

In the state of Texas, Algebra 1 is the first 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 Algebra 1. We will try to fill in gaps in the students' mathematics background and also challenge their existing skills as well.

Classroom Rules:

1. The students will come to class prepared with their notebook, textbook, workbook 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. Using class time to work 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 it is collected the student will receive a zero (0) for that assignment.
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 Algebra 1 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 Algebra 1.**
- (3) Students should always bring a pencil to class and should always do their homework in pencil as well. Highlighters and colored pencils may be helpful, but not required.

- (4) Students will be assigned a numbered TI-83 graphing calculator for use in the classroom. Purchasing a graphing calculator for home use is optional, but strongly encouraged (since the graphing calculator is required for the TAKS Math test in grades 9, 10 and 11).
- (5) I have a classroom set of rulers. However, you will need to have a ruler at home for use on assigned homework.
- (6) Any donations of facial tissue will be greatly appreciated.

Grading Procedures:

The final grade a student receives 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 all or random questions 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 from the office 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.* So make sure that you exchange phone numbers/e-mails with a few of your classmates. 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, or on the teacher's desk unless told to do so by the teacher.

Tutoring:

The teacher is available daily, **by appointment**, for tutoring on A days before school (7:15 a.m. – 7:45 a.m.). 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. Bocharova 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, along with other extra credit opportunities throughout the year.

Progress Reports:

Detailed progress reports specific to the Algebra 1 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 Algebra 1:

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.

Algebra 1A

<p>Review of prior knowledge (chapter 2 and 1.1 and 1.2)</p> <ul style="list-style-type: none"> • Operations with real numbers • Order of operations • Evaluating algebraic expressions • Sets of numbers and properties of numbers • Evaluating expressions involving absolute values
<p>Introduction to Functions (chapter 1 and outside material)</p> <ul style="list-style-type: none"> • Writing algebraic expressions and equations from word problems • Represent functions as tables, rules, graphs and words • Finite differences in tables and using them to determine rules (equations)
<p>Solving Equations (chapter 3 and outside material)</p> <ul style="list-style-type: none"> • Solving one step equations • Solving two-step equations • Solving single variable equations with a variable located on each side of the equal sign • Solving single variable equations involving grouping symbols • Solving proportions • Solving percent word problems • Solving literal equations for a given variable
<p>Linear Functions (chapter 4 and outside material)</p> <ul style="list-style-type: none"> • Graphing linear equations using a table of values • Identifying discrete and continuous functions • Identifying function domain and range • Graphing linear equations using intercepts • Finding slopes/rates of change • Graphing linear equations using the slope-intercept form • Graphing linear functions • Writing and interpreting equations in function notation • Writing and solving direct variation equations • Writing and solving inverse variation equations
<p>Writing Linear Functions (chapter 5)</p> <ul style="list-style-type: none"> • Writing and using linear equations in slope-intercept form

<ul style="list-style-type: none"> • Writing and using linear equations in point-slope form • Writing and using linear equations in standard form • Writing equations for parallel and perpendicular lines • Using linear regression to fit a line to a scatterplot • Make predictions using a linear regression
<p>Inequalities (chapter 6 and 7.6)</p> <ul style="list-style-type: none"> • Graphing single-variable inequalities on a number line • Solving inequalities of one variable using addition, subtraction, multiplication or division • Solving multi-step, single variable inequalities • Solving conjunctions and disjunctions of inequalities • Graphing linear inequalities of two variables • Graphing a system of linear inequalities of two variables
<p>Systems of Linear Equations (chapter 7)</p> <ul style="list-style-type: none"> • Solving systems of linear systems by graphing • Solving systems of linear systems by substitution • Solving systems of linear systems by elimination • Solving special linear systems (parallel lines and same lines) • Solving word problems using systems of equations

Algebra 1B

<p>Introduction to Piecewise Functions (outside material)</p> <ul style="list-style-type: none"> • Graphing piecewise functions (all linear parts) given the equation • Writing a piecewise function equation (all linear parts) given the graph
<p>Exponential Expressions and Equations (chapter 8)</p> <ul style="list-style-type: none"> • Apply exponent properties for products and quotients • Simplify expressions involving zero and/or negative exponents • Write and utilize scientific notation • Write and graph exponential growth and decay functions • Solve word problems involving exponents
<p>Polynomials (chapter 9 and outside materials)</p> <ul style="list-style-type: none"> • Add, subtract and multiply polynomials • Find special polynomial products • Solve polynomial equations in factored form • Factor $x^2 + bx + c$ • Recognize and factor difference of squares and perfect square trinomials • Factor $ax^2 + bx + c$ • Solving quadratic equations by factoring • Solving word problems using quadratic equations
<p>Square roots (2,7, 11.2 – 11.5, 10.4, 10.6, 10.7)</p> <ul style="list-style-type: none"> • Finding square roots • Simplify radical expressions • Solve radical equations • Pythagorean Theorem and its converse • Distance formula • Midpoint formula • Use completing the square to solve a quadratic equation

- Solve quadratic equations using the quadratic formula
- Interpret the discriminant

Non-linear equations (10.1, 10.2, 10.8 and outside materials)

- Graph $y = ax^2 + c$
- Graph $y = ax^2 + bx + c$
- Compare linear, quadratic and exponential models

Probability and Statistics (chapter 13)

- Finding simple probabilities and odds
- Finding permutations and combinations
- Finding probabilities of compound events
- Finding mean, median, mode, range and mean absolute deviation
- Create and interpret stem and leaf charts
- Create and interpret histograms
- Create and interpret box and whisker plots

Rational expressions (12.2 – 12.5) – if time allows

- Graph rational functions
- Divide polynomials
- Simplify rational expressions
- Multiply and divide rational expressions