

Challenge Early College High School

Bonnie R. KING

bking1@houstonisd.org

713.664.9712 ext 344/360/359

Supplies
3-inch Binder
6-in Ruler
Binder Supply Pouch
Binder Dividers
Grid Paper
Pencils

To all students and parents:

Welcome back to school and to the CHALLENGE EARLY COLLEGE family! I hope you are all looking forward to a successful and exciting school year. In my class, you should expect to be challenged as well as educated. I am available for calls or appointments at any time in my schedule not filled by a class or duty.

ALGEBRA 2

Syllabus

We will be using McDougal Littell's *ALGEBRA 2* as our textbook. The following topics are included:

Algebra 2	Topics
1.1 1.2 1.3 1.6 1.7	Apply Properties of Real Numbers Evaluate and Simplify Algebraic Equations Solve Linear Equations Linear Equations, Inequalities, and Applications Solve Absolute Value Equations and Inequalities
2.2 2.3, 2.4 2.8 2.1	Linear Equations, and Functions <ul style="list-style-type: none">• The Slope of a Line• Linear Equations in Two Variables• Linear Inequalities in Two Variables (Omit compound inequalities)• Introduction to Functions
3.1 3.2 3.3	Systems of Linear Equations <ul style="list-style-type: none">• Solve Linear Systems By Graphing• Systems of Linear Systems Algebraically• Graph Systems of Inequalities
5.1 5.3	Exponents, Polynomials, and Polynomial functions <ul style="list-style-type: none">• Use Properties of Exponents• Add, Subtract and Multiply Polynomials

5.4	Factoring <ul style="list-style-type: none"> • Greatest Common Factors, Factoring by Grouping • Factoring Trinomials • Special factoring • A General Approach to Factoring • Solving Equations by Factoring
6.1 6.2 6.2 6.2 6.2	Roots, Radicals, and Root Functions <ul style="list-style-type: none"> • Radical Expressions • Radical Exponents (include a review of exponents) • Simplifying Radical Expressions • Adding and Subtracting Radical Expressions • Multiplying & Dividing Radical Expressions
4.1 4.2 4.3; 4.4 4.5; 4.6 4.7 4.8 4.9	Quadratic Equations, Inequalities, and Functions <ul style="list-style-type: none"> • Graph Quadratic Functions in Standard Form • Graph Quadratic Functions in Vertex or Intercept Form • Solve Quadratic Equations by Factoring • The Square Root Property • Complex Numbers • Complete the Square • The Quadratic Formula • Use the Quadratic Formula and the Discriminant

Course Objectives:

Upon completion of this course, a student should be able to perform the following mathematical skills:

1. multiply and divide polynomials.
2. factor polynomials.
3. add, subtract, multiply, and divide rational expressions.
4. simplify complex fractions.
5. solve equations involving rational expressions.
6. graph linear equations & linear inequalities in two variables.
7. find the slope of a line & its equation.
8. simplify rational exponents and radicals.
9. add, subtract, multiply, and divide expressions involving radicals.
10. add, subtract, multiply, and divide complex numbers.
11. solve quadratic equations by factoring, completing the square, using the quadratic formula, and using the square root property.
12. solve systems of linear equations in two variables.
13. solve word problems.
14. recognize functional notation and evaluate functions.
15. graph quadratic functions.

GENERAL GRADING RUBRIC:

In free-response questions on a test, problems will be worth 3, 4 or 5 points. The rubric for grading is given below.

Meaning	Out of 3	Out of 4	Out of 5	
Superior	3	4	5	Student shows understanding of the concept by: <ul style="list-style-type: none"> • Having fewer than 2 minor errors • Providing a clear, logical and complete process • Providing evidence of checking and/or alternate representