Hellgate High School
Forward Thinking, High Achieving

Geometry – 2016-17

Instructor Information

Instructor: James Fields
Room: 118
Email: jfields@mcps.k12.mt.us
Phone: 406.728-2400 ext. 6046
Course Web Page: http://www.mcpsmt.org/Page/11018
Course Calendar: https://docs.google.com/spreadsheets/d/1TEoqwKIqik-SK9pms6hzkMxjV65yxAGNfzzQV3RzCPk/edit#gid=0

Welcome to Geometry!

This course is a study of Euclidean Geometry. Topics discussed include dimensional objects (lines, planes, polygons, circles, and polyhedrons), angular measurement, congruency, similarity, deductive and inductive reasoning, formal proofs, relational computations (perimeter, area, and volume), right triangle trigonometry, and practical applications. Algebraic concepts and techniques are integrated and emphasized trough the course to aid in the understanding of geometric concepts and applications, and to reinforce proficiency in algebraic skills.

This course meets the Montana State Standards as well as the Common Core State Standards for Mathematics.

Montana Common Core Learning Outcomes:

1. Experiment with transformations in the plane.
2. Understand congruence in terms of rigid motions.
3. Prove geometric theorems.
4. Make geometric constructions.
5. Understand similarity in terms of similarity transformations.
6. Prove theorems involving similarity.
7. Define trigonometric ratios and solve problems involving right triangles.
8. Apply trigonometry to general triangles.
9. Understand and apply theorems about circles.
10. Translate between the geometric description and the equation for a conic section.
11. Use coordinates to prove simple geometric theorems algebraically.
12. Explain volume formulas and use them to solve problems.
13. Visualize relationships between two-dimensional and three-dimensional objects.
14. Apply geometric concepts in modeling situations.

Textbook:

NYS Common Core Mathematics Curriculum
Packets for each module will be handed out in class. Electronic copies of the packets are linked here:

- Module 1
- Module 2
- Module 3
- Module 4
- Module 5

Required Materials:

You will need the following by the end of the first week of class:

- Notebook dedicated to geometry
- Pencils
- 3-ring binder with pocket folder
- Scientific Calculator **(cannot use cell phones on exams)**
- Compass
- Protractor with straight edge

Behavior Expectations:

In addition to what's outlined in the student handbook and the Montana Behavior Initiative, I have 3 simple expectations in my class:

1. **Be respectful to everyone and everything in the classroom, including yourself.**
2. **Do not be disruptive to anyone else or yourself.**
3. **Focus on math in class and cooperate and discuss math with your classmates and myself.**

What does that mean?

- Be in class.
- Be on time.
- Work hard on math. Anyone can do math with work, but you need to work to succeed.
- Cell phones silent at all times and away while I or classmates are addressing the class.
- Listen while I or classmates are addressing the class without talking.
- Cell phones are to be used for appropriate class-relevant tasks only during work time.
- Music through earbuds or headphones is fine only during individual work time.

Class work and Homework:

The time you spend struggling with the class work and homework problems is the most important time you will spend on this course. Working hard on the homework and class work is how you will succeed in this class. Take it seriously and be generous with the time and energy that you put into it. You are allowed to work together with your classmates on the assignments, but be sure that when you are finished you understand the learning target on your own because **you will be tested individually on your understanding of each learning target.**

Grading:

Your grade will be comprised of summative assessments (exams) at the end of topics and modules and formative assessments, which include your class work and homework. Summative assessments will account for 80% of your grade and formative assessments will account for 20%.

Assessments will be broken down by learning target. You will be given a score of 0-4 on each learning target according to the rubric on the following page. Final grades will be according to this scale:

A: 87.5 – 100%
B: 75 – 87.49%
C: 62.5 – 74.99%
D: 50 – 62.49%
F: <50%

0 No Evidence	1 Below Standard	2 Nearing Standard	3 At Standard	4 Exceeds Standard
Blank	Missing or incorrect answer and little evidence of reasoning or application of mathematics to solve the problem.	Missing or incorrect answer but evidence of some reasoning or application of mathematics to solve the problem.	A correct answer with some evidence of reasoning or application of mathematics to solve the problem, **OR** an incorrect answer with substantial evidence of solid reasoning or application of mathematics to solve the problem.	A correct answer supported by substantial evidence of solid reasoning or application of mathematics to solve the problem.

Make-up Work:

If you miss class, it is **YOUR** responsibility to make the work up. If possible, check the course calendar and do the work while you are gone if you miss a day. Do not ask me what you missed when you come back! I will have everything posted on the course calendar, so check there.

Make-up exams will not take place during class time. You must make arrangements to take the exam with me before school, after school, during lunch, or during a study hall.