

Algebra/Geometry I 2016-17

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Algebra/Geometry I (AGI) is always a very interesting and fun class to teach, and I am very grateful for the opportunity to do so.

This year AGI is my **4th hour class and generally meets Tuesday (block), Thursday (block), and Friday (33-minute class)**. As you may be aware, **I share my students with Ms. Kat Sharon for Science**. Since Science 8 is heavily math-based, this allows for the opportunity to coordinate the introduction of concepts in math and science in order for students to have the maximum learning benefit at an appropriate level of rigor.

Course Content: **AGI is a 9th grade level course. Students who complete AGI successfully (mastery level 3 or higher) will earn high school credit for this course AND placement in Algebra/Geometry II (10th grade level) for 9th grade.** AGI content is aligned with the Michigan Standards for Mathematics for both content and practice. In addition, AGI for 8th grade students includes the essential content from the 8th grade content standards (considerably more rigorous pre-requisite standards than were in place prior to the last few years).

The texts for the course are Connected Mathematics Project 3 and SIMMS Level I, A Modeling Approach Using Technology in addition to other print and digital resources.

Standards for Mathematics Content

Number and operations:

Real Number System and its subsets

properties of real numbers

exponents and their properties

square and cube roots

flexibility with composing and decomposing numbers leading to fluency with calculations

Statistics and Probability:

linear regressions

measures of correlation

theoretical probability for single and compound events

experimental probability

combinations and permutations

Algebra:

Relations and functions

multiple representations (equations, graphs, charts/tables, pictorial and narrative descriptions of real-world scenarios)

linear inequalities

exponential growth and decay

inverse and direct proportions

arithmetic and geometric sequences and series (explicit and recursive forms)

Geometry:

two-and three-dimensional figures and their properties

similarity and scale

application of geometric properties to model real-world situations

Measurement:

linear, area and volume measurements and their conversions within and across BOTH metric and customary measurement systems

equivalent rates

scale factor

volume and area factor relationships

Standards for Mathematical Practice:

Make sense of problems and persevere in solving them.

Reason abstractly and quantitatively.

Construct viable arguments and critique the reasoning of others.

Model with mathematics.

Use appropriate tools strategically.

Attend to precision.

Look for and make use of structure.

Look for and express regularity in repeated reasoning.

Class policies and procedures:

Agendas for each week are posted on my web site. Agendas contain learning goals presented as Focus Questions for each class meeting, an outline of learning tasks for students to experience in class, homework assignments, information about upcoming performance assessments (summative), links for students to use to assist in their learning, and special events or reminders.

Students must read, keep and refer to their math agendas for detailed information including detailed directions that override those in the text and/or on print or digital assignments.

A student who misses class due to absence is expected to access the agenda (online or there may be a hard copy available in my classroom “extras” bin) on the day she/he returns to school whether that day is a “math day” or not! With a block scheduling format, it is particularly important that students stay current with learning and that includes prompt attention to “absent work.”

Students are expected to show their problem solving strategies (evidence of their thinking process) and to justify their responses in writing.

Group and partner work is expected for many of these assignments. It is imperative that students work in functional, productive groups. Many students in AGI as 8th graders either want to dominate groups or work “in parallel” with other group members. These approaches are counterproductive since this class is a unique opportunity to tackle their first high school class with like-achieving peers. Part of the curriculum in this class is to assist students in learning how to work constructively in groups and to deepen their communication, reasoning and

problem-solving skills.

Spiral notebooks will be used for notes, explorations, reflection on focus questions and summaries of discussions.

Calculators are allowed for almost all assignments. Students may use the calculator applications on their computers except in test situations. For that reason, it is important that students have some familiarity with graphing calculators. There is a set in the classroom for students to borrow. If you choose to purchase a calculator for home use, a TI-83+ or TI-84 are preferred.

AGI GRADING SYSTEM 2016-17

The grading for AGI (8th grade) is based on a mastery learning system. Mastery learning allows students to practice new skills and application of concepts and to receive constructive feedback on their work. Students are encouraged to revise assignments until they have mastered the related content and process standards. Given the opportunity for more practice and revision, **all** students can grow in their mastery of math content. This includes students who may believe they have reached the pinnacle of achievement in math based on their previous math class placements, grades and coursework.

For some formative and all summative assessments, mastery score marks (4-0 scale) will be recorded. Use of this scale (which corresponds to letter grades) results in a more accurate summary of student achievement than a scale based on percentage of points earned.

Traditional Letter Grade Equivalent	Mastery Learning Mark (4-point scale)
A	4
B	3
C	2
D	1
E	0

Formative assessments are assessments FOR learning (practice with feedback).

Formative assessments will count as 20% of the quarter grade.

Classwork, brief progress checks (orally or in writing), quizzes and homework are included.

Only key indicator assignments are collected.

