Peters Township High School
Course Syllabus: Geometry Honors

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| Course Information | Teacher Information |
| Course Length: Full YearClass Location: Room 212Teacher Website: Access to upcoming test dates, teacher notes & homework schedule[ranone.educatorpages.com](http://ranone.educatorpages.com/)Reminders will be sent out via the Remind App | Name: Mrs. RanonePhone: 724.941.6250 ext. 5384Email: RanoneT@pt-sd.org |

**Course Overview and Essential Skills**

This course is a study of language, concepts and techniques of Geometry that will challenge students to critically analyze and logically solve problems. This course is the foundation for students’ ability to recognize spatial relations and apply logical reasoning skills. Topics include parallel and perpendicular lines, triangle congruence and properties, polygons, similarity, trigonometry, circles and spatial reasoning. Many real world applications are presented within the course content. This course includes a heavy emphasis on Algebra skills such as setting up and solving equations, graphing, systems of equations and factoring. The pacing of this course is rigorous.

**Course Textbook and Required Materials**

* Geometry

Holt McDougal

ISBN# 978-0-030-99575-0

 • Required (and essential) daily materials:

Textbook, Three-Ring Binder/Notebook, Pencil, Calculator (Scientific or TI-84 Plus)

* Online Book: <http://my.hrw.com/>

**Note:** Below is the username/password for the Common Core edition of our textbook. Not all exercises and chapters match the version of the book that we use daily. Please use this text as an additional resource, but not to complete homework.

Username: geometryhn1

Password: ranone

**Teacher Grading Policy**

**Homework**

You are expected to keep track of homework assignments. The best way to learn and understand math is to practice with the homework problems; homework assignments reflect the skills we work on in class. Each day’s lesson builds on what was learned the previous day.

* Each homework assignment is worth **five points**. You will only earn five points if the assignment is complete (i.e. you have showed all work and you have followed all directions).
* Homework will be checked based on completion not accuracy, but the expectation is that you will put forth your best effort.
* Homework will be checked randomly each week. I reserve the right to check homework more often or less often. Although homework will not be checked for points every day, homework answers will be reviewed and questions will be answered on a daily basis.
* Because homework is reviewed daily, **late homework is not accepted**.

**Tests and Quizzes**

Assessments will be completed for each unit. Test/Quiz dates will be posted at least one week in advance.

* Tests and quizzes range in value depending on the material covered.
* All assessments are designed to be completed in **one** class period (or less).
* You will receive a set of review problems/outline in some form prior to completing a test, but you should also review your notes and handouts from class in order to be successful.
* If you are absent from class on the day of a test, you are responsible for scheduling a time to complete the test. The test must be completed at a time that we have agreed upon.
* Make-up tests may be completed after school, during your lunch, during your study hall, or during your scheduled class period (you are still responsible for the work that we do in class).

Your grade in this class is based on cumulative points. The overall grade for a nine week period will be determined by dividing a student’s total points by the overall total points and multiplying by one hundred.

**Classroom Procedures and Expectations:**

My expectations for you are very simple and are meant to help you achieve success in Algebra II.

I expect that you:

* Will show respect to any teacher, fellow student, or visitor in the classroom.
* Will come to class prepared by completing the previous night’s homework assignment and studying regularly for tests and quizzes. Make sure you always have a pencil, book, notebook/binder and calculator.
* Will be in class daily. It is hard to learn the material when you are not here.

When you are absent, it is **your** responsibility to:

* + Get the notes that you missed from a reliable classmate, and review the material covered.
	+ Get missed assignments from the class website and any missed worksheets (if necessary) from the classroom when you return.
* Will not cheat or plagiarize any work that is meant to be a representation of your ability.
	+ Do not give me a reason to question your integrity.
	+ **If you are caught copying homework or cheating on a test, you will receive a zero for the assignment or assessment.**
* Will arrive on time to class. We work from bell to bell. If you are late to class, you are missing instruction.
* Will seek help when you do not understand a concept. You are expected to keep up by taking the initiative to find help from me.
	+ I will be available before school each morning from 7:00-7:20 and after school on Mondays, Tuesdays, and Thursdays from 2:20-2:50.
	+ I am in the Tutoring Center in the Library 3rd period, and I have Study Hall in the Cafeteria 8th period.
* Will not have your cell phone/earbuds out during class. If your cell phone is out during class, it will be confiscated for the period. After the first offense, cell phones will be sent to the main office and can be picked up after 9th period.
	+ **All student cell phones will be collected upon entering class on test days and will be placed in the front of the classroom. Once all tests have been turned in, cell phones will be returned.**

**Honor Code**

All academic work in this course follows the Academic Integrity Policy (#145) of the Peters Township School District.  Students are expected to maintain the Peters Township Honor Code:

