Geometry 2020-2021 Room #314

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Tutoring Hours: MWF Lunch or by Appointment before/after school | Room #314

Welcome to Geometry. Welcome to Math. Like the study of mathematics, my class is a welcoming inclusive space. We will explore your ideas and identity through the lens of Geometry. I'm excited that you are going to learn with me over the course of the next school year. - Mr. Krall

Geometry is a branch of mathematics involving space, shape, size, and position of things. Here are a few Geometers (those who practice Geometry).

 Emmy Noether (1882-1935) Fixed Einstein's Theory of Relativity with *Noether's Theorem*	 Vivienne Malone-Mayes (1932-1995) First African-American professor at Baylor University	 Maryam Mirzakhani (1977-2017) Beautiful mathematical work; exceptional communicator

I highlighted these three Geometers because they bring a bunch of different mathematical skills to the table:

Outspoken	Courageous	Curious
Creative	Collaborative	Persistent

Some of my mathematical skills are the following:

Willingness to be wrong	Thoughtful	Humorous

What are some of *your* skills?

In order to bring out these skills, we need to ensure that our math classroom is a safe, inclusive space that allows us to think deeply. In order to do that, I'd like to offer a few *norms* or "ways of being." I also invite you to develop additional *norms* with me.

Be curious and express curiosity	Encourage one colleague every day	Work on the same problem at the same time

We will reflect on these *norms* often. I'll do my best to live up to them.

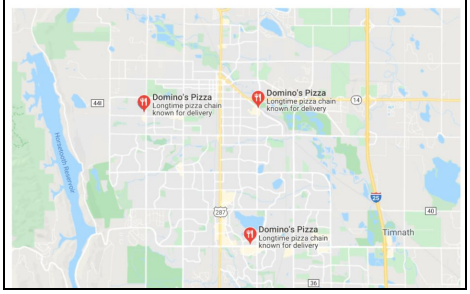
And now, some triangle dot paper. Feel free to doodle.

The Structure of our Course: Portfolio Problems. Our courses will be structured around ten problems of significant complexity and value. Here are three problems we are going to solve this year. There are eight additional problems posted around the room (for a total of ten "anchor problems." We'll learn strategies to solve them and you'll keep a record of your solution methods in a mathematical work portfolio.

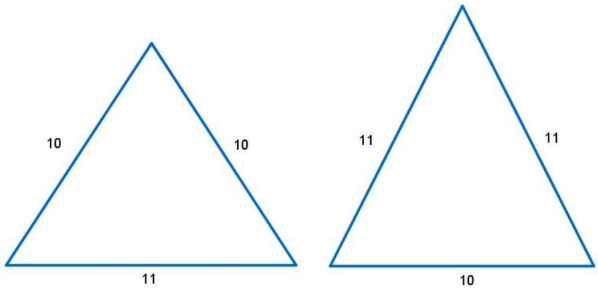
Portfolio Problem #1: Pizza Delivery Problem (September)

Domino's Pizza has three locations in Fort Collins, CO. I would like you to determine the delivery zones for each. When a customer enters their address in the delivery's website, it should automatically connect them to the closest store.

Below is a map of Fort Collins with each of the three Domino's Pizza locations. Use whatever tools, reasoning, and discussion you can to design the delivery zones for each. Please ensure that the delivery zones cover ALL of Fort Collins (including Timnath).

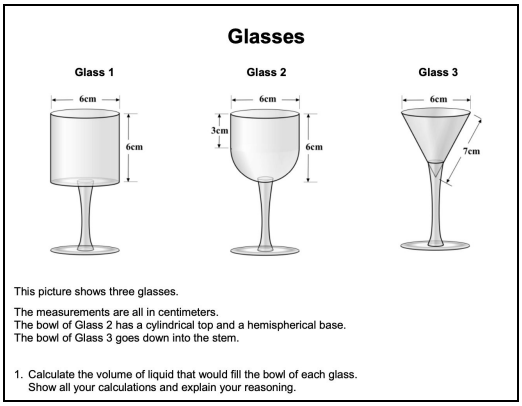


Portfolio Problem #2: Equilateral-er Triangles (October)



Which of these two triangles is the "more equilateral" triangle?

Portfolio Problem #3: Glasses (November)



Portfolio Problem #4: Elmo's Microwave Travel (December)

- How many rotations will Elmo make?
- How far does Elmo travel?

Grades. A few words about grades:

- Grades are not an accurate representation of what you know, what you can do, and who you are. Nevertheless, I understand how important they can be to your future. I will approach your grade with humility.
- Any grade you receive is eligible for full credit on redos.
- Any grade you receive is up for negotiation. Come see me and we'll figure it out.
- The assignments that count the most will be graded using a *rubric*.

How will I calculate your grade? Because I have to input a numerical grade in the gradebook at the end of every grading period, here's my breakdown:

- Mathematical Work Portfolio: 40%
- Daily Assignments: 40%
- Tests and Quizzes: 20%

And now for a bit more fun. Shade one section and see if you can figure out what fraction of the whole shape it is.