

Columbus Regional Math Collaborative November 12, 2021

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Face to Face High School Workshop –

November 16th

Frank Brown Hall, Room 1010

A Dive into Resources for Engaging Students

We are excited to announce A Dive into Resources for Engaging Students in Mathematic – a day-long, face to face workshop for High School Mathematics teachers on November 16th! This exploration of engaging mathematical practices and resources will give you ideas that you can implement immediately.

Nancy Mims and Peter Anderson will create an atmosphere for you to experience activities firsthand, ask questions, and generate new ideas.

Sign up – Space is limited!

Face to Face Workshops available to Muscogee County Schools are no cost to the teachers.

November and December Virtual Workshops

Virtual workshops available to Chattahoochee County, Muscogee County, Russell County, and St. Anne Pacelli schools are **NO COST** to the teachers



After the workshop, you will receive an email to fill out an evaluation.

Note: It should take less than 10 minutes to respond

Upon completion, you will receive a Certificate of attendance for the workshop.



Date: Tuesday, November 30, 2021 Time: 4:30pm – 5:15pm

6th Grade – Unit 4 –One-step equations and inequalities

Presenter: Hope Phillips

Date: Tuesday, December 14, 2021 Time: 3:45pm – 4:30pm

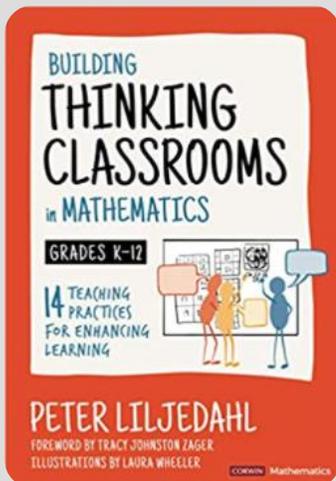
K – 5th Elementary School: Creating Mathematical Thinkers (Virtual Workshop).

Habit 9: Collaborate to learn

Presenter: Laura Stokes

Building Thinking Classrooms — *Learning Community*

Hosted by Peter Anderson, Director



Date: Tuesday, November 30, 2021 Time: 7:00pm – 8:00pm

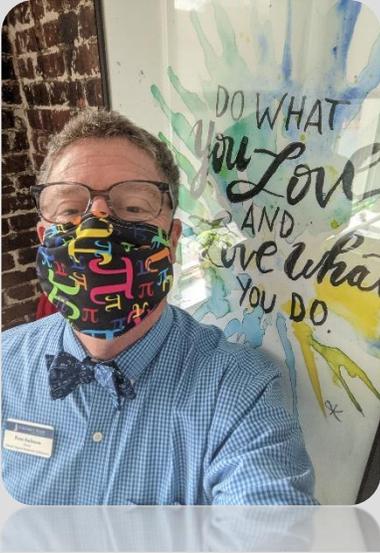
<https://columbusstate.libcal.com/event/8436445>

[Building Thinking Classrooms – Learning community](#)

Warning: It will change the way you teach. Contact [Peter Anderson](#)

Director's Notes

Teaching, Studenting, and PhotoMath



Do we teachers communicate to students what we really want them to do? This may seem like a silly question coming from an old teacher.

Our Algebra 1 class has been studying quadratics for longer than I would like to admit. To my experienced eye, it seemed like the students were *getting it*. It is funny how one moment you feel as if you are making wonderful progress and in the next moment you are completely humbled. It took just one student to alter my view.

On this particular day, we identified the characteristics of a function that allow us to determine how to sketch its graph. Students worked on vertical whiteboards with their groups. They had done an admirable job of sketching graphs. When I consolidated the learning, there was ample evidence that a broad cross-section of the class had a good understanding of the concepts.

We moved to a check-your-understanding exercise. Students worked independently. As I moved from desk to desk, I noticed Jeremy was making excellent progress. He worked on his desktop with a dry erase marker and wrote his answers on the recording sheet.

I asked if I could watch him do his work. Agreeing to let me observe, Jeremy wrote the problem on his desk. He took out his cell phone and snapped a picture of the problem using an app ([photomath](#)), sketching the graph he saw on his phone. He wasn't fazed, in the slightest, that his teacher was watching him.