*As a student of Peters Township School District, I recognize the value of my own learning and pledge to maintain honesty and academic integrity in all that I do.  All work that I submit is my own.*

* Any student that is unsure of the expectations of an assignment should seek clarification from the teacher.
* Upon submission of every assignment and assessment in this class, you are agreeing to comply and uphold the PTHS Honor Code**.**

**Course Outline of Material Covered:**

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| Unit or Topic | Concepts/Skills/Resources | Timeframe |
| Chapter 1Foundations for Geometry | * Identify and describe points, lines and planes
* Measure and construct segments
* Measure and construct angles
* Identify and apply angle relationships
* Use formulas in geometry
* Find midpoint and distance in the coordinate plane
* Perform transformations in the coordinate plane
 | 4 Weeks |
| Chapter 2Geometric Reasoning | * Use inductive reasoning to make conjectures
* Identify and write conditional statements
* Identify and write biconditional statements and definitions
* Use deductive reasoning to verify conjectures
* Analyze direct and indirect arguments
* Create and analyze truth tables
* Construct algebraic proofs
* Construct geometric proofs
 | 4 Weeks |
| Chapter 3Parallel and Perpendicular Lines | * Identify and apply angle relationships formed by lines
* Identify and apply angles formed by parallel lines and transversals
* Prove lines parallel
* Identify and apply properties of perpendicular lines
* Differentiate between slopes of lines
* Graph parallel and perpendicular lines in the coordinate plane
* Construct geometric proofs
 | 3 Weeks |
| Chapter 4Triangle Congruence  | * Classify triangles
* Identify and apply angle relationships in triangles
* Identify and apply properties of congruent triangles
* Use triangle congruence theorems: SSS, SAS, ASA, AAS, and HL
* Identify and apply properties of isosceles and equilateral triangles
* Construct geometric proofs
 | 3 Weeks |
| Chapter 5Properties and Attributes of Triangles  | * Identify and apply properties of perpendicular bisectors and angle bisectors
* Identify and apply properties of bisectors of triangles
* Identify and apply properties of medians and altitudes of triangles
* Apply the triangle midsegment theorem
* Identify inequalities in one triangle
* Identify inequalities in two triangles
* Apply the Pythagorean Theorem
* Apply Special Right Triangles
 | 4 Weeks |
| Chapter 6Polygons and Quadrilaterals | * Identify and apply properties and attributes of polygons
* Identify and apply properties of parallelograms
* Apply conditions for parallelograms
* Identify and apply properties of special parallelograms
* Apply conditions for special parallelograms
* Identify and apply properties of kites and trapezoids
 | 3 Weeks |
| Chapter 7Similarity | * Define and set-up ratios
* Define and solve proportions
* Set-up ratios and solve proportions in similar polygons
* Identify and apply triangle similarity theorems: AA, SSS, and SAS
* Apply properties of similar triangles
* Use proportional relationships
* Identify and apply dilations and similarity in the coordinate plane
 | 3 Weeks |
| Chapter 8Right Triangles and Trigonometry | * Identify and apply similarity in right triangles
* Identify and apply trigonometric ratios
* Solve for missing angles and side lengths in right triangles
* Identify and solve for angles of elevation and angles of depression
 | 3 Weeks |
| Chapter 9Extending Perimeter, Circumference, and Area | * Develop formulas for triangles and quadrilaterals
* Develop formulas for circles and regular polygons
* Calculate perimeter and area of composite figures
* Calculate perimeter and area in the coordinate plane
* Investigate the effects of changing dimensions proportionally
* Solve problem situations involving geometric probability
 | 3 Weeks |
| Chapter 10Spatial Reasoning | * Identify, construct, and represent three-dimensional figures
* Apply formulas in three dimensions Calculate the surface area of prisms and cylinders
* Calculate the surface area of pyramids and cones
* Calculate the volume of prisms and cylinders
* Calculate the volume of pyramids and cones
* Calculate the surface area and volume of spheres
 | 3 Weeks |
| Chapter 11Circles | * Identify and apply properties of lines that intersect circles
* Define, identify, construct and calculate the measure of arcs and chords
* Apply formulas for sector area and arc length
* Define, identify, construct and calculate the measure of inscribed angles
* Identify and apply angle relationships in circles
* Identify and apply segment relationships in circles
* Write equations and graph circles in the coordinate plane
* Solve problems using the equation of a circle and/or the graph of a circle
 | 3 Weeks |

\****Depending on the needs of the class or changes in the school year, the course outline is subject to change.***

**Detach and Return**



**Geometry Honors**

We have read and understand the class policies and expectations.

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(Print Student Name) (Print Parent/Guardian Name)

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(Student Signature) (Parent/Guardian Signature)

Preferred form of contact Phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

for Parent/Guardian:

(Please check one.)

 E-Mail \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is there anything you would like me to know as we begin this transition?