

Geometry Syllabus 2008 - 09
Olga Bocharova
ochochare@houstonisd.org

In the state of Texas, Geometry is the second math course students take in the high school curriculum. It can be a difficult course and may, at times, require additional time for preparation and practice. The students are expected to come to class each day with their completed homework, the proper materials and the motivation to succeed in Geometry.

Classroom Rules:

1. The students will come to class prepared with their notebook, textbook and pencil.
2. Students need to be in the classroom before the tardy bell rings. The School Tardy Policy is in the student TimeTracker.
3. Before leaving class, students will be expected to pick up and dispose of any trash in and around their work areas.
4. Students should do their own work.
5. Working on assignments for another class is not allowed unless granted by the teacher.
6. All assignments should be handed in on time. Late work will not be accepted. If a student does not have an assignment at the
7. The students will treat others with respect and courtesy. When doing group activities in the classroom, it is important that you listen to each other and always keep the volume of your discussions at an acceptable level.
8. The students will refrain from eating, drinking, gum chewing, and personal grooming in class.
9. The students will refrain from sleeping in class, putting their heads down on the desks, propping their heads on their hands or slouching down in their desks.
10. Adhere to all rules in DeBaKey High School's student handbook and HISD's Code of Student Conduct.

Consequences:

- (1)Warning (2) Detention (3)Parent Phone Call /counselor referral (4)Referral to Assistant Principal

Cheating of any kind will result in a zero.

**The above consequences are for a violation of classroom rules or Level I rules. All violations of other levels will result in consequences as specified in the Student Code of Conduct.

Textbook:

McDougal Littell Geometry 2007 Texas edition (resources available at classzone.com)

Materials:

- (1) Each student should have a binder with filler paper or a spiral notebook with a small binder to organize and keep all returned papers
- (2) Graph paper (either 4 or 5 squares per inch) is a necessary daily supply for Geometry. A few internet links will be given within the first week for printable graph paper from your computer, if desired.
- (3) Students should always bring a pencil to class and should always do their homework in pencil as well. Highlighters and colored pencils are optional, but can be very helpful.
- (4) Students will be assigned a specific TI-83 graphing calculator for use in the classroom. Purchasing a graphing calculator for home use is optional, but encouraged. Work assigned as homework will NOT require a graphing calculator.
- (5) I have a classroom set of rulers, compasses and protractors. However, you will need to have a ruler, protractor and compass at home for use on assigned homework.

(6) Any donations of facial tissue and paper towels will be greatly appreciated.

Grading Procedures:

The final grade a student receives for each cycle will be calculated as follows:

Tests will be 50% of your grade for each cycle. Quizzes and major assignments will make up 40% of your grade for each cycle. All major assignments will be designated as such when they are assigned. Daily grades will constitute the remaining 10% of your grade. Daily work will include both classroom work and homework. Some assignments will be graded for completion while other assignments will be collected with some of the problems to be graded for correctness.

Homework:

Students should expect to have homework assigned at every class meeting. The intent of each homework assignment is to give students an opportunity to practice the skills introduced and modeled in the classroom and to give the students an idea of the types of questions that may be seen on a quiz or a test. The homework questions will be discussed the next class meeting (unless otherwise stated by the teacher). If a student does not have their homework available in class when it is called for, no credit is given and no credit will be given for late work. All work must be shown on homework to receive credit. (Therefore a sheet with just answers is not sufficient for credit.)

Make-up work:

Any student missing a class must bring an official permit to the class for a teacher's signature within 3 days of returning to school. Students are responsible for the work they miss when absent from class for any reason. It is wise to contact 2 classmates to find out what you have missed. Students who are absent on the day an assignment is given will have three school (calendar) days to make up the work. Students who are absent on the day an assignment is due or test is given must be prepared to complete the assignment/test the day they return to school. The teacher reserves the right to give extensions, in writing, for students with extended illnesses or emergencies, on a case-by-case basis. Extensions will not be given for lack of organization or planning on the part of the student (inkless printers, forgotten materials, last minute realizations that you need help, etc.) Do not put any work in the teacher's mailbox, under the classroom door, on the teacher's desk unless told to do so.

Tutoring:

The teacher is available daily, **by appointment**, for tutoring on A days before school (7:15 a.m. – 7:45 a.m.) and at B lunch. The school also offers Title I tutorials after school from 3:25 p.m. – 4:25 p.m. Students can go to any of the participating teachers they wish, but must be in the room for tutoring by 3:25 p.m. Ms. Winkler will be tutoring in the afterschool program. The days of availability will be announced and posted.

Extra Credit:

There are no opportunities for individual extra credit in this class. However, bonus questions are offered on some quizzes and tests. The teacher reserves the right to also offer extra assignments if she feels it appropriate.