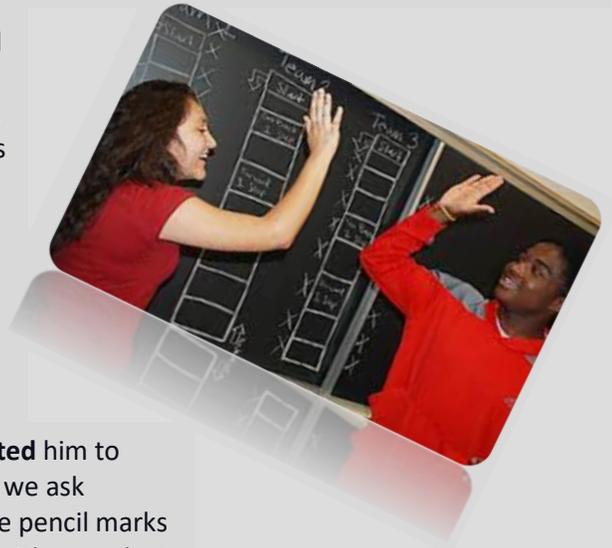
I got the sense Jeremy was sort of proud of his resourcefulness. I let him finish sketching the graph and then asked him how he knew the answer was correct. Jeremy showed me the Photomath results on his phone. Pointing to it, he said, "It's right here." I continued, "How are you so sure Photomath has the right solution." He tipped his head, indicating his teacher was *dense*, and said, "I took a picture of it."

We continued circularly another round or two. Jeremy finally realized I wanted him to explain how he could *look* at a function and determine the characteristics of the graph. We worked through more examples. Quickly, Jeremy got pretty good at using the characteristics of the equation to determine the graph. He was even able to work backward. When shown a function's graph, he could tell me the characteristics of the equation. The entire conversation with Jeremy took less than five minutes.

As I left his desk, he looked at me and said, "Well, damn, Mr. Anderson. I spent \$7 on this app. I don't even need it now."

I believe Jeremy was working just **to finish** the assignment, but **I wanted** him to work toward grasping the mathematical concept. All too often, when we ask students to do work in our classes, their mission becomes to put some pencil marks or ink on the paper so that their work is observable. They present us with a product. Teachers give them a grade. In my mind, what I'm asking the student to do is to understand what they are doing...perchance to learn.

How do we get students to work for understanding?



I was fortunate to observe a class of Algebra 2 students this past week. The students took a quiz on the quadratic formula. *Typically, testing is a sign that this is not the best class to observe*, but I stayed. The class structure was such that students did not have to begin the quiz until they were ready. They could study and even ask their teacher questions.

Many of the students began the quiz at the start of class. Several of the students took the time to review their notes. They worked on problems to understand. Some of the students even watched content videos. The dynamic was interesting. Students were working to gain understanding. Then, they took the quiz.

Isn't that what we want from our students? That they work to understand?

These instances got me thinking. How can I make changes, so students are thinking and learning? What ideas do you use to leverage activities toward student thinking?

Happy Maths,

Pete

Resource Teachers -Puzzle Solution

Rob, Rib, and Rick collected pens – **Solution Next Page**



Rob, Rib, and Rick collected pens.