Even though not all assignments are collected, students are still expected to have the assignments completed before we discuss them in class.

Students are expected to “re-do” assignments to correct all mistakes as directed on assignments returned to them as “fix and turn in again.”

Not all formative assessments will be scored and recorded in MISTAR Grade book.

“Late” work is accepted and evaluated without a penalty. However, a zero will be entered for that assignment until the work is completed and corrected. At that point, an appropriate mastery

score will be assigned.

Students are expected to complete a self-assessment each week.

Summative assessments are assessments OF learning where students are challenged to “show what they know.”

Summative assessments are worth 80% of each quarter grade.

Major projects, tests, vocabulary tests, and presentations are included in this category.

Students are expected to **re-take tests** if their mastery score is 2 or below. A student must meet criteria specified by the teachers which requires him/her to prove that he/she completed and corrected ALL formative assessment work assigned before the test (whether the formative assessment was recorded in MISTAR or not), corrected his/her mistakes from the original test and scheduled an appointment with the teacher before being allowed a re-take. The re-test will not be identical to the original test, but the content and level of difficulty will be the same. Only the better score will be included in grade calculations.

Students with test anxiety will be shown and encouraged to practice positive coping strategies to help them grow more comfortable with testing and to make sure their test results give an accurate picture of their levels of concept mastery. One helpful offering for many students with test anxiety is **removing “time pressure”** allowing them to take as much time as needed to complete their summative assessments (within prescribed boundaries)

If any portion of a student’s summative assessment data is missing at the end of a quarter, the student will receive an Incomplete for the quarter. The student will then be expected to complete the missing assessments within the first three weeks of the next quarter in order to earn a grade for the previous quarter to replace the “Incomplete.”

Since this is a high school course, midterm and final exams will be recorded separately on students’ report cards. Each quarter grade is weighted at 40% of that SEMESTER grade with the exam grade weighted at 20% for that same semester.

Per Pathfinder School policy, there is **no extra credit available** since a student’s grade earned must reflect the actual level of mastery of course content.

Parents/guardians and students have access to students’ grades through MISTAR Grade book.

Stressed Out? Suggestion in response to “Yikes! I am going to fail this class!

Homework is sometimes a source of frustration for students and their families.

(Seriously)

There is no expectation for students to spend “hours and hours” on their work! This perceived need for excessive time spent on homework is due to one of the following possible causes:

The student has a fuzzy understanding of the concept in question and needs to spend the time working on easier problems first in order to build confidence and conceptual connections. There could also be some gaps in prerequisite knowledge that the student may need to address in order to grasp new concepts. If this is a frequent occurrence, please let me know.

The student is overestimating the scope and quality of the answer required. There are some very “driven” students who may need to be told it is perfectly acceptable to put work aside as completed “well enough” even though it is not “perfect.”

The student was absent (or off task/not paying attention) during the notes, exploration, and discussion portions of the activity assigned. The explorations are where students experiment with a concept and the discussion is where they solidify knowledge and make connections. If a student is absent for an exploration and discussion, he/she really needs to try to re-create that experience before attempting the homework. This can be difficult to completely replicate what happened in class.

If the student was not paying attention (“tuned out,” distracted, trying to start on the assignment with the belief that he/she did not need to listen), it is not unusual for the student to say that “no one told him/her how to do the problems.” The discussion is critical, and listening in class, taking notes, paying attention and asking questions during the discussions are important behaviors to ensure less stress with homework assignments for students and parents!

The student skims the problem and “doesn’t get it.” The texts for this course, especially SIMMS I, are not “easy reads”. Each problem and paragraph contains several important details. Students should expect to read a problem 3-4 times while taking notes and writing out the steps expected of them to complete what the problem asks them to do. **Many students in this course have not had enough experience with problems where they could not casually skim and solve them immediately. Students need to READ carefully and thoroughly.** This is more difficult if a student is very fatigued.

The student has been trying to complete the work and is **very frustrated. Normal learning involves a degree of frustration.** However, **excessive frustration is counter-productive. If a student reaches the frustration max, simply put the work away. If time permits, try again later. If not, please just have him/her tell me that the frustration level was too high to continue. It would help if he/she were able to write down the questions he/she has and the point at which the confusion began in order that I may help to resolve the problem.**

Maintain a sense of humor above all else, and this will be a great year!

If you have any questions, concerns, requests for conferences, or suggestions, please feel free to contact me. **Family involvement is welcome in this class.**

Email is my strongly preferred method of communication with parents and guardians. I do check email during the school day and also during evenings/ weekends when I am able to do so. I can be reached via e-mail at dregal@pinckneypirates.org.

Students are also welcome to email me with questions they have on their “off block” days or even on weekends. I will answer if I am available.

Thank you, students, parents and guardians, for being part of our joint AGI adventure this year.

Deborah Regal Coller
(aka Mrs, Regal Coller or Mrs. RC)