Columbus Regional Math Collaborative September 17, 2021

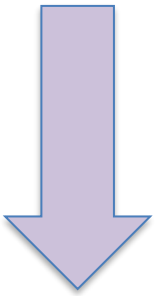
Notes to Nerds

Workshops Director's Notes News Items Resource Teachers Math Is Fun

Workshops

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: September 23, 2021 Time: 4:30pm – 5:15pm

7th Grade – Expressions & Equations

Presenter: Hope Phillips

Date: September 28, 2021 Time: 3:45pm – 4:30pm

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

Presenter: Laura Stokes

Date: September 30, 2021 Time: 4:30pm – 5:15pm

8th Grade – Exponents & Equations

Presenter: Hope Phillips

Virtual Book Study

Presented by Peter Anderson, Director

Date: September 28, 2021 Time: 7:00pm – 8:00pm

https://columbusstate.libcal.com/event/8202451

Building Thinking Classrooms

Warning: It will change the way you teach. Contact Peter Anderson

Director's Notes

Mistakes we make.

This past Friday marked a month of me teaching in a high school. The newness has worn off for the students and me. And goodness gracious, as the reality of the teaching world hit this old guy right between the eyes.
How do we get anything done when there are so many interruptions!
I am not talking about the kids.
There are requests from the office for students.
Other teachers checking in on your class to see a student or to see something else?
Then on top of all of that is a schedule change? *You now have the kids an hour longer* than you were scheduled to have them? *Yay! Bonus math! (Did you read the sarcasm in my writing.)*

Monday this past week, there was a young man in the class who refused to do any work. I will talk with him about what we were doing and model the most appropriate supports. He would respond consistently: *I can't do the math. I have never been able to do the math. I don't have a math mind. Mom and Dad couldn't do the math, I'm the same way.*
It got to the point where it wasn't just affecting his learning, it was affecting the learning of those around him. So I met him at the door on Tuesday morning. - I greet all the students at the door with a smile and a playing card.
I ask him to wait at the door for the start of class. The students came in and were busy with the beginning activity, I turned my attention to this gentleman - Reid. I ask him to take out his cell phone and Google the phrase *growth mindset*. I ask if he would read and learn all he can about growth mindset, he agrees.

I dive back into the classroom, focusing students on our day's project. I return to him about five minutes later.

I ask, W*hat is a growth mindset?*
He says - *It's when you make up your mind that you can learn something, and you do.*
I said, *Do you think that's true?*
He said he wasn't sure.
I asked if he wouldn't mind watching a short video on growth mindset. He must have thought that it was pretty cool. At least he didn't have to do math.
He began watching the video and I returned to the classroom.
When I came back to him a few moments later, he was pretty excited. He said, *Did you know that anybody can learn math?!*
Feeling pretty good about my teacher-ness I reply: *Hey that's pretty cool.*
Reid continues; *Did you know that when we make mistakes, we are actually learning better than if we know something?*
My eyebrows up, *My goodness* I said.
Reid goes on*, Did you know that the best way to learn something is just by trying it out and seeing how you do?*
Goodness, gracious! I reply to him.
Did you know that there's something called a fixed mindset?
No, really tell me about it. - I asked.

Well, it means that you are determined that you don't want to learn something and so you can't and you don't.
Wow! I said aloud.
Reid was pretty knowledgeable about this growth mindset thing.
I said, *Reid, can I ask you a couple of questions? - You know, about growth mindset.*
Eagerly he replied: *Sure Mr. Anderson.*
Reid, Do you know anybody who has a growth mindset? I inquired.
He gave me a surprised look.
Then he responded - You Mr. Anderson.
I said, *Really why?*
Reid says, *Well you're good at math, so you have to have a growth mindset. You make a lot of mistakes. He continues - You made four just yesterday when you were telling us how to solve a problem.*
At this point, I had to agree with him that to make a lot of mistakes.
I asked him this question, can you think of anybody in your class who has a growth mindset? He gave it some thought. Looking at me and he named a couple of students. I asked, *is it because they make lots of mistakes?* He replies *They make a few. But mainly they were just born being good at math.*
I ask him, Do you know of anybody who has a fixed mindset? Think real hard. Reid chews on this for a good second or two. *I can think of a couple.* He names some students but does not include himself.
Do you have a fixed mindset? I ask him.
No! I think I'm pretty open to learning?
Responding to him, *I'm very happy to hear that. Do you think you could have a growth mindset for math class?*
Quickly shaking his head; Mr. Anderson, I'm just not really good at math.
I thought carefully for a second.
You know Reid, I really want you in our class.
And I'm glad to know that you don't have a fixed mindset.
And I realize you told me you don't have a growth mindset.
How about we just make a deal here?
He leans his head to the side, *What kind of deal?*
I offer; *Would you agree to make mistakes in our classroom when you're doing the work?*
He looked at me again, cocking his head to the other side now. *So you want me to go into class and make mistakes?*

Yes, I would like for you to do that. But I'm not talking about silly mistakes that you do intentionally. I want you to make honest mistakes, the kind of mistakes you make when you're trying. Would you be willing to do that?

