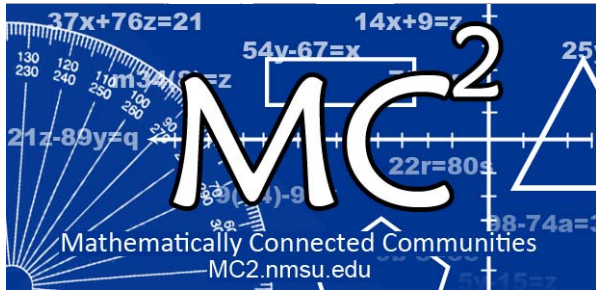


**March 2015  
Webinar**

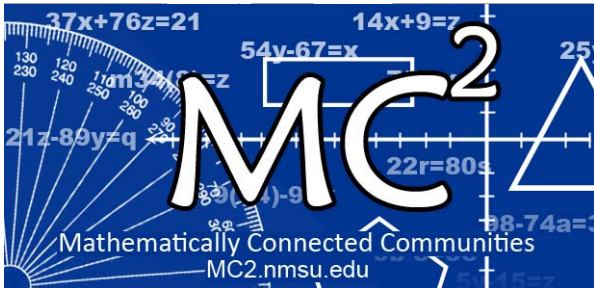
**Count Down to**

**PARCC**  
Partnership for Assessment of  
Readiness for College and Careers



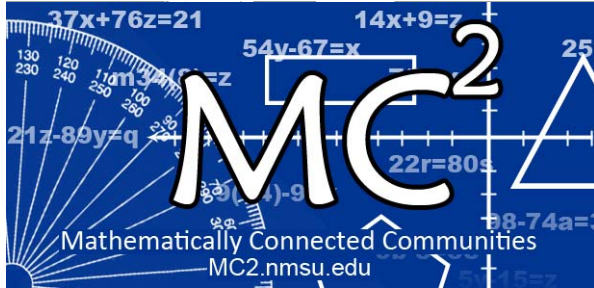
# Tips for Today's Presentation

- This webinar has been previously recorded.
- You will not be able to speak to the presenter at this time or use the Q & A feature.
- If the presentation does not display correctly, be sure to view in full screen mode.



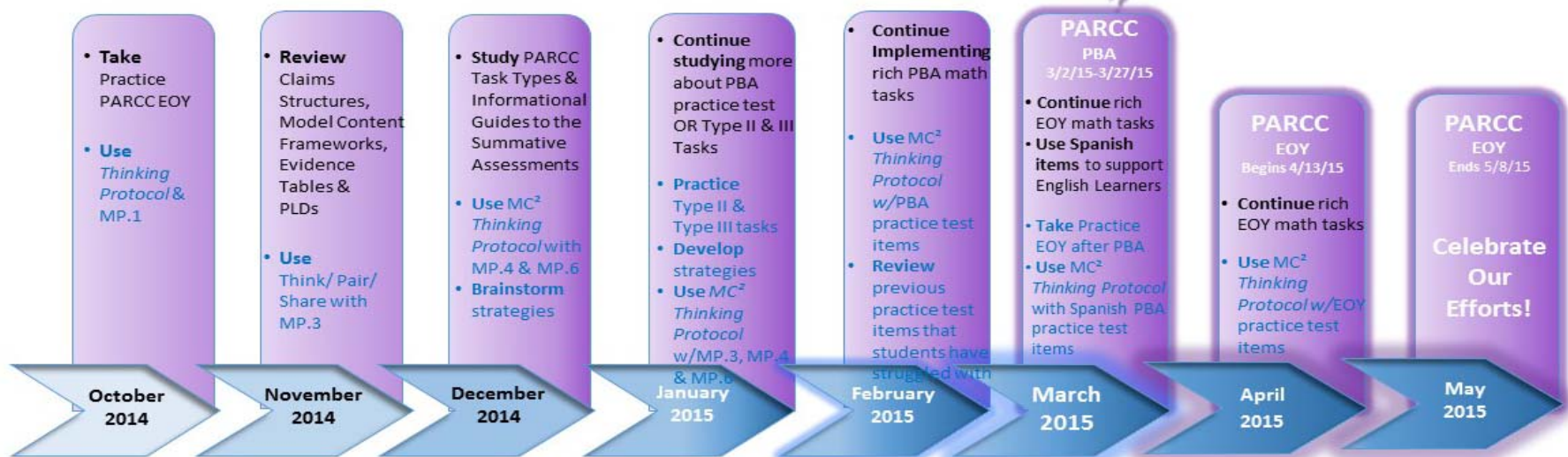
# Webinar Agenda...

