

# Middle School Math Collaboration

October 8, 2019



# GROUP ASSIGNMENTS

6th Grade Group 1	6th Grade Group 2	6th Grade Group 3	6th Grade Group 4	6th Grade Group 5
Andy Kling	Sarah Templet	Joline Kreh	Renee Landry	Jamie Binder
Holly Robertson	Angelle Ourso	Pearl Legarth	Brandi Williams	Shannon Holder
Anita Murray	Erin Bailey	Emily Crocker	Jordynn Morrissey	Lori Wismans
Shelli Kienzle	Lisa Haller	Kelli Hopper	Courtney Harness	Shonese Bickham
Karen Pelitire	Christine Dupre	Aleisa Gouges	Dodi Berthelot	
Olivia Bubrig				
7th Grade Group 6	7th Grade Group 7	7th Grade Group 8	7th Grade Group 9	7th Grde Group 10
Laken Scioritino	Hannah Byrnes	Linda Wilson	Christy Dixon	Farrah Piazza
Katie Rouillier	Allison Buratt	Heidi Nolan	Will Collins	Evonda Wright
Iman Thomsen	Brittany Goebel	Karesa Aguillard	Margaret "Peggy" Wardell	Shannon Holder
Tana Luther	Tarwarnisha Thompson	Earldean Arvie	Kelly Smith	Angela Jordan
Stephanie Julien	Rebecca Plaisance	Michael Sharper	Kristy Doucet (Amy U. Jarreau)	
Laura Gutierrez	Cynthia Rogers			
8th Grade Group 11	8th Grade Group 12	8th Grade Group 13	8th Grade Group 14	8th Grade Group 15
Bennett Becnel	Rebecca Cullen	Kate (Kathryn) Bourgeois	Misty Lyngaas	Miriam Davis
Jodi Burgett	Jessi Vincent	Kim Wheat	Penny Hood	Diane Coco
Courtland Joshua	Megan Rodgers	Susan Lindsey	Jill Hughes	Derra Landaiche
Hanh Hoang	Heather Hoffpauir	Victoria Kaltenbacher	Stephanie Dagsaan	Sam Smith
	Brenda Monsour	Jami Orgeron		Lauren Settle
8th Grade Algebra I Group 16				
Jennifer Blanchard				
Devin Wright				
Britne Edmonston				

# ANNOUNCEMENTS



- **INTERIM ASSESSMENTS**
  - Interim 1 - November 18
  - Interim 2 - February 26
  
- **EUREKA ON-SITE COACHING**
  - **Delivering a Lesson Collaboratively**

# DATA REFLECTION



## WHEN ANALYZING THE DISTRICT TRENDS OVER THE LAST TWO YEARS...

- In what area(s) did your grade level show improvements?
- What are some areas of need?

# MEETING GOAL



*Engage in a student work analysis process where we:*

- Identify the thinking required in high quality, rigorous prompts
- Establish inter-rater reliability
- Distinguish characteristics of exemplar models
- Categorize student work samples based on need
- Create a plan for addressing student needs while continuing to move forward

# LADOE DIAGNOSTIC ASSESSMENT SCORING EXERCISE



Diagnostic Assessment Administered	Question #
6th	13
7th	44
8th	46
Algebra I	55

# Analyze prompt and identify the thinking required to solve this problem

An airplane has a total of 414 packets of crackers, pretzels, and peanuts available for passengers.

- There are  $n$  packets of crackers.
- The number of packets of pretzels is 9 more than twice the number of packets of crackers.
- The number of packets of peanuts is 3 times the number of packets of pretzels.

## Part A

Which equation can be used to determine the number of packets of crackers,  $n$ , on the airplane?


- A.  $6n + 9 = 414$
- B.  $6 + 9n = 414$
- C.  $9n + 36 = 414$
- D.  $9 + 36n = 414$

## Part B

The airplane has seats for 144 passengers. The seats are arranged in 48 rows, with 3 seats in each row.

- There are 132 passengers on a certain flight.
- There are exactly 2 passengers in  $x$  rows.
- There are exactly 3 passengers in  $y$  rows.

Write a system of linear equations that can be used to model the situation. Use your system to determine the number of rows with exactly 2 passengers and the number of rows with exactly 3 passengers. Show your work.



**Make  
sense of  
the  
problem.**



**Attend to  
Precision**

Part A

C

Part B

$$x + y = 48$$

$$2x + 3y = 132$$

$$3y = -2x + 132$$

$$y = -\frac{2}{3}x + 44$$

$$x + -\frac{2}{3}x + 44 = 48$$

$$\frac{1}{3}x + 44 = 48$$

$$\frac{1}{3}x = 4$$

$$x = 12$$

$$12 + y = 48$$

$$y = 36$$



**Part A** (1 point)

Answer Key: C

Rationale A: used  $3x$  for the number of packets of peanuts

Rationale B: used  $3x$  for the number of packets of peanuts and switched the placement of the variable

Rationale C: correct [ $n + 2n + 9 + 3(2n + 9) = 414 \rightarrow 3n + 9 + 6n + 27 = 414$ ]

Rationale D: switched the placement of the variable

**Part B** (2 points)

- Correct system of equations (1 point)
- Correct solution, with work shown (1 point)

Sample Student Response:

$$\begin{cases} x + y = 48 \\ 2x + 3y = 132 \end{cases}$$

$$\begin{cases} 2x + 2y = 96 \\ 2x + 3y = 132 \end{cases}$$

$$y = 36$$

$$x + 36 = 48$$

$$x = 12$$

There are 12 rows with exactly 2 passengers. There are 36 rows with exactly 3 passengers.