Mr. Anderson, I think I can do that. Reid says

I extend my fist toward him; *So then it's a deal? You come into the class and you are willing to make mistakes but only if you're trying? Fist-bump if you agree.*

We fist bump.

Reid goes into class and sits down and begins to do his work. With mistakes of course.

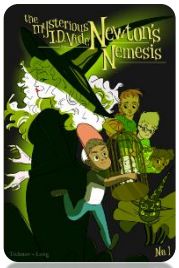
News Items

Jordan Vocational High School - **Project Share** - It has two parts:
Part One is that a resource teacher is placed in the high school for one period a day for a semester to engage students in learning mathematics using rich tasks and best practices.

Part Two is where you enter in - ***yes, you***! Come and observe, critique, and challenge us to be better educators - together.
Contact us if you or your students would like to visit. Peter Anderson

The Math Collaborative supports the efforts of Dr. Basil Conway in building a mathematics community in our area. Here is a flyer if any teachers are interested.

Valuable PD … for free (*and you get a certificate!*) - Several events are on tap until the end of September! (Link Here)

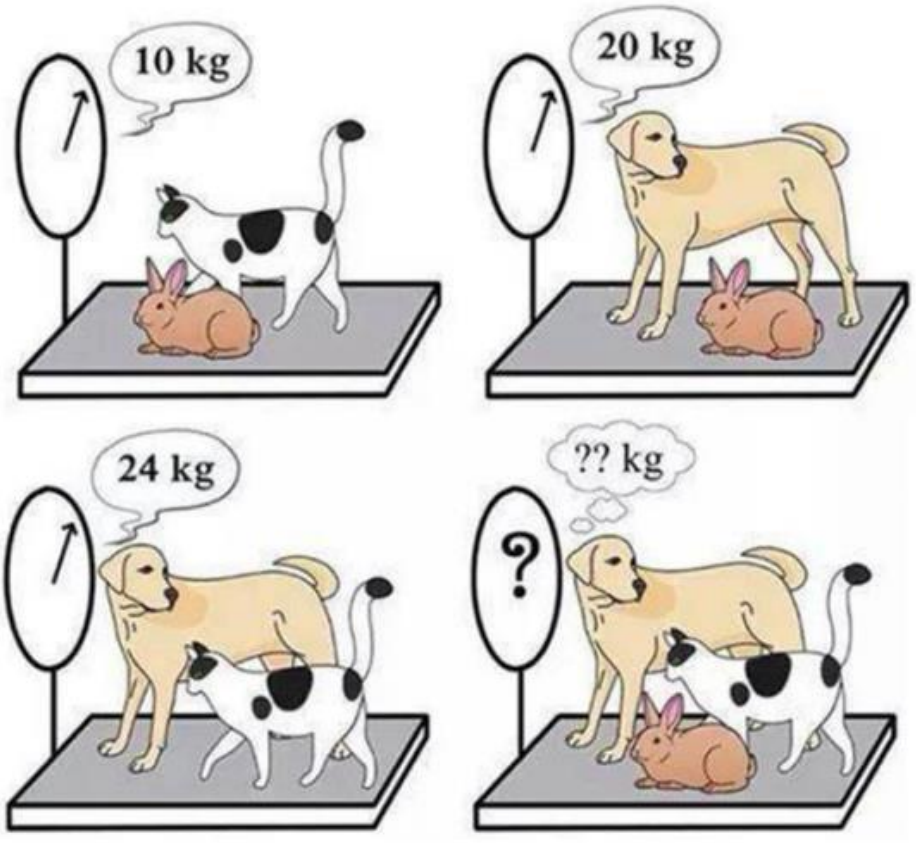


Free Fraction Resources - This lesson introduces ways of thinking about division and asks students to explore 13divided by 2, 3, and 4 using the first issue of CSU's Dr. Cindy Ticknor's *The Mysterious I.D. Vide in Newton's Nemesis* Find the resource here.

Resource Teachers -- Puzzle

Cinna-bun, Oreo, and Moon Pie

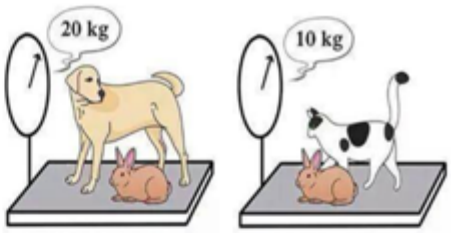
What is the value shown on the last scale?



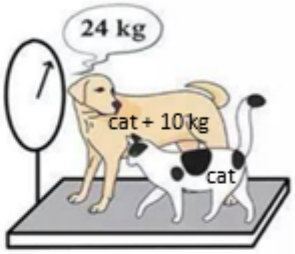
Next page for puzzle solution

One solution pathway (there are others)

The difference between the scales' values is 10 kg, which tells you the dog weighs 10 kg more than the cat.