- **Teacher Planning Resources** for PARCC End-of-Year (EOY) Assessment
  - Recap of Informational Packets
  - PARCC Spanish Practice Test Items
- **Anchor Charts**



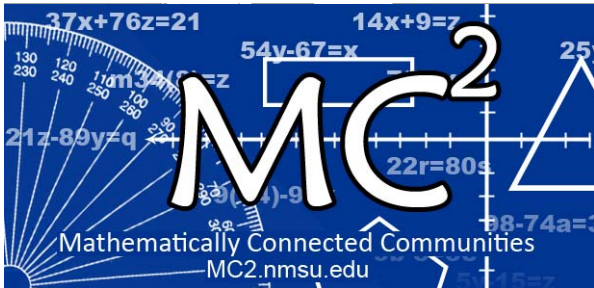
# Monthly Resources for Teachers

## MC<sup>2</sup> Countdown to PARCC



**Color Code Key: Teacher Support & Classroom Strategies**

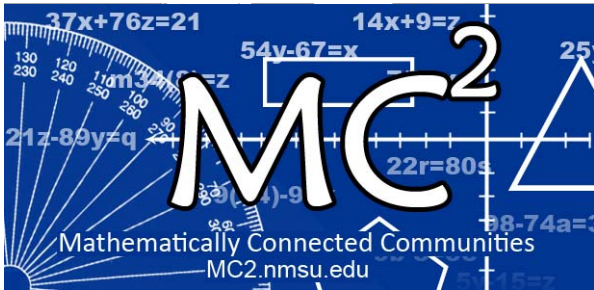
\*The bulleted tasks above are recommended by MC<sup>2</sup> to assist teachers in preparing for PARCC.  
Click on the image to enlarge the graphic.



## Aligned to CCSS-M with Emphasis on Math Practices 1, 3, 4, and 6

- 1. Make sense of problems and persevere in solving them.**
2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others**
- 4. Model with Mathematics**
5. Use appropriate tools strategically
- 6. Attend to precision**
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning





# March – For Teachers PARCC Informational Guide

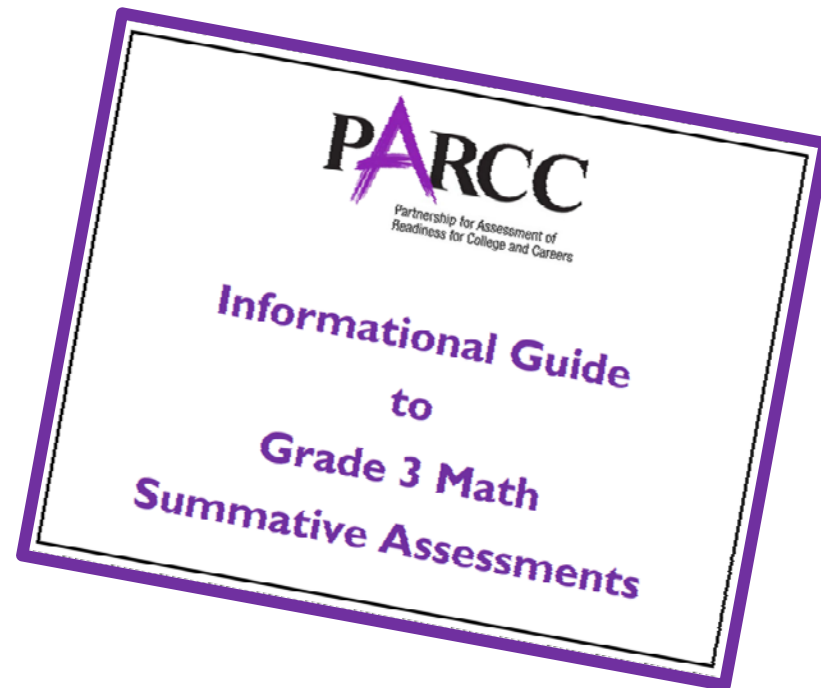
## PARCC Mathematics Test

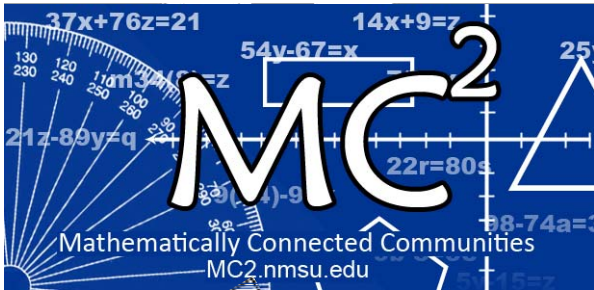
### Documents:

<http://www.parcconline.org/mathematics-test-documents>

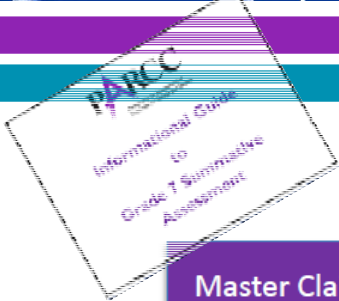
### Contents:

- Claims Structure
- Task Types
- High Level Blue Prints
- Grade Specific Evidence Statements (Listed by PBA, EOY, and PBA/EOY Combination)





# March – For Teachers PARCC Informational Guide



## Claims Structure: Mathematics – Grade 7

**Master Claim:** On-Track for college and career readiness. The degree to which a student is college and career ready (or “on-track” to being ready) in mathematics. The student solves grade-level/course-level problems in mathematics as set forth in the Standards for Mathematical Content with connections to the Standards for Mathematical Practice.

### Sub-Claim A: Major Content<sup>1</sup> with Connections to Practices

The student solves problems involving the Major Content<sup>1</sup> for her grade/course with connections to the Standards for Mathematical Practice.

43 points

### Sub-Claim B: Additional & Supporting Content<sup>2</sup> with Connections to Practices

The student solves problems involving the Additional and Supporting Content<sup>2</sup> for her grade/course with connections to the Standards for Mathematical Practice.

13 points

### Sub-Claim C: Highlighted Practices MP.3 and MP.6 with Connections to Content<sup>3</sup> (expressing mathematical reasoning)

The student expresses grade/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others, and/or attending to precision when making mathematical statements.

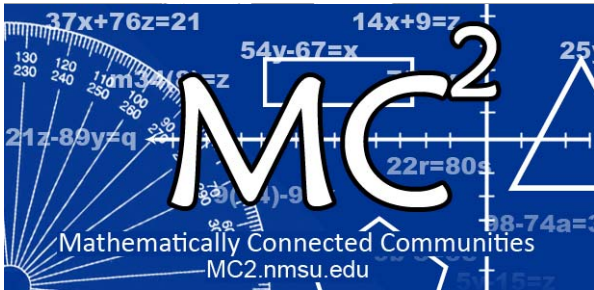
14 points

### Sub-Claim D: Highlighted Practice MP.4 with Connections to Content (modeling/application)

The student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course (or for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), *engaging particularly in the Modeling practice*, and where helpful, making sense of problems and persevering to solve them (MP. 1), reasoning abstractly and quantitatively (MP. 2), using appropriate tools strategically (MP.5), looking for and making use of structure (MP.7), and/or looking for and expressing regularity in repeated reasoning (MP.8).

12 points

Total Exam  
Score Points:  
82

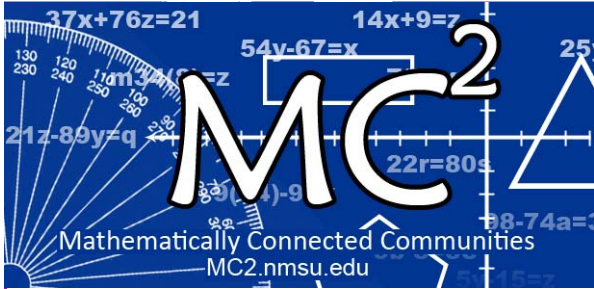


# March – For Teachers PARCC Informational Guide

## Overview of PARCC Mathematics Task Types

Task Type	Description	Reporting Categories	Scoring Method	Mathematical Practice(s)	Summative Assessment
Type I	conceptual understanding, fluency, and application	<b>Sub-Claim A:</b> Solve problems involving the <u>major content</u> for the grade level <b>Sub-Claim B:</b> Solve problems involving the <u>additional and supporting content</u> for the grade level	computer-scored only	can involve any or all practices	EOY and PBA
Type II	written arguments/justifications, critique of reasoning, or precision in mathematical statements	<b>Sub-Claim C:</b> Express mathematical <u>reasoning</u> by constructing mathematical arguments and critiques	computer- and hand-scored tasks	primarily MP.3 and MP.6, but may also involve any of the other practices	PBA only
Type III	modeling/application in a real-world context or scenario	<b>Sub-Claim D:</b> solve real-world problems engaging particularly in the <u>modeling</u> practice	computer- and hand-scored tasks	primarily MP.4, but may also involve any of the other practices	PBA only