What characteristics do you see that are common in all 3 Anchor Papers?

Part A  
C

Part B

$$x + y = 48$$

$$2x + 3y = 132$$

$$3y = -2x + 132$$

$$y = -\frac{2}{3}x + 44$$

$$x + -\frac{2}{3}x + 44 = 48$$

$$\frac{1}{3}x + 44 = 48$$

$$\frac{1}{3}x = 4$$

$$x = 12$$

$$12 + y = 48$$

$$y = 36$$

Anchor Paper 1

What characteristics do you see that are common in all 3 Anchor Papers?

## Anchor Paper #2

A)  
choice C

B)  
 $2x + 3y = 132$   
 $x + y = 48$

$x = 48 - y$   
 $2(48 - y) + 3y = 132$   
 $96 - 2y + 3y = 132$   
 $96 + y = 132$   
 $y = 36$

$x + 36 = 48$   
 $x = 12$

12 rows of 2 and 36 rows of 3

# What characteristics do you see that are common in all 3 Anchor Papers?

## Anchor Paper #3

Part A

$$c \quad 9n + 36 = 414$$

Part B

$$48 = x + y$$

$$48 = 36 + 12$$

$$48 = 48$$

$$132 = 2x + 3y$$

$$132 = 2(12) + 3(36)$$

$$132 = 132$$

The number of rows with 2 passengers is 12, and the number of rows with 3 passengers is 36.

# Guiding Questions for Analyzing Student Work

- Did the students meet all of the criteria?
- Is the work that students produced satisfactory?
- What misconceptions are present?
- How would grouping your students intentionally provide opportunities for academic feedback and support?
- What does the work tell us about how well the students understand the Learning Target?

# What next steps can you plan and implement for this student? Why?

## Anchor Paper #5

Part A

C.

Part B

$$x + y = 48$$

$$2x + 3y = 144$$

$$2(x + y) = 2(48)$$

$$2x + 2y = 96$$

$$2x + 3y = 144$$

$$(2x + 2y = 96)$$

$$y = 48$$

$$y = 48, x = 0$$

there are 0 rows with 2 passengers and 48 rows with 3

# What next steps can you plan and implement for this student? Why?

## Anchor Paper #6

Part A

$$c \quad 9n + 36 = 414$$

Part B

Imagine the 48 rows and you go about filling each row with 2 people. Once you do this, you will have 96 people seated since  $48$  (rows)  $\times$   $2$  (people) equals  $96$ . That also means there are 36 people yet to be seated since  $132 - 96$  equals  $36$ . So, you then go about filling the rows again, and in the end there are  $12$   $\times$  rows with 2 people and there are 36  $y$  rows with 3 people.

Look at your student work samples.

Repeat this process.

Does anything surprise you? What do you notice?



# Pile, Stack, and Plan



1. What learning targets or standards are being assessed?  
What is the criteria?

*If there is multiple criteria being assessed choose one.*

**!** **These three steps should take  $\frac{1}{3}$  of your time.**

2. **Individually**, review the sample student work. Identify a strength and a next step to improve. Write this on a sticky note and place on the back of the student sample. Each team member reviews each sample in this manner.


3. **Together**, come to consensus on the strength and next steps of each piece of student work.

# Pile, Stack, and Plan



5. Develop an instructional response for each of the next steps identified in student works.

6. Sort the rest of the student work by next steps.

 **Step 5 should take  $\frac{2}{3}$  of your time.**

7. Determine when and how you will determine if your instructional plan or intervention worked.

# Guiding Questions for Analyzing Student Work

- Did the students meet all of the criteria?
- Is the work that students produced satisfactory?
- What misconceptions are present?
- How would grouping your students intentionally provide opportunities for academic feedback and support?
- What does the work tell us about how well the students understand the Learning Target?

# Student work analysis is a major part of the work of a PLC!

## What are the 4 Questions of PLCs?

1. What do we want students to learn?
2. How do we know students have learned it?
3. What do we do when students don't learn it?
4. What do we do when students learned it/already know it?



# Follow-up after this meeting

Each PLC will upload annotated student work samples from their **Pile, Stack, and Plan analysis** for the **Type II and III Quarter 1 benchmark items**.

- 3 samples for each task
- Student Responses report in Illuminate (Excel file on the right)

6th Grade - 3 tasks	7th Grade - 3 tasks	8th Grade - 2 tasks	8th Grade Algebra I - 3 tasks
#8-9 #14-15 #20-22	#11 #15-16 #19-21	#10-11 #14	#14-15 #17 #18

All artifacts should be uploaded to the Google Classroom (Class code: **s2ixgn5**) by Friday, October 25.