **Learning Targets**

*How does \_\_\_\_\_ connect to Mixed, Spaced Practice?*



p.51

*Add questions, comments, good ideas to share, and burning issues to the Parking Lot!*



---

# Assessment

## Self-Assessment



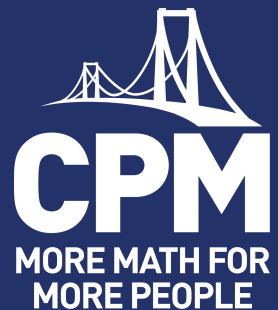
*Assessment is a process that should help students become better judges of their own work, assist them in recognizing high-quality work when they produce it, and support them in using evidence to advance their own learning.*

– NCTM's Productive Assessment Beliefs

---

Break

**#MoreMath**



@CPMeducationalprogram



@CPMmath



@CPMmath

---

# Chapter Closure

## Agenda and Learning Target



- + Opening & Icebreaker
- + Research Connections
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing
- + Lunch
- + Assessment
- + Break
- + **Chapter Closure**
- + W.I.N. Time
- + Closure

**Learning Target:** I can describe the four types of Chapter Closure.

# Chapter Closure

## Mathematician's Notebook



**Your Task:** Explore the Chapter Closure section of the Mathematician's Notebook.

### Chapter 1 Vocabulary

Area	Histogram
Data	Perimeter
Dimensions	Polygon
Difference	Product
Dot plot	Quotient
Equation	Sum
Expression	Term
Factor	

122 Chapter 1 Mathematician's Notebook, Inspiring Connections, Course 1

### Chapter 1 Closure

The last section of each chapter is a Chapter Closure. This section gives you the chance to reflect on the chapter, summarize your learning, and make mathematical and real-world connections. There are four options in each Chapter Closure. Your teacher will let you know which option(s) you are using to close the chapter.

---

#### Making Connections

#### Checking Understanding

---

#### Summarizing Learning

#### Considering Perspectives

Mathematician's Notebook, Inspiring Connections, Course 1 Chapter 1 123

*What do you notice?*



*What do you wonder?*

# Chapter Closure

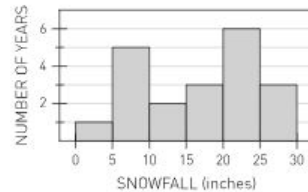
## Authors' Vision



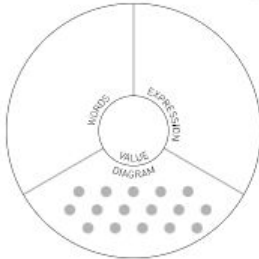
### Making Connections



### Checking Understanding



### Summarizing Learning



### Considering Perspectives



**Consolidate knowledge, connect ideas, and make extensions.**

**Reflect on understanding and identify areas to continue to work on.**

# Chapter Closure

## IC2 Chapter 2 Closure: Launch



### Your Task:

Independently consider the student work.

- + What does this student know?
- + What mistake is this student making?

CONVERT IT!

$$\frac{7}{12}$$

DECIMAL

$$\begin{array}{r} 1.7143 \\ 7 \overline{)12.0000} \\ \underline{-7} \phantom{0000} \\ 50 \phantom{00} \\ \underline{-49} \phantom{00} \\ 10 \phantom{00} \\ \underline{-7} \phantom{00} \\ 30 \phantom{0} \\ \underline{-28} \phantom{0} \\ 20 \phantom{0} \\ \underline{-21} \phantom{0} \\ 0 \end{array}$$

# Chapter Closure

## IC2 Chapter 2 Closure



### Carousel

- + Read the summary page.
- + Complete items on the Team Task page.

**Coordinator**

Keep track of time.



**Making Connections**

**Considering Perspectives**

**Checking Understanding**

**Summarizing Learning**

# Chapter Closure

## IC2 Chapter 2 Closure



### Closure



Go to the Reflection Journal titled “Chapter 2 Closure: Math Class Experiences” in your Mathematician’s Notebook. Read the prompt and write a response.



### Reflection and Practice

The end of a chapter is a good time to reflect on what you have accomplished so far. Take some time now to review your progress on the Chapter 2 Learning Targets listed at the beginning of the chapter. Then use the following table to support your learning.

