

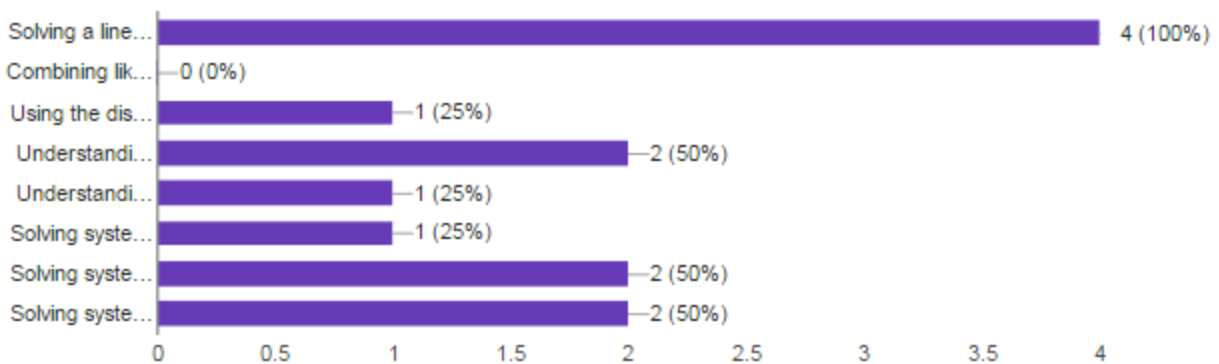
# Are We Teaching the Right Math in the Right Way?

## 8<sup>th</sup> Grade Math Email PD Session 1a – Teacher Responses

### Unpacking the Standards

Out of the list of math topics below, which three do you typically find to be the most challenging for your students?

(4 responses)



Explain why you believe students struggle with the first of the three boxes you checked.

(4 responses)

Students forget the rules for fraction operations

I think students struggle with the first topic I selected is because of gaps or weakness in computation of rational numbers.

They seem to have the most problem when they have a fraction as the coefficient.

Students are unable to recall basic math facts, procedures, rules, or formulas.

## Explain why you believe students struggle with the second of the three boxes you checked.

(4 responses)

Students forget to carry their negative signs to the next step when solving equations and forget to distribute the negative sign to the second term within parenthesis

As far as substitution /elimination students need to have mastery in solving literal equations. Students tend to get caught up in arranging equations. Once they master how to arrange the equation, they need more time practice real life word problems to fully understand the concept.

Although they have graphed lines when using the slope intercept formula, they seem to become confused when trying to identify the point of intersection.

Students are unable to recall basic math facts, procedures, rules, or formulas.

---

## Explain why you believe students struggle with the third of the three boxes you checked.

(4 responses)

When the substitution problems become complicated (not just a single number or variable), students forget what to substitute.

As far as substitution /elimination students need to have mastery in solving literal equations. Students tend to get caught up in arranging equations. Once they master how to arrange the equation, they need more time practice real life word problems to fully understand the concept.

In many instances students are unsure as to which variable to eliminate and how.

Students are unable to recall basic math facts, procedures, rules, or formulas.

In reference to one or more of the three topics you checked, describe an ineffective teaching strategy often used in classrooms.

(4 responses)

For rational number operations, sometimes teachers assume students should remember their rational number operations and give worksheet after worksheet without enough guided practice involved.

I think an ineffective way of presenting the concepts listed about is jump into the teaching the concept w/o prior knowledge of students can do the need prerequisite skills required for success.

In many instances lecturing is ineffective, students don't respond readily to long drawn out pieces of information.

Teachers giving students prepared notes to study for assessments.

---

Now, describe an effective teaching strategy to address the same topic(s) as the previous question.

(4 responses)

Sometimes students need lots of guided practice with paper and pencil and one on one instruction or peer tutoring especially when it comes to solving equations with variables on both sides of the equal sign with rational coefficients.

After teaching multiple step equations, students should be taught how to solve literal equations(Go Math does not have a lesson on this).

The teacher should spend time reviewing computation of rational numbers before teaching the indicated topics (if needed).

If you have manipulatives to go along with the lecture, and break the material up into smaller tidbits, the students will be able to gain more information while you'll be able to check for understanding.

Teachers need to spend more time teaching students how to master note taking skills at an earlier grade level.

## Louisiana Standard 8.EE.7: Solve linear equations in one variable.

Give one example of a math problem that would measure a student's procedural skill and fluency related to 8.EE.7.

(4 responses)

$$20 + 3x = 36 + 28x$$

$$2(a - 8) + 7 = 5(a + 2) - 3a - 19$$

When students have to graph systems of equations, they have to rely on their knowledge of slope intercept in order to graph the lines. Upon graphing them correctly, they will determine the point of intersection. By being able to do this, they must be able to determine the coordinates of the point, thereby finding the solution to the system.

$$y = 4 \quad y = \frac{3}{2}x + 4$$

## Louisiana Standard 8.EE.8: Analyze and solve pairs of simultaneous linear equations (systems of two linear equations).

Give one example of a math problem that would measure a student's conceptual understanding of 8.EE.8.

(4 responses)

Understanding after graphing

$$y = -2x + 5$$

$$y = 3x$$

the point of intersection is the solution and the  $(x,y)$  coordinate point also satisfies both equations.

The formula for the perimeter of a rectangle is  $P = 2l + 2w$ , where  $l$  is the length and  $w$  is the width. A rectangle has perimeter of 24 inches. find its dimensions if its length is 3 inches greater than its width.

A student can be given a graph of a line and be asked to identify and calculate the slope of the line.

$$y=2x+4 \quad y=3x+2$$

Give one example of a math problem that would measure a student's procedural skill and fluency related to 8.EE.8.

(4 responses)

Solve by substitution

$$3x + y = 11$$

$$-2x + y = 1$$

Use substitution to solve the equation below.

$$y = 4x$$

$$x + y = 5$$

$4x - 3 = 2x + 13$ : In this scenario, the student must use his their knowledge of combining like terms and additive inverse when it come to simplifying the expression.

$$2x - 4y = 0 - 4x + 4y = -4$$

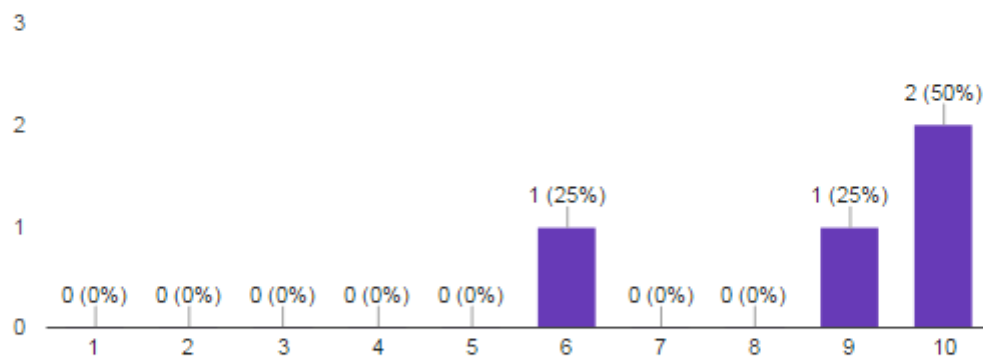
## Additional Feedback

Please provide any other comments you have related to the standards addressed in this Google Form.

(0 responses)

No responses yet for this question.

On the scale below, rate this professional development process? (4 responses)



Thank you for completing this task! You may use the space below to comment on your scale response in the prior question...

(1 response)

I would love to see how other teachers responded. I would also like to know if I answered the questions correctly.