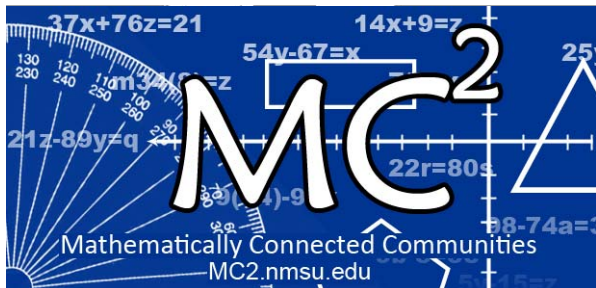


# March – For Teachers PARCC Informational Guide

Performance-Based Summative Assessment (PBA)			
	Task Type/ Point Value	Number of Tasks	Total Points
Number and Point Values for each Task Type	Type I 1 Point	8	8
	Type I 2 Point	2	4
	Type II 3 Point	2	6
	Type II 4 Point	2	8
	Type III 3 Point	2	6
	Type III 6 Point	1	6
	<b>Total</b>		<b>17</b>
Percentage of Assessment Points by Task Type	Type I	(12/38) 32%	
	Type II	(14/38) 36%	
	Type III	(12/38) 32%	

End-of-Year Summative Assessment (EOY)			
Task Type/ Point Value	Number of Tasks	Total Points	Percent of Test
Type I 1 Point	24	24	55%
Type I 2 Point	8	16	36%
Type I 4 points	1	4	9%
<b>Total</b>	<b>33</b>	<b>44</b>	<b>100%</b>

## Grade 7 High Level Blueprints - Mathematics



# March – For Teachers PARCC Informational Guide

## Grade 7 Evidence Statements Listing by PBA only, PBA and EOY, and EOY Only

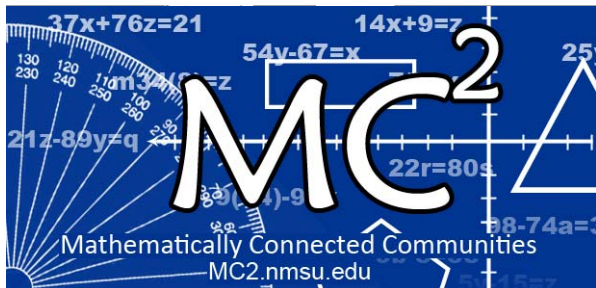
The PARCC Evidence Statements for Grade 7 Mathematics are provided starting on the next page. The list has been organized to indicate whether items designed to align with an Evidence Statement may be used on the Performance-Based Assessment (PBA), the End-of-Year (EOY) Assessment, or on both the PBA and EOY.

Evidence Statements are presented in the order shown below and are color coded:

**Lavender** – Evidence Statement is applicable to the PBA only.

**Peach** – Evidence Statement is applicable to both the PBA and EOY.

**Aqua** – Evidence Statement is applicable to the EOY only.



# March – For Teachers PARCC Informational Guide



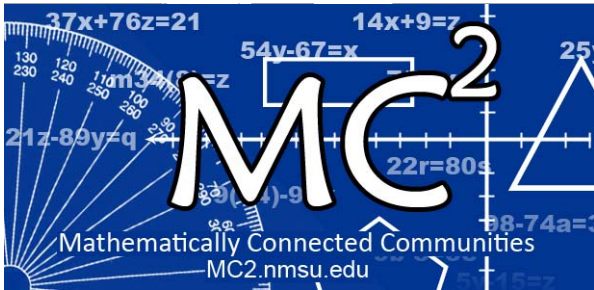
## Grade 8 Evidence Statements

PBA Only

PBA and EOY

EOY Only

Subclaim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to MPs	Calculator
A	8.EE.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^5 = 1/3^3 = 1/27$	<p>PBA/EOY</p> <ul style="list-style-type: none"> <li>i) Tasks do not have a context.</li> <li>ii) Tasks focus on the properties and equivalence, not on simplification.</li> <li>iii) Half of the expressions involve one property; half of the expressions involves two or three properties.</li> <li>iv) Tasks should involve a single common base or a potential common base, such as, a task that includes 3, 9 and 27.</li> </ul>	MP.7	No
A	8.EE.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as $3 \times 10^8$ and the population of the world as $7 \times 10^9$ , and determine that the world population is more than 20 times larger.	<p>PBA/EOY</p>	MP.4	No
A	8.EE.4-1	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used.	<p>PBA/EOY</p> <ul style="list-style-type: none"> <li>i) Tasks have "thin context" <sup>2</sup> or no context.</li> <li>ii) Rules or conventions for significant figures are not assessed.</li> <li>iii) Some of the tasks involve both decimal and scientific notation.</li> </ul>	MP.6 MP.7 MP.8	No
A	8.EE.4-2	Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	<p>PBA/EOY</p> <ul style="list-style-type: none"> <li>i) Tasks have "thin context".</li> <li>ii) Tasks require students to recognize <math>3.7E-2</math> (or <math>3.7e-2</math>) from technology as <math>3.7 \times 10^{-2}</math>.</li> </ul>	MP.6 MP.7 MP.8	Yes
A	8.EE.5-1	Graph proportional relationships, interpreting the unit rate as the slope of the graph.	<p>PBA/EOY</p> <ul style="list-style-type: none"> <li>i) Tasks may or may not contain context.</li> </ul>	MP.1 MP.5	Yes