Closure Problem (Cluster)	Learning Targets	Need Help?	More Practice
CU 2-136 CU 2-137 (R.P.A)	I can reason proportionally.  I can use proportions to convert between different scale factors.	<ul style="list-style-type: none"><li>• <a href="#">Lesson 1.1.4</a></li><li>• <a href="#">Lesson 2.3.5</a></li><li>• <a href="#">Solving Proportions Methods &amp; Meanings (2.4.1)</a></li></ul>	<ul style="list-style-type: none"><li>• Problems <a href="#">1-35</a>, <a href="#">1-36</a>, <a href="#">1-115</a>, <a href="#">1-122</a>, <a href="#">1-136</a>, <a href="#">2-9</a>, <a href="#">2-20</a>, <a href="#">2-110</a>, <a href="#">2-111</a></li></ul>
CU 2-138 CU 2-139 (N.S.A)	I can convert rational numbers to decimals and determine if the decimals terminate or repeat.	<ul style="list-style-type: none"><li>• <a href="#">Lesson 2.1.1</a></li><li>• <a href="#">Lesson 2.1.2</a></li></ul>	<ul style="list-style-type: none"><li>• Problems <a href="#">2-7</a>, <a href="#">2-8</a>, <a href="#">2-17</a>, <a href="#">2-18</a>, <a href="#">2-29</a>, <a href="#">2-49</a>, <a href="#">2-102</a></li></ul>



---

# Chapter Closure

## Reflection

### Learning Target:

I can describe the four types of Chapter Closure.

*What do you want to remember about the **Chapter Closures**?*

*How do **Chapter Closures** connect to Mixed, Spaced Practice?*



**p. 52–53**

*Add questions, comments, good ideas to share, and burning issues to the Parking Lot!*

---

# W.I.N. Time

## Agenda and Learning Target



- . Opening & Icebreaker
- . Research Connections
- . Break
- . Team Challenge
- . Algebra Tiles
- . Walkthrough & Planning
- . Digital Platform: Pacing
- . Lunch
- . Assessment
- . Break
- . Chapter Closure
- . **W.I.N. Time**
- . Closure

**Learning Target:** I can prepare for the start of my school year.

---

# W.I.N. Time

“What I Need” Choice



## Your Task

Prepare for the school year by focusing on any of the following.

## Planning

Lesson · Chapter · Course Planning  
Timeline · Materials · Chapter Closures

## Course Overview

- + Classroom Resources
- + Assessments & Rubrics
- + Scavenger Hunt

# W.I.N. Time

## Forum Settings



Search, Notifications, Messages, Profile

- Profile
- Learning Log
- File Cabinet
- Action Plans
- My CPM PL Record
- CPM eBooks
- Inspiring Connections
- Participant Handbook
- Preferences**
- Log out

## PREFERENCES

### USER ACCOUNT

- Edit profile
- Forum preferences**
- Calendar preferences
- Message preferences
- Notification preferences

## FORUM PREFERENCES

Email digest type ? Complete (daily email with full posts) ▾

Forum auto-subscribe No: don't automatically subscribe me to forum discussions ▾

Use experimental nested discussion view No ▾

### FORUM TRACKING

Forum tracking No: don't keep track of posts I have seen ▾

When sending forum post notifications ? Do not mark the post as read ▾

---

# Closure

## Agenda and Learning Target



- + Opening & Icebreaker
- + Research Connections
- + Break
- + Team Challenge
- + Algebra Tiles
- + Walkthrough & Planning
- + Digital Platform: Pacing
- + Lunch
- + Assessment
- + Break
- + Chapter Closure
- + W.I.N. Time
- + **Closure**

**Learning Target:** I can reflect on the learning event and plan my next steps for the school year.

---

# Closure

## The Three Pillars of CPM



The three pillars represent researched best practice in math education around which the CPM program is designed.

### Collaborative Learning

Research says students learn ideas more deeply when they discuss ideas with classmates.

Team Roles & Agreements  
Instructional & Language Routines  
Culturally Relevant Pedagogy  
Visibly Random Teams  
VNPS

### Problem-Based Learning

Research says students learn ideas more usefully for other arenas when they learn by attacking problems.

Launch & Closure  
Digital Platform  
Mathematician's Notebook  
VNPS  
Circulation & Questioning


### Mixed, Spaced Practice

Research says students learn ideas more permanently when they are required to engage and re-engage with those ideas for months or even years.

