Geometry A
Course Syllabus

I. Contact Information and "Office Hours"

Mr. Jackson
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Mr. Slezak
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- Math Lab = Thursday afternoon

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II. Course Description

In this course, you will learn to use new models and methods to think about problems as well as solve them. You will be developing powerful mathematical tools and learning new ways of thinking about and investigating situations. You will be making connections, discovering relationships, figuring out what strategies can be used to solve problems, and explaining your thinking. Learning to think in these ways and communicate about your thinking is useful in mathematical contexts, other subjects in school, and situations outside the classroom. The mathematics you have learned in the past will be valuable for learning in this course. That work, and what you learn in this course, will prepare you for future courses.

III. Course Objective (BIG IDEAS)

Chapter 1: You will...
- Become familiar with basic geometric shapes and learn how to describe each one using its attributes, such as parallel sides or rotation symmetry.
- Investigate three basic rigid transformations: reflection (flip), rotation (turn), and translation (slide).

Chapter 2: You will deepen your understanding of...
- The relationships between pairs of angles formed by transversals and the angles in a triangle.
- How to find the area and perimeter of triangles, parallelograms, and trapezoids.
- The relationship among the three side lengths of a right triangle (the Pythagorean Theorem).
- How to determine when the lengths of three segments can and cannot form a triangle.

Chapter 3: You will learn...
- How to support a mathematical statement using flowcharts and conditional statements.
- About the special relationships between shapes that are similar or congruent.
- How to determine if triangles are similar or congruent.

Chapter 4: You will learn...
- The trigonometric ratio of tangent.
- How the tangent ratio is connected to the slope of a line.
- How to apply trigonometric ratios to find missing measurements in right triangles.
- How to model real world situations with right triangles and use trigonometric ratios to solve problems.
- Several ways to model probability situations, such as tree diagrams and area models.
- How to formalize methods for computing probabilities of unions, intersections, and complements of events.
- How to find expected value in games of chance.

IV. Course Materials

- Spiral Notebook: Organize journal entries, class work, and homework
- Calculator (scientific calculator): Finish homework outside of school
- Writing Utensil: Pencils with eraser

V. Grading

10% is based on WORK HABITS
- Ready – Homework complete, materials out, prepared to learn
- Respect – Follow instructions, study team expectations
- Responsible – Take care of materials, help others

Inquiries about the work habits grade should be brought to the teacher's attention within a week of the published grade.

20% is based on HOMEWORK or other class work
Homework is where we want you to TRY and make MISTAKES. In general, homework will be checked for completeness and NOT correctness. You are responsible for keeping all of your assignments complete and organized in your math folder.

You will receive full credit for all the homework you have completed on time. Late homework assignments will receive zero points. However, we expect you to finish and turn in ALL assignments no matter how big or small. You will still receive zero points for any late work, but it will be completed and you will be prepared.

You are **expected** to be a positive, active participant in class. Contributing ideas and questions during class discussions and working together with other students are examples of being a positive, active participant.

20% is based on QUIZZES
There will be frequent quizzes and Team Assessments over material covered and discussed in class. These quizzes are designed to help you assess your progress. Quizzes will help you gain confidence in the material you understand and will let you know what material you still need help on.

50% is based on TESTS
Tests will be given at the end of each unit. There are no re-takes on tests. **Test corrections** will be available for anyone who has completed all homework requirements on time for the unit.