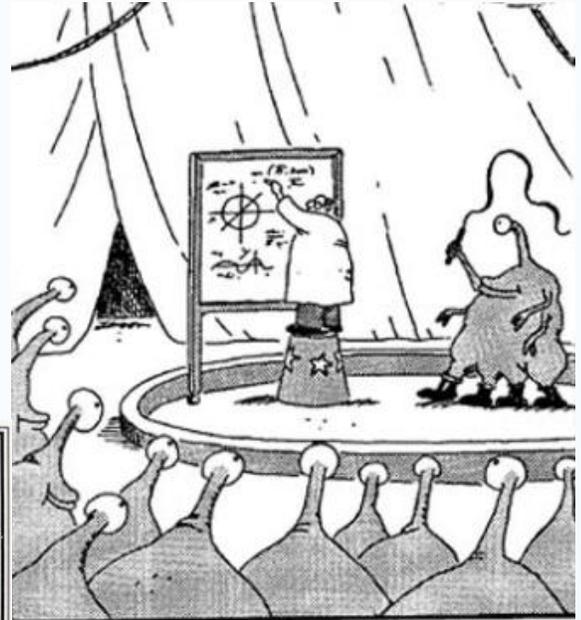# A³
Summer, 2017
DAY 5

- **PLEASE SIGN IN**

- **No assigned Seating**

"Go for it, Sidney! You've got it! You've got it! Good hands! Don't choke!"
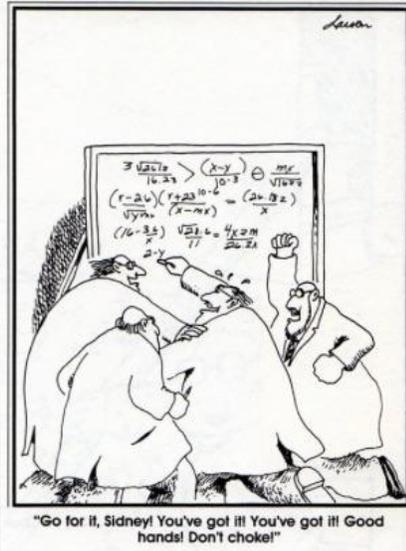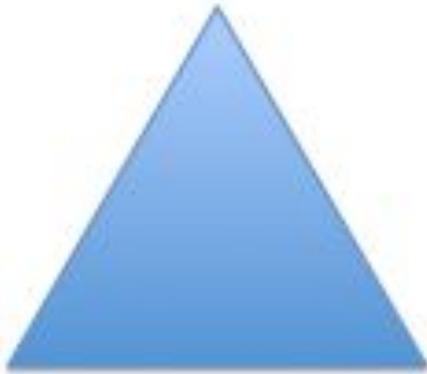

Abducted by an alien circus company, Professor Winters is forced to write Linear Algebra equations in center ring.

Agenda

- Reflections
- Fractions and number properties
- Locker Problem
- Progressions review
- Lunch
- Progressions Presentations
- Writing Probes
- Closure - Homework and Next steps
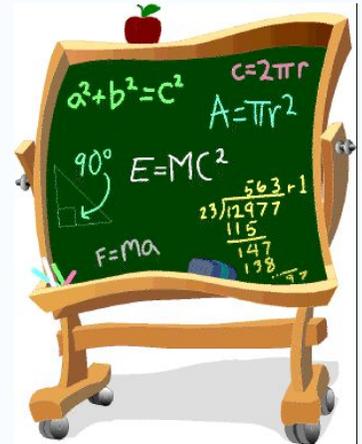
Important things we've learned

1. How to divide fractions using diagrams / pictures
2. You have to Identify the whole(s) when working with fractions
3. ⅘ can be a whole
4. There are so many people here with such a great amount of knowledge! and …...We all need a good night's sleep!
5. How to draw a picture for ⅔ divided by ¾
6. I'm realizing I need structure when approaching an open-ended problem and I need to provide that structure for my students as well
7. Probes are pain
8. Writing good probes is hard
9. Fractions can be written in different bases
10. making meaning out of -why we multiply by the reciprocal when dividing fractions
11. that all the teachers in this grant group are amazing and deserve respect
12. our dividing fraction conversation was "huge"
13. the ⅗ of whole when you have ⅘ compared to fraction division
14. that you can work the mango fraction problem backward
15. Writing probes is not getting any easier - still challenging - still difficult
16. Probe writing was a lot better today - more interesting writing for a common misconception in my classroom
17. I'm not the only one who struggles with fraction operations
18.

Things that squared with our thinking!

1. Collaboration helps clarify and deepen understanding
2. it's helpful to discuss progression documents in cross grade level groups
3. Jimmy Buffett sucks
4. Probe writing is still a lot of work, but easier now and more interesting.
5. I appreciate writing these probes with different people to get different perspectives.
6. Progressions help me see how "I" fit in.
7. Feet and inches are easier in base 12 - my students have always said 6.2 is 6ft 2 in.   8-)
8. Probes are difficult
9. Drawing good fraction models can be challenging
10. I'm still glad I teach 4th grade
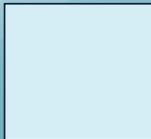
What is still circling?

1. Is probe writing next week going to be easier?
2. WIll the probe writing be easier due to the practice we have had?
3. Please put a link to the cup activity on line …..
4. Will we have enough time?
5. I would enjoy continuing this process. Crazy thinking about where we/I started. So much learning.
6. What is the best way to start writing probes?
7. When is A cubed part 2 going to start?
8. How does what we do in the math world compare with what is done in other realms - like business ed?
9. Who will help me fix probes after this grant ends?
10. The more we discuss k-12 the more I feel that to be an effective secondary teacher I need to teach every grade level!!
11. Using diagrams to multiply and divide fractions can be confusing
12. How do I go back and help our elementary grow?
13. can using arrows on the number line to indicate direction be confused with arrows used for inequalities?
14. Start writing with misconceptions or WOT's????
15. Is preservation of the distributive property really the main reason that a negative times a negative is a positive?
16. I thought probe writing was going to get easier

AND………..

Progression Prep (30 min)

1. Form a team with the other people who read the same progression document
2. List the big ideas / understandings in your progression
3. Prepare a poster that you will share with the whole group after lunch

Plan your presentation including any discussion and question for about 5 minute.

Lunch

DID YOU REMEMBER TO SIGN IN FOR THE AFTERNOON SESSION????

Poster Presentations

Writing Time….

Options:

1. Continue work with the Stats/Prob probes
2. Begin brainstorming ideas for probes (look at standards to determine areas of focus, decide how you are going to split up into teams, etc.)
   a. K - 5 teams will work with 3 domains (Number and Operations in base 10, Operations and Algebraic thinking, Fractions)
   b. 6 - 8 teams will work with 4 domains (The Number System, Expressions & Equations, Functions and Ratio and Proportional….)
   c. 9 - 12 teams will work with 3 domains (Number & Quantity, Algebra and Functions)

Feedback Forms