Reflection & Practice  
Vertical Threads  
Assessments  
Reflection & Goal Journals  
Learning Targets

# Closure

## Inspiring Connections Action Plan



Professional I

### DAY FOUR

MIXED, SPACED  
PRACTICE

onal

gist

Podcast

How will you use the resources in *Inspiring Connections* to support mixed, spaced practice?

Consider:

- Beliefs
- Research
- Big ideas
- Vocabulary
- Tools and resources to support you

**Learning Target:** I can reflect on the learning event and plan my next steps for the school year.

---

# Closure

## Give One, Get One



### Directions:

1. Brainstorm three ideas to share about the topic.
2. Identify your partner.
3. Take turns sharing: give one idea to your partner, and get one idea from them.
4. Record a new idea from your partner.
5. Locate a new partner and repeat steps 3 and 4.
6. Report new ideas back to your team and be prepared to share the new ideas with the class.





---

# Closure

## Implementation Action Plan



### Give One, Get One

- + **Find a proximity partner** to share one of the “Action Plans” you intend to implement.
- + **Circulate and exchange** one of your Action Plan items again with a new partner.
- + **Repeat** one last time with a third partner.

---

# Closure

## Implementation Action Plan – Finalize



**Use** the following resources:

- + Reflection Journals
- + Give One, Get One
- + Participant Notebook
- + Teacher Tips



---

# Closure

## Closing Circle



### Round 1:

- + *I am excited about \_\_\_\_\_.*
- + *I am nervous about \_\_\_\_\_.*

### Round 2:

- + *[Name], I appreciate you because \_\_\_\_\_.*
- + *[Name], thank you for \_\_\_\_\_.*
- + *[Name], I noticed \_\_\_\_\_.*
- + *I'd like to celebrate [Name] because \_\_\_\_\_.*



---

# Closure

## Pass It On



### Directions:

1. Your team has an envelope of sentence frames, questions, problems, etc.
2. The first team member selects and reads a prompt from the envelope, shares their response, and passes the paper to the next team member to respond.
3. The next team member responds, and passes the paper to the next teammate. Repeat until all teammates have responded to the same prompt.
4. Repeat the process again with a new prompt, beginning with a new team member each time.



# Closure

## Pass It On



## Pass It On

**Investigator**

**Get** the Pass It On envelope

**Organizer**

You are the first to **read** a prompt.

# Closure

## CPM Guiding Principles



Students deepen their mathematical understanding when they are engaged with concepts over time.



Students have significantly better retention of mathematics when concepts are grounded in context.



Student's involvement in effective study teams increases their ability to learn mathematics.



Effective study teams are guided, supported and summarized by a reflective knowledgeable teacher.



Assessing what students understand requires more than one opportunity.



When students and stakeholders embrace a growth mindset, they understand that mastery takes time, effort and support.

# Closure

## Embedded Supports



Ambassador	Go Chat	Pass It On	Stop and Scan	Stronger & Clearer
Board Report	Huddle	Pick Three	Swapmeet	Collect & Display
Carousel	Jigsaw	Quick Pitch	Talk-Write-Discuss	Critique, Correct, Clarify
Dyad	Learning Ladder	Reciprocal Teaching	Teammates Consult	Information Gap
Exhibit Visit	Listening Post	Red Light, Green Light	Team Spotlight	Co-Craft Questions
Fishbowl	Numbered Heads	Relay	Think-Ink-Pair-Share	Three Reads
Give One, Get One	Pairs Check	Share Around	Visibly Random Teams	Compare & Connect
Glow and Grow	Partner	Silent Debate		Discussion Supports

---

# Closure

## Outcomes



Together we have had the opportunity to...

- + Become familiar with the CPM Mixed, Spaced Practice learning research pillar.
- + Learn how the design of *Inspiring Connections* supports and develops mixed, spaced practice.
- + Explore and experience *Inspiring Connections*.
- + reflect on current practices and assessment beliefs to develop a plan for the implementation of *Inspiring Connections*.

### Learning Event Feedback:

1. Open up the learning event module.
2. Scroll down to Event Attendance and Feedback.
3. Open Day 4 Feedback.
4. Complete the Feedback form.



---

# Closure



- + **Parking Lot**
- + **Attendance**
  - Enter passcode in the PL Portal  
**XXXXXX**
- + **Before Next Session:**
  - Complete lessons from a student's perspective.
  - Read the Authors' Vision to guide your lesson planning.
  - Refer back to your notes from this week.
  - Reach out with struggles, concerns, or questions.



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- <https://bsky.app/profile/cpmmath.bsky.social>