# March – For Teachers PARCC Informational Guide



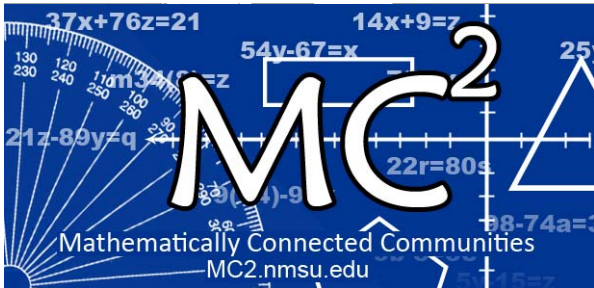
## Grade 8 Evidence Statements

PBA Only

PBA and EOY

EOY Only

Subclaim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to MPs	Calculator
B	8.NS.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion, which repeats eventually into a rational number.	EOY i) Tasks do not have a context. ii) An equal number of tasks require students to write a fraction $a/b$ as a repeating decimal, or write a repeating decimal as a fraction. iii) For tasks that involve writing a repeating decimal as a fraction, the given decimal should include no more than two repeating decimals, i.e. 2.16666..., 0.23232323...	MP.7 MP.8	No
B	8.NS.2	Use rational approximations of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g. $\pi^2$ ). For example, by truncating the decimal expansion of $\sqrt{2}$ , show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	EOY i) Tasks do not have a context.	MP.5 MP.7 MP.8	No
A	8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2=p$ and $x^3=p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	EOY i) Tasks may or may not have a context. ii) Students are not required to simplify expressions such as $\sqrt{8}$ to $2\sqrt{2}$ . Students are required to express the square roots of 1, 4, 9, 16, 25, 36, 49, 64, 81 and 100; and the cube roots of 1, 8, 27, and 64.	MP.7	No
A	8.EE.6-1	Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane.	EOY i) Tasks do not have a context.	MP.2 MP.7	Yes
			EOY		



# March – For Teachers PARCC Informational Guide

## Grade 8 Assessment Policies

### Calculators:

- PARCC mathematics assessments allow a scientific calculator in Grade 8.
- For students who meet the guidelines in the *PARCC Accessibility Features and Accommodations Manual* for a calculation device, this accommodation allows a calculation device to be used on the non-calculator section of any PARCC mathematics assessment. The student will need a hand-held calculator because an online calculator will not be available. If a student needs a specific calculator (e.g., large key, talking), the student can also bring his or her own, provided it is specified in his or her approved IEP or 504 Plan and meets the same guidelines.

### Scratch Paper (required):

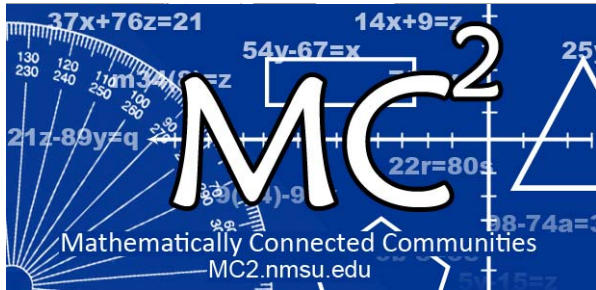
- Blank scratch paper (graph, lined or un-lined paper) is intended for use by students to take notes and work through items during testing. At least two pages per unit must be provided to each student. Any work on scratch paper will **not** be scored.

### Allowable Geometry Tools:

- A protractor, tracing paper, reflection tools, straight edge, and compass are allowable materials for the grade 8 assessments.
- If schools allow students to bring their own tools, they must be given to the school test coordinator or test administrator prior to testing to ensure that the tools are appropriate for testing (e.g., tools do not have any writing on them).

