

Geometry Syllabus 2019-2020

Metropolitan Business Academy

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Extra Help Hours

Monday - 2:15-3:00

Tuesday - 2:15-3:00

Thursday - 2:15-3:00

Course Description: Geometry is the study of the size, shape and position of two and three dimensional figures. Geometry is found everywhere, and is often used daily without even realizing it. Just like in previous math courses, the skills taught in geometry will be crucial for success in future math classes and in life. The units we will cover are as follows: **Proof, Parallel, and Perpendicular Lines***; Transformations, Triangles, and Quadrilaterals; **Similarity, and Trigonometry***; Circles and Coordinates; ***Extending Two Dimensions to Three Dimensions***; Probability.
(Of note: * denotes a major focus of the course)

Course Standards

1. Problem Solving and Critical Thinking in Mathematics	Students can apply processes to define, evaluate and solve complex problems in math.
2. Clear and Effective Communication in Mathematics	Students can clearly convey meaning and ideas about math to varied audiences using different modes.
3. Abstract and Quantitative Reasoning	Students make sense of quantities and their relationships in problem situations.
4. Statistics and Probability	Students can interpret and apply statistics and probability concepts to analyze data, justify conclusions, and make inferences.
5. Algebraic Mechanics	Students can simplify algebraic expressions; solve problems involving algebraic equations; reason, describe, and analyze quantitatively using units and number systems.
6. Functions	Students can use a variety of functions to model real world applications and solve problems using multiple representations.
7. Solving Problems in 2 and 3 Dimensions	Students can use constructions, postulates, theorems, and formulae to model real world situations and solve problems in 2 and 3 dimensions.

21st Century Competencies

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| 1. Problem Solving and Critical Thinking | 4. Creativity and Innovation |
| 2. Accessing and Analyzing Information | 5. Initiative, Leadership and Accountability |
| 3. Communication and Collaboration | 6. Citizenship and Responsibility |

Performance Task Chart

Title	Description	Content Standards	21st Century Competencies
Class Engagement and Preparedness	Students will be evaluated based on their participation in class, their completion of the homework, and their engagement with the material.	#1 - 7	#3, 5, 6
Mastery Tests	Mastery tests are skills-based assessments. Students demonstrate their mastery of mathematical skills specific to the unit of study.	#1 - 7	#1
Showcases (Embedded Assessments)	Showcases require students to apply mathematical skills in real-world situations. Students demonstrate a deeper comprehension of the mathematical principles on EAs.	#1 - 7	#1, 3
Problems of the Month	The Problem of the Month is a non-routine, complex problem that allows for multiple avenues of problem solving. Students write up their solution and how they arrived at and checked that solution	#1 - 7	#1, 3, 4, 5
Practice PBAT (Performance-Based Assessment Task)	Ideally, one Performance Based Assessment Task will be completed by students each trimester. Students will apply their problem solving and mathematical skills in real-world situations.	#1 - 7	#1 - 4

Portfolio Criteria: Each trimester, you will gather examples of your best work for your portfolio.

Trimester 1	Trimester 2	Trimester 3
Mastery Tests Showcase	Mastery Tests Showcase	Mastery Tests Showcase
Evidence of Revision <ul style="list-style-type: none"> ● Error Analysis for MT ● Problem of the Month revisions 	Evidence of Revision <ul style="list-style-type: none"> ● Error Analysis for MT ● Problem of the Month revisions 	Evidence of Revision <ul style="list-style-type: none"> ● Error Analysis for MT ● Problem of the Month revisions
Mathematician of the Day & Teacher for a Problem Presentation & TFAP Reflection	Teacher for a Problem Presentation (2) & TFAP Reflection	Teacher for a Problem Presentation (2) & TFAP Reflection
Problems of the Month (2)	Problems of the Month (1)	Problems of the Month (2)

Required Materials

If obtaining any of these materials poses a difficulty, please contact me and we will find a solution.

- 3-ring binder (1-inch or larger)
- Writing implement (pencil preferred)
- Paper (preferably graph paper)

Class Expectations

- 1.
- 2.
- 3.
- 4.
- 5.

How You Will Be Graded

On Powerschool you will see mastery codes, a green checkmark, a 0, or a dash. A green checkmark means the item is complete and has been handed in. A zero (0) and an orange dot means the item has not been turned in or completed, including absences. A dash (---) might appear in place of a green checkmark or other codes if you use certain types of cell phones, so we recommend checking your powerschool on a computer. The mastery code meanings are below. Your goal is to reach competent or above on all major tasks for the year.