If the dog weighs the same as a cat plus 10 kg, then you can substitute that for the dog on this next scale.

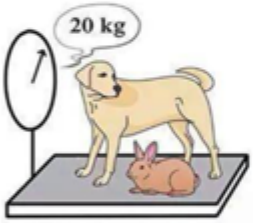


Think: dog + cat = 24 kg or (cat + 10 kg) + cat = 24 kg.
Therefore:

2 cats = 24 kg – 10 kg, so
2 cats weigh 14 kg or 7 kg each.

You now also know that the dog weighs 17 kg. (24 kg – cat or 24 kg – 7 kg = 17 kg)

To solve for the rabbit's weight use either of the two pictures.

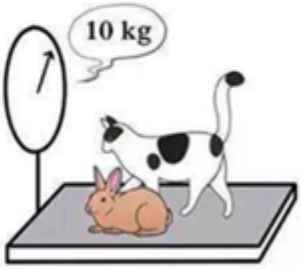


Since the dog weighs 17 kg and dog + rabbit = 20 kg,

17 kg + rabbit = 20 kg, rabbit = 3 kg.

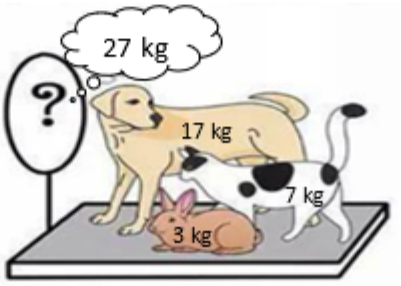
OR since the cat weighs 7 kg, and the cat + rabbit = 10 kg,

7 kg + rabbit = 10 kg, the rabbit weighs 3 kg.



So, the combined weight of all three animals is 27 kg

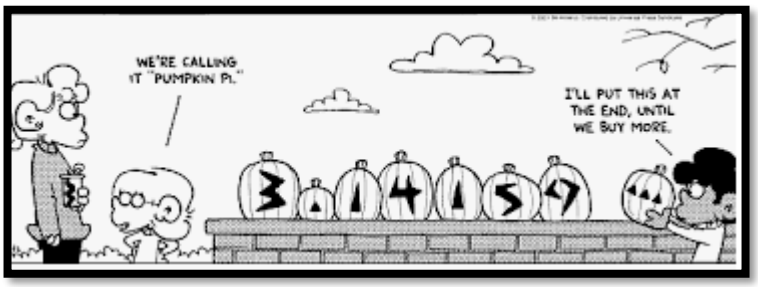
dog + cat + rabbit = 17 kg + 7 kg + 3 kg = 27 kg



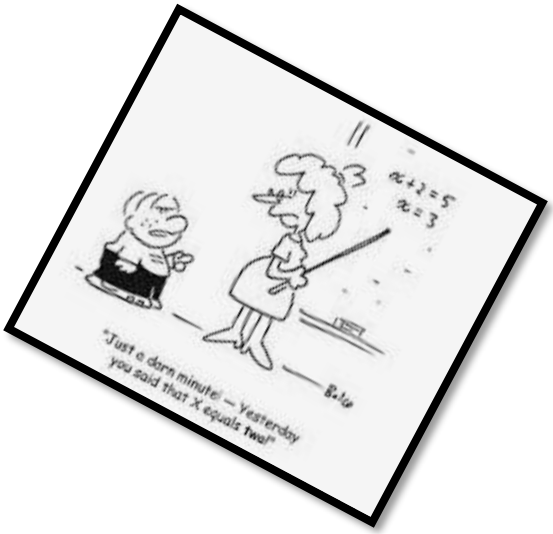

MATH
IS
FUN

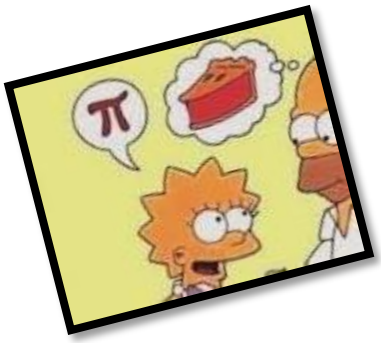

DO i
REALLY
EXIST?
√-1


WHY SHOULD A MATH TEACHER NEVER CALL HER STUDENTS AVERAGE?
Because it's a 'mean' thing to say!

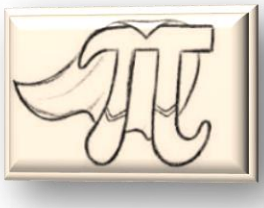

WE'RE CALLING IT "PUMPKIN PI."
I'LL PUT THIS AT THE END, UNTIL WE BUY MORE.
3.1415


GUESS WHAT DAY IT IS?
PI DAY!


"Just a darn minute! – Yesterday you said that X equals two!"


π

CLICK HERE TO
READ MORE ON OUR WEBSITE



****

Columbus Regional Math Collaborative
Frank Brown Hall
1127 Broadway
Columbus, GA 31901
Mailing Address:
4225 University Avenue
Columbus, GA 31907