### Mathematics Reference Sheet:

Triangle	$A = \frac{1}{2}bh$	Cylinder	$V = \pi r^2 h$
Parallelogram	$A = bh$	Sphere	$V = \frac{4}{3}\pi r^3$
Circle	$A = \pi r^2$	Cone	$V = \frac{1}{3}\pi r^2 h$



# March – For Teachers Re-Take the EOY Practice Test

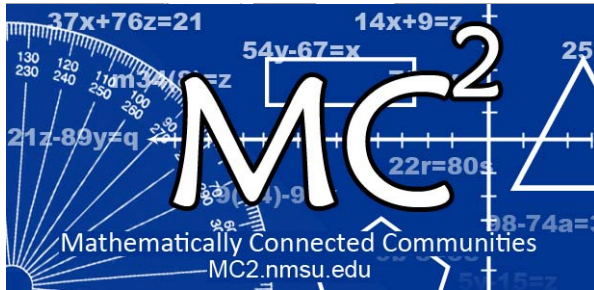
- **Re-take the EOY Practice Test:**

<http://parcc.pearson.com/practice-tests/math//#>

- **Familiarize yourself with the technology skills necessary for the tasks.**

### **Discuss with Colleagues:**

- What are the mathematical expectations of the EOY? How do the questions align to the CCSS-M standards at your grade level?
- What technology experiences do students need in order to be successful with the testing format?



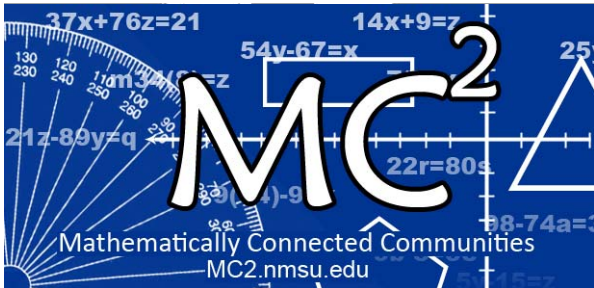
# For the Classroom

Use the *MC<sup>2</sup> Thinking Protocol (with Spanish prompts)* for sample PARCC items 1-2 per week as a class warm-up or formative assessment

Thinking Protocol (15-20 min.):

1. **Students think individually** about the test item. (3 min)
2. **Think with a partner** about the problem. Change colored writing utensils to add to the solution. Don't erase from your original ideas. (5 min.)
3. **Share strategies.** Teacher selects 2-3 students or partners to share their ideas. The purpose is to add new ideas/strategies to the whole group's thinking. (6 min.)
4. **Ask students to reflect** on the problem and identify what was easy about the problem. What required more effort? (1 min.)

Go to: [http://mc2.nmsu.edu/PARCC/Grades/MAR/MC2\\_ThinkingProtocol\\_PARCC\\_wELprompts.pdf](http://mc2.nmsu.edu/PARCC/Grades/MAR/MC2_ThinkingProtocol_PARCC_wELprompts.pdf)



## For the Classroom (continued)

### *MC<sup>2</sup> Thinking Protocol: Spanish Thinking/Writing Prompts*

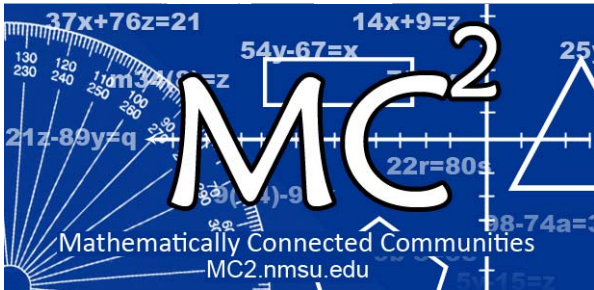
#### **Math Practice 1: Make sense of problems and persevere in solving them.**

1. ¿Qué sabes acerca del problema?
2. ¿Qué preguntas tienes?
3. Explica tu razonamiento o tu forma de pensar en la solución del problema.

#### **Math Practice 3: Construct viable arguments and critique the reasoning of others.**

1. ¿Cuáles son las suposiciones, definiciones y los conocimientos previos para ayudar en la forma de pensar sobre este problema?
2. ¿Cuáles son algunas conjeturas que puedes tener sobre el problema?
3. Explica tu argumento matemático para que alguien más pueda dar sentido a tu forma de pensar.





## For the Classroom (continued)

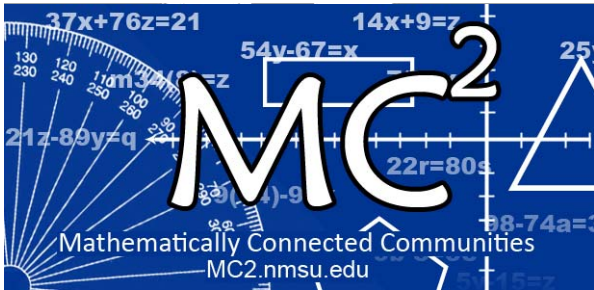
### *MC<sup>2</sup> Thinking Protocol: Spanish Thinking/Writing Prompts*

#### **Math Practice 4: Model with mathematics.**

1. ¿Cuáles son las cantidades importantes que se necesitan para resolver el problema?
2. ¿Qué operación (es) matemática (s) o representación (es) vas a usar para resolver el problema?
3. Explica cómo sabes que tu respuesta tiene sentido en el contexto de la situación.

