Dr. Sarah's Welcome to MAT 3610: Introduction to Geometry Worksheet!

Physical Geometry Manipulative: measuring tape

Discuss with your classmates as you write your responses on here or use a stylus to electronically write on the PDF version available from the top of ASULearn via the "in-class items, video slides and more" link. Discuss and ask me questions during group work time as well as when I bring us back together:

1. **Monday-Wednesday Class**: I reward and value your engagement and active learning in this class, where you will try course activities and get feedback from your peers and/or me as you are working. This may feel harder than a lecture style where you are mostly listening rather than doing—here you are mostly doing!—-but educational research shows that it is much better for your learning!

   ASU designates that "Face-to face component is not a lecture but provides time for discussion, demonstrations, problem-solving, and higher-level thinking and collaborative activities. Class time is used to apply course content in ways that can only be accomplished when everyone is together" `https://cetlss.appstate.edu/teaching-learning/course-delivery-options`.

   ASU prepares students to employ various modes of communication that can help communities reach consensus or respectful disagreement: successful communicators interact effectively with people of both similar and different experiences and values and in this class you will practice oral and written communication during class by interacting with your peers and me. Regardless of gender, political party, race, religion, sexuality, or more this class is to be a welcoming environment, and so I want you to be sensitive and respectful to each other in upcoming discussions. We are all responsible for fostering a supportive and welcoming environment where everyone feels encouraged to participate and learn. Part of that is to keep an open mind, actively listen to others and encourage everyone to participate, maintain a professional tone, show respect, and make your contributions matter. Focusing on our course content and activities throughout class, asking or answering related and thought-provoking questions, coming up with creative ways of thinking about the material, and explaining the material to others are some examples of effective class engagement.

   Write down any questions you have on the above or draw me a smiley face if you don't have any questions. If you need more room on this or any other question, attach an additional sheet.

2. **Building Community Part 1**: Introduce yourselves to those sitting near you. What are their preferred first names? If you weren't able to be there write N/A or give reference to anyone you had help from.

Reflections on Geometry Experiences

3. Discuss with your group: What positive experiences have you had with geometry in the past? Then write down one or two items you found interesting.

4. Discuss with your group: What challenges have you had with geometry in the past? Then write down one or more items you found interesting.

Concept Development and Connections among Mathematical Perspectives

5. A line: Mathematics often starts with definitions, but the definition of an object may not be consistent across time, context, or even from one book or course to the next. Discuss various perspectives related to a line and come up with your own group's definition of a line.

6. In what classes in college has your group seen lines arise and in what contexts?

7. Discuss various perspectives about why lines are useful in real-life and write down one or more that you found interesting.

8. Do you have access to a laptop, tablet, or phone that you can bring to future classes to access the internet?
   Circle one: yes no maybe
9. Tablets, phones, computers and more are typically measured across the diagonal for advertising dimensions. This practice was started by early television manufacturers to make the size seem more impressive. If you or someone at your table has a tablet, phone, or computer with you (if not, let me know) then what are the horizontal, vertical and diagonal line measurements on the outer edges (include any cases you have on it)? Sketch and label the measurements.

10. What is a theorem that would relate the horizontal, vertical and diagonal line measurements? Discuss and then write the theorem as an axiomatic statement—in MAT 2110 or equivalent, the prerequisite for this class, you made use of axioms.

11. Test the theorem with your measurements. Up to measurement error and rounding, does it hold?

12. **Building Community Part 2**: If you are finished discussing and responding to the above before I bring us back together, chat to get to know your classmates better.

13. **PDF responses to ASULearn**: Collate your handwritten responses, preferably on this handout, into one full size multipage PDF for submission in the ASULearn assignment. I recommend you turn it in sometime today, but you have until later so you can acclimate to the technical requirements of our course. Typically these are due before the start of the next class. I provide personalized feedback as I grade these for a good faith effort. Mobile apps like Adobe Scan or CamScanner can work well. You can also use many printers or photo copiers to scan to PDFs—the school library lists that as an option and they can help: `https://library.appstate.edu/services-search/print-zone-tech-help`