Mastery Language Abbreviations	Mastery Language	Progression to Meeting Standard	Standard Grading Equivalent
XE	Exemplary	Exceeds Standard with Distinction	100
CO-XE	Competent-Exemplary	Exceeds Standard (revise for exemplary)	93
CO	Competent	Meets Standard (revise for exemplary)	85
EM	Emerging	Approaches Standard (needs revision)	70
NY	Novice	Not Yet (needs revision)	60
NE	No Evidence	No Evidence of Work Yet (needs completion/revise)	50

Procedures and Policies

Do Now: Every day, we will begin the day with a Do Now that will serve as a warm-up for the class. Sometimes this Do Now will be a pile of papers at the front of the class. Other times, the Do Now will be projected on the board. The expectation is that you will silently and independently complete the Do Now at your assigned seat. This will be factored in to your daily class participation evaluation.

Classwork: During class, we will do a variety of different kinds of work. This includes group work, partner work, independent practice, and games. You are expected to fully participate and complete all given classwork. You should keep all classwork in your class binder, as this will help you stay organized and prepared for upcoming assessments.

Homework: Homework will be assigned every class period and checked at the beginning of the next class, during the Do Now. The expectation is that you complete the homework for every class in order to be prepared, but you are allowed to miss 5 homework assignments per trimester without a negative impact on your mastery. The problems are meant to help you practice throughout the week as you learn new material, as well as review material you have already learned. Homework is numbered by the unit and then which homework it is in that unit. For example, Homework #4.2 is Unit 4's 2nd homework assignment.

Problems of the Month: You will have approximately 15 minutes for 4 to 5 class periods (two weeks) to work on the Problem of the Month (POTM). If you do not turn it in on the due date, you will not receive credit for it. Instead, you may complete and turn in the make-up Problem of the Month, but you will not be given extra class time to work on it. At any time you may choose to attempt the Honors Problem of the Month, even if you are not completing an Honors Contract.

Cell Phones: Though cell phones are useful in many settings, the expectation is that they are silent and away during math class, in order to prevent distractions and allow every student to fully engage in the material. Your cell phone should be put away during class unless the teacher specifies otherwise.

Food and Drink: If you are thirsty or hungry during class, it is fine to drink or eat when you need to. Just make sure that you clean up anything that you bring to class.

Honors Contract

At the beginning of the year, you have the opportunity to sign an honors contract, agreeing to complete specific work in order to receive honors credit for Geometry. The requirements are:

1. You must complete all honors Problems of the Month
2. You must correctly complete half of the Challenge Problems on Mastery Tests
3. You may not miss more than 5 homework assignments per trimester
4. You must attempt all challenge problems on homework assignments

At the end of each trimester, you must set up a brief, 15-minute meeting with your teacher to check-in on your honors contract progress.

Revision

If you do not meet or exceed the standard on skill, you may revise it after taking the following steps:

1. Completing an Error Analysis sheet (for Mastery Tests)
2. Showing evidence of studying (completing old homework assignments, re-working classworks)
You must complete ALL of the homework assigned for that unit before retaking the Mastery Test
3. Attending an After-School Support session with your teacher.

Mathematician of the Day: Math has a long and interesting history, and we don't often get the chance to learn about it. It is especially unfortunate that most of the history we study about math is centered around the contributions of old white men. There are many different types of people that have made incredibly important contributions to our collective math knowledge.

Each day, we will have one student prepare a "Mathematician of the Day" 1-minute presentation. The expectation is that each student will have an opportunity to share with the class a very short story about what this person did in the world of math. Each student will also be responsible for creating a one page poster with a picture of the mathematician and a few facts or quotes to post on our wall of mathematicians. Please see me if you need any help.

Geometry Games: This year, I am teaching five different sections of geometry. In honor of Mr. Donohue, each class will be a team competing against the other classes. Classes will earn points for showing up on time to class, completing homework, and good classroom behavior and performance. There will also be weekly riddles posted that can be completed for extra points. At the end of the trimester, the class with the most points will win a prize.

By signing this document, I have read and understand the policies, procedures and rules of this classroom.

Print Name: _____

Student Signature: _____

Date: _____