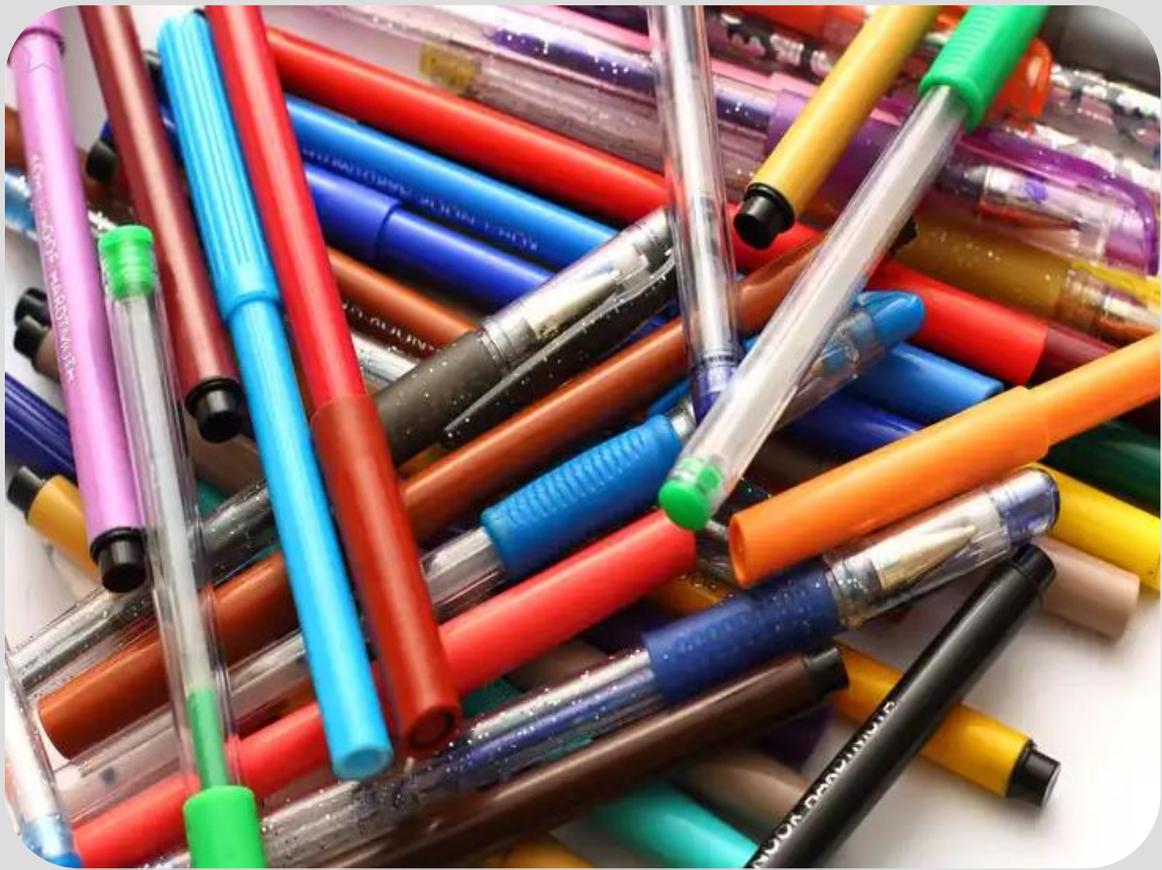
Rob collected double the amount of pens Rib had.

Rick collected double the amount of pens Rob collected.

Altogether, they collected 2,646 pens.

How many pens did each boy collect?

Solution



Solution:

Rob, Rib, and Rick collected pens.

Rib collected $\frac{1}{2}$ Rob

Rob collected 2Ribs.

Rick collected 2Robs.

Rob + Rib + Rick = 2,646 pens

Rib						
	Rob		Rob		Rob	
						Rick

For every Rob there are two Ribs and for every Rick there are two Robs or four Ribs.

So, Rob + Rick + Rib:

2 Ribs + 4 Ribs + 1 Rib = 7 Ribs.

$2,646 \div 7 = 378$ pens

Rib collected 378 pens, Rob collected 756 pens, and Rick collected 1,512 pens.

News Items for November 12th

- We have had an amazing two weeks!



The Mathematics Collaborative has visited almost a dozen schools! Can we visit your classroom?



We had visits from the Middle School Students at St. Luke School! We explored FUNctions from all different approaches. Hope Phillips had the students actually walking the functions! Nancy Mims had students tell stories and then represent them as functions! Peter Anderson showed the students that no matter where you start functions are represented in multiple ways! We would love to have your school visit us! (f(x))



A group of wonderful third graders landed in fraction land here at the Math Collaborative exploring the area, set, and linear models for fractions! It happened all in one morning! Laura Stokes wholly molly fractions, Hope Phillips clothesline fractions, and Monique Gunnels scooch lesson exploring sets made for a fun-filled day of learning for the students and their teachers! Let us know if you would like a similar experience. Fraction land is as near as an email anderson_peter2@columbusstate.edu



