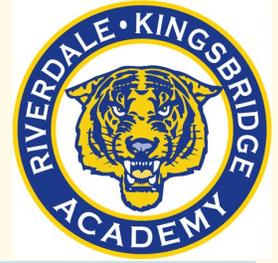November 2015

High School Mathematics Newsletter

Curriculum News from our Classes

9th Grade

Algebra 1 Common Core

We have recently finished the 2nd unit of the course covering Inequalities and Absolute Value Inequalities. We are now into the third unit of the course covering analyzing functions, domain, and range, and "analyzing linear equations in slope-intercept and standard form." We are also analyzing the graphs of Absolute Value Functions. During the week of 11/2—11/6, students will be working on exploring the relationship between the volume of water and the number of marbles it takes to displace the water. You can check on how your child is progressing in class by logging onto www.jupitergrades.com. Please make sure that your children are on top of their assignments.

10th Grade Geometry

Common Core

"Transformations "was a big topic in October. We looked at the four basic transformations, then applied construction techniques to them. Finally, we chained them together in compositions. The first test of the second marking period was Compositions.
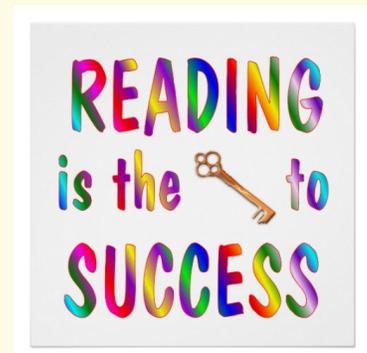
After transformations, our next stop is building to the dreaded proof. We begin with the idea of axioms—things we all agree are true without actually having to prove them. Then we will explore ideas of proof and begin with some simple two-column proofs.
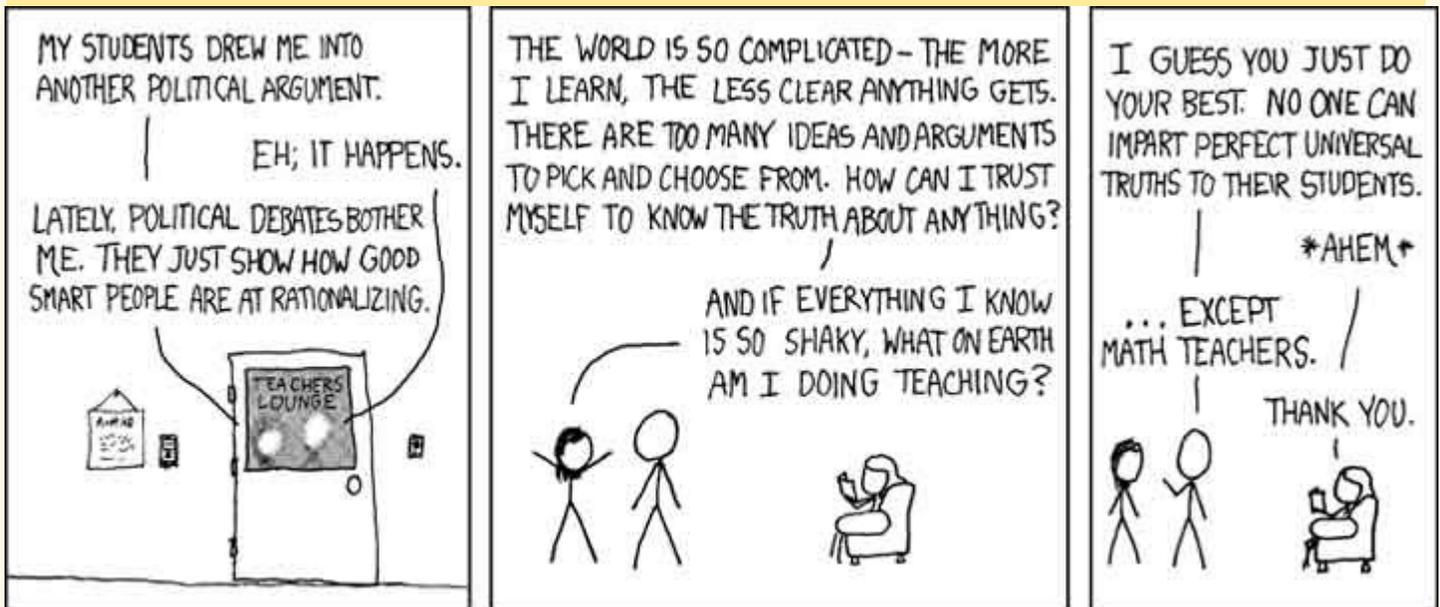
The "Proof" is one of the more stressful topics in geometry for most students. It requires us to distinguish between what we think might be true and what we absolutely, positively know MUST be true. It's a little like playing a game of Sudoku. If you fill in the