Progress Reports:

Detailed progress reports specific to this Geometry class will be given to each student during the beginning of the 4th week of each 6 weeks. If appropriate, students might receive multiple progress reports for each cycle.

Projected Scope and Sequence for Geometry:

The following topics will be taught in the Algebra 1 Course. Detailed, day-to-day lesson sheets will be given to the students at the beginning of each grading cycle. The information in this scope and sequence and in the day-to-day lesson sheets is projected information and subject to change without previous notice.

Geometry A

<p>Essentials of Geometry (chapter 1 and outside material)</p> <ul style="list-style-type: none"> • Review solving equations (linear with single variable) • Points, lines, planes • Segments and congruence • Midpoints and bisectors • Measuring and classifying angles • Identify angle pair relationships • Classifying polygons • Perimeter, circumference, and basic area (triangles, squares, rectangles, circles)
<p>Reasoning and Proof (chapter 2)</p> <ul style="list-style-type: none"> • Apply Inductive reasoning • Apply Deductive reasoning • Analyze conditional statements • Use postulates and diagrams • Use properties from algebra • Prove statements about segments, angles, and angle pair relationships
<p>Parallel and Perpendicular lines (chapter 3)</p> <ul style="list-style-type: none"> • Pairs of lines and angles formed • Parallel lines and transversals • Proving lines parallel • Finding and using slopes of lines • Writing and graphing equations of lines • Proving theorems about perpendicular lines
<p>Transformations (chapter 9)</p> <ul style="list-style-type: none"> • Translations • Reflections • Rotations • Compositions of transformations • Symmetry • Dilations
<p>Congruent Figures (chapter 4)</p> <ul style="list-style-type: none"> • Triangle sum properties • Congruence properties • Proving triangles congruent (SSS, SAS, ASA, AAS, and HL) • Using congruent triangles to solve real world problems • Isosceles and equilateral triangle properties
<p>Relationships within Triangles (chapter 5)</p> <ul style="list-style-type: none"> • Midsegment theorem and coordinate proof • Perpendicular bisectors • Angle bisectors of triangles • Medians of triangles • Altitudes of triangles

<ul style="list-style-type: none"> • The centers of a triangle
<p>Similar Figures (6.1 – 6.3 and outside material)</p> <ul style="list-style-type: none"> • Review solving equations (quadratic with single variable) and quadratic formula • Ratio and proportion • Geometric mean • Solving real world problems using proportions • Similar polygons

Geometry B

<p>Similar Triangles (6.4 – 6.6)</p> <ul style="list-style-type: none"> • Proving triangles are similar (AA, SSS, SAS) • Triangle proportionality theorem • Solving real world problems using similar triangles
<p>Right Triangles and Trigonometry (chapter 7 and outside material)</p> <ul style="list-style-type: none"> • Review simplifying square roots and operations with square roots • Pythagorean theorem and its converse • Right triangle similarity and geometric mean • Special right triangles • Trigonometric ratios (sine, cosine, tangent) • Solving right triangles • Law of sines and law of cosines
<p>Quadrilaterals (chapter 8)</p> <ul style="list-style-type: none"> • Angles of polygons • Properties of parallelograms • Properties of special parallelograms (rectangles, rhombuses and squares) • Properties of trapezoids and kites • Proving quadrilaterals are parallelograms, rectangles, rhombuses, squares
<p>Perimeter and Area (chapter 11 and outside material)</p> <ul style="list-style-type: none"> • Area of a triangle, parallelogram, trapezoid, rhombus, kite, regular polygon • Perimeter and area of similar figures • Circle area and circumference • Arc length and sector area • Geometric probability
<p>Surface Area and Volume (chapter 12)</p> <ul style="list-style-type: none"> • Drawing and exploring solids • Euler's theorem • Cross-sections (intersections of planes and solids) • Surface area of prisms, cylinders, pyramids, cones, spheres • Volume of prism, cylinders, pyramids, cones, spheres • Cavalieri's principle
<p>Circle Properties (chapter 10 and outside material)</p> <ul style="list-style-type: none"> • Circle vocabulary • Properties of tangent lines • Measures of arcs • Properties of chords • Inscribed angles • Angles formed by intersecting chords, intersecting secant lines or a tangent line and a

secant line

- Segment lengths formed by intersecting chords, intersecting secant lines or a tangent line and a secant line
- Equations of circles

If time allows ...

- Estimating area under a curve using left-hand rectangles, right-hand rectangles, midpoint rectangles, and trapezoids
- Velocity-time graphs (finding acceleration and distance traveled)
- Points of intersection of a line and a circle
- Tangent lines and circles (examine algebraically)
- Equation of a circle as a piecewise equation