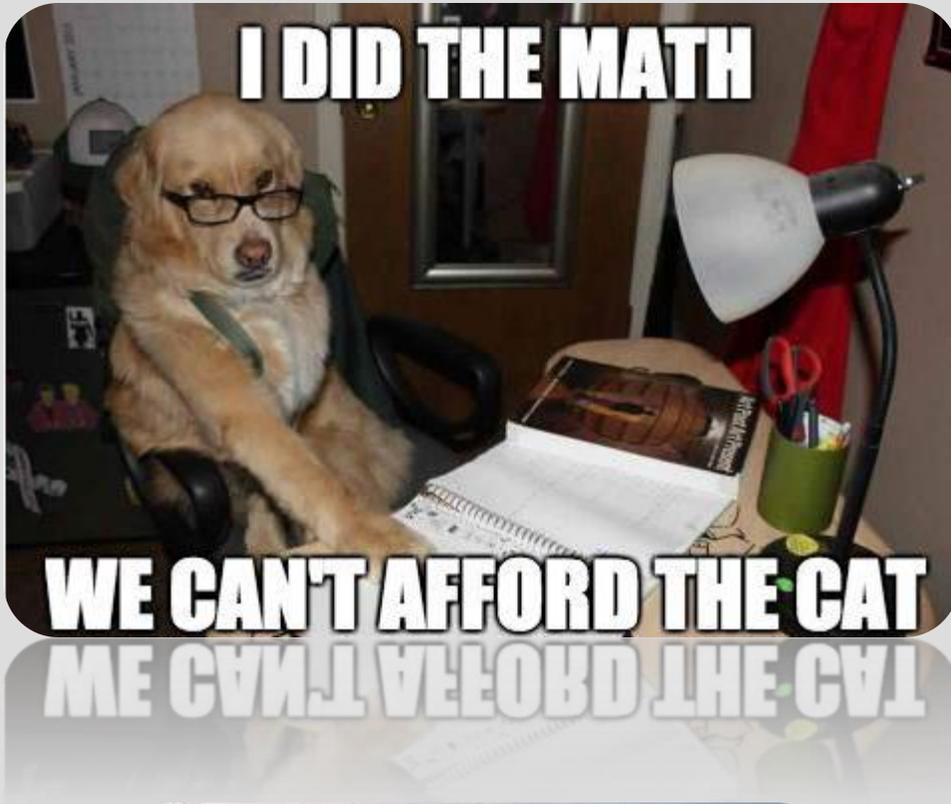
Project Share with Jordan High School is rocking along. Kenneth Jones in the UTeach Program had a student visit our humble but busy classroom! We would love to have visitors - but know that you will see all you want - and do some teaching too!

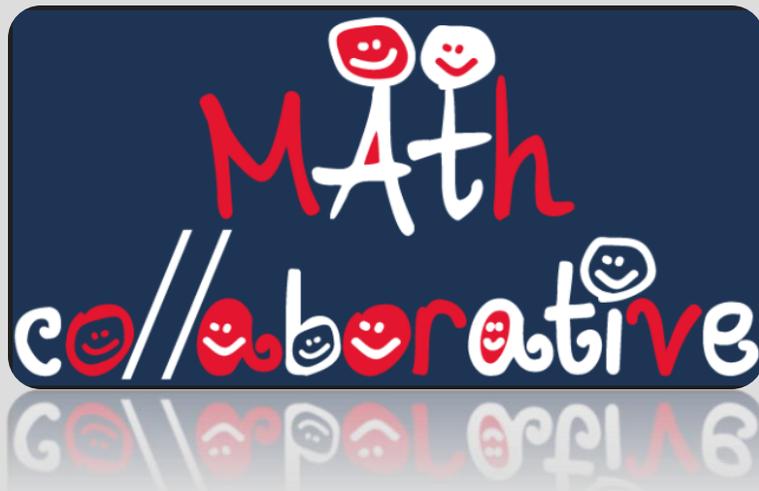
Literacy Alliance

GEORGIA'S FIRST CERTIFIED LITERATE COMMUNITY

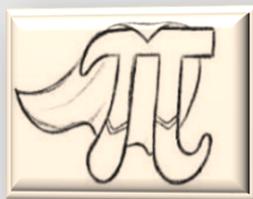
Thank you to [Literacy Alliance](#), CSU Phi Kappa Phi, and Dr. McElveen, and Dr. Ticknor for inviting us to the Literacy Event this past Saturday. We met so many wonderful people and gave away some wonderful math fluency games for families to take home! You can find them here - [Fours a winner](#) and [Risk It Sticks](#) (Caution they are add-itive!)

Math Humor





CLICK HERE TO READ MORE ABOUT OUR [WEBSITE](#)
[Columbus Regional Mathematics Collaborative - Columbus State University](#)



Columbus Regional Math Collaborative

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