IMPORTANT DATES

Week of 11/2/15—Writing Tasks

Thursday 11/19—Parent/Teachers Conference

READING is the 🔑 to SUCCESS

MY STUDENTS DREW ME INTO ANOTHER POLITICAL ARGUMENT.

EH; IT HAPPENS.

LATELY, POLITICAL DEBATES BOTHER ME. THEY JUST SHOW HOW GOOD SMART PEOPLE ARE AT RATIONALIZING.

TEACHERS LOUNGE

THE WORLD IS SO COMPLICATED — THE MORE I LEARN, THE LESS CLEAR ANYTHING GETS. THERE ARE TOO MANY IDEAS AND ARGUMENTS TO PICK AND CHOOSE FROM. HOW CAN I TRUST MYSELF TO KNOW THE TRUTH ABOUT ANYTHING?

AND IF EVERYTHING I KNOW IS SO SHAKY, WHAT ON EARTH AM I DOING TEACHING?

I GUESS YOU JUST DO YOUR BEST. NO ONE CAN IMPART PERFECT UNIVERSAL TRUTHS TO THEIR STUDENTS.

AHEM

... EXCEPT MATH TEACHERS.

THANK YOU.

Curriculum News (continued)

cells in Sudoku with guesses for numbers that seem possible, you run the risk of an error that will contaminate everything that comes after it. The legal profession has a name for it—"the fruit of the poisoned tree". But that's not really a surprise, given the similarities between geometry and law. Yes, really!

11th Grade
Algebra 2 Common Core

In Algebra 2, the students have been learning various techniques of factoring, such as expressing a trinomial as a product of two binomials, grouping, and taking out a greatest common factor.   They are currently exploring how rewriting expressions in factored form can make seemingly difficult prob-

lems much easier to solve. In particular, they have been using factoring to solve quadratic equations and simplify rational expressions. Students continue to challenge themselves in groups, tackling novel problems with the skills they have been acquiring. In the future, students will be encountering some obstacles for factoring, as well as modeling real-life scenarios with polynomial equations. Students who need extra help are welcome to work in Room 310 during 6th period or by appointment after school.

Reach us any time via Jupiter Grades or via the email addresses posted @RKA141.org

Triangle Investigation

We recently completed an investigation in Geometry. The model for this will be an assignment given to new employees by their boss, who needs an answer soon to give to the vice president. The task not only involves investigation to determine an answer, but also organizing and communicating the answer to the boss. The final result will be writing a memo that the boss can bring to the vice president. It should be a different experience from the theorems and proofs we are starting to get into. Wish us luck.

Brainteaser!

What is the next letter in this pattern?

Z, O, T, T, F, F, S, S, E, ___

Events Outside of RKA

Math Encounters: "Chaos in the Climate" with Gavin A. Schmidt
Wednesday, November 4, at 4:00pm and 7:00pm
Nat'l Museum of Mathematics, 11 E. 26th St.

How do we deal with the chaotic climate system? What do models of chaos look like, and why are mathematical models so unreasonably effective, even though they are far from perfect? Dr. Gavin A. Schmidt, Director of the NASA Goddard Institute for Space Studies, will help us understand why it's possible to make predictions, even when they involve seemingly unpredictable systems. Refreshments follow the afternoon presentation of Math Encounters; arrive by 6:30 pm for refreshments preceding the evening presentation. Register at mathencounters.org. - See more at: http://momath.org/about/upcoming-events/#sthash.NYM6Y1qP.dpuf