#### **Math Practice 6: Attend to precision.**

1. ¿Cuáles son las unidades importantes en el problema? (¿Qué estamos midiendo o contando?)
2. ¿Qué relación entre las unidades/cantidades necesitas saber con el fin de resolver el problema?
3. Usa el lenguaje matemático apropiado y preciso, unidades, etiquetas y cálculos para describir claramente tu razonamiento matemático.



## For the Classroom (continued)

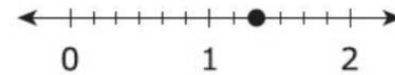
### 4<sup>th</sup> Grade Spanish PARCC Sample Assessment, Standard 4.NF.3b:

Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by using a visual fraction model.

#### Sample Math Practice Prompt:

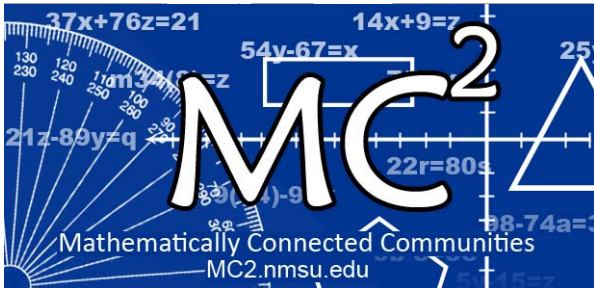
1. Explica tu argumento matemático para que alguien más pueda dar sentido a tu forma de pensar. (MP.3)

El punto de la recta numérica muestra el valor de la suma de dos fracciones.



¿Cuál expresión tiene la misma suma?

- (A)  $\frac{4}{3} + \frac{4}{3}$
- (B)  $\frac{6}{4} + \frac{2}{4}$
- (C)  $\frac{5}{6} + \frac{3}{6}$
- (D)  $\frac{2}{12} + \frac{6}{12}$



## For the Classroom (continued)

### Add Anchor Charts to the *MC<sup>2</sup> Thinking Protocol Process*

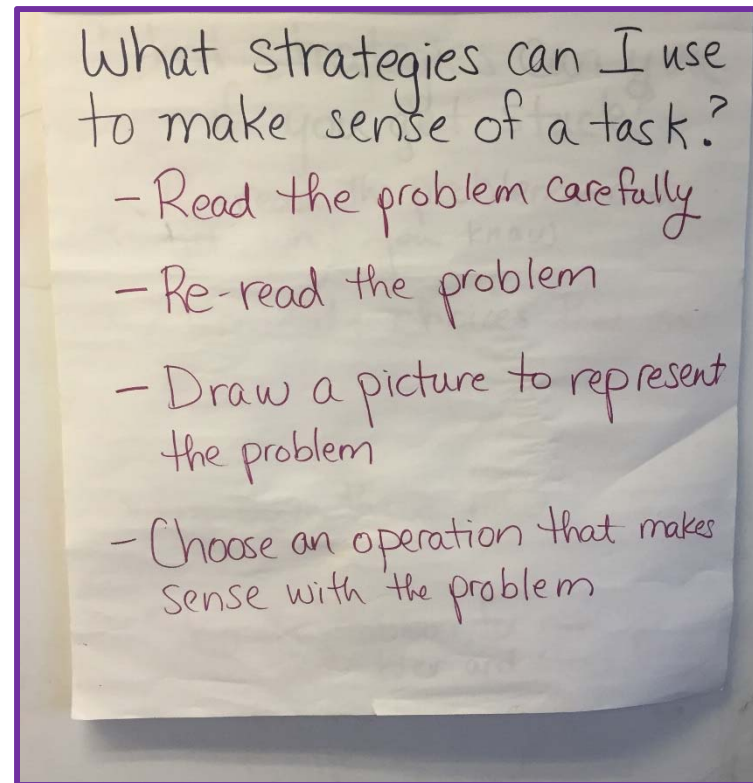
**Step 1:** Complete the *MC<sup>2</sup> Thinking Protocol* with a challenging task.

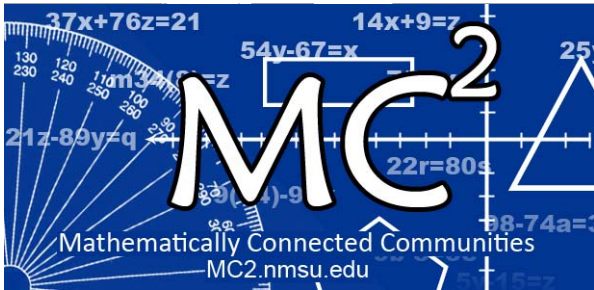
**Step 2:**

- Ask students to reflect on the process.
- Ask, “What was easy?”
- Ask, “What was hard?”
- Discuss with their table group or partner.

**Step 3:**

- Choose a question prompt for the anchor chart.
- Use a think/pair/share strategy and record students’ ideas.

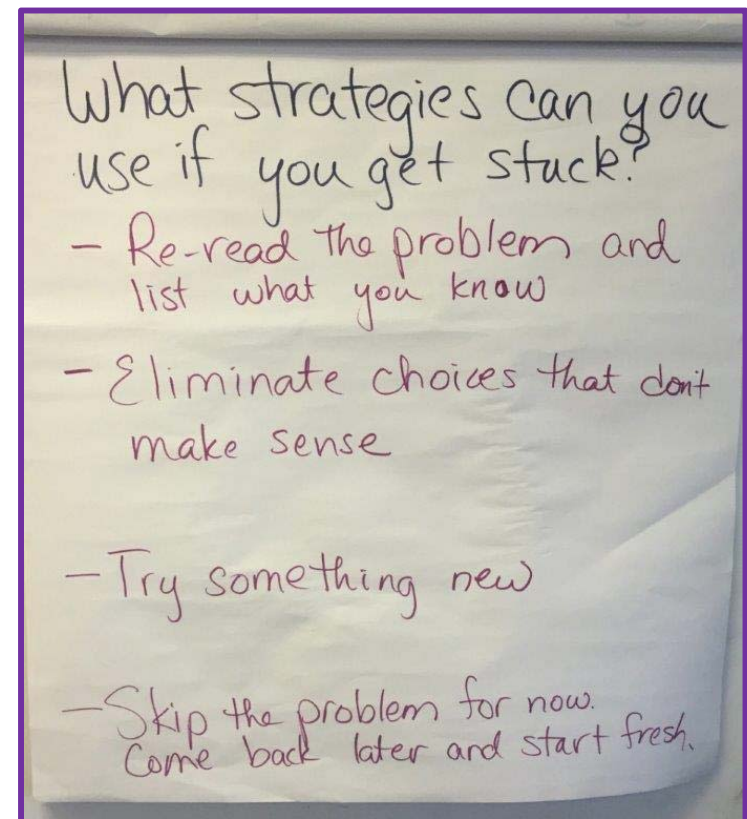


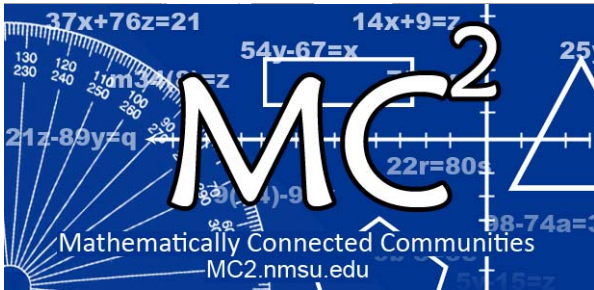


## For the Classroom (continued)

### Anchor Chart Prompts

- What strategies can we use to make sense of the tasks?
- How can I make sure I have completely answered the question(s)?
- What strategy can I use if I get stuck?



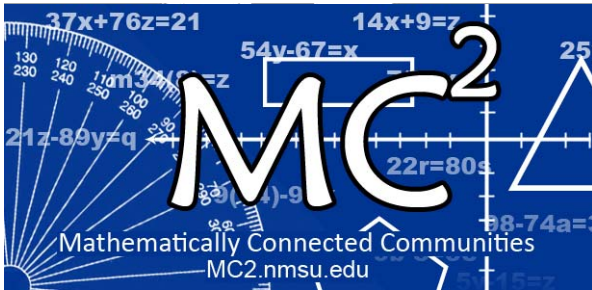


# For the Classroom (continued)

## Checklist

### Before the EOY Assessment...

- Use *MC<sup>2</sup> Thinking Protocol*** in class with all EOY Practice Items.
- Develop Anchor Charts** for strategies students can use on the assessment.
- Make sure every child** has practiced using the technology on the type of computer he/she will be using when taking the assessment.
- Make sure students** practice using the calculator that will be available to them during the test.
  - **Grades 3-5 ONLY for students with a calculator accommodation:** Four-function calculator with square root and percentage functions
  - **Grades 6-7:** Four-Function Calculator
  - **Grade 8:** Scientific Calculator
  - **High School:** Graphing calculator (functionalities consistent with TI-84 or a similar model)



# Thank You!

Please email any questions/comments you have to [mc2@nmsu.edu](mailto:mc2@nmsu.edu).

The MC<sup>2</sup> team will compile these into a FAQ for March and post it on the MC<sup>2</sup> website (<http://mc2.nmsu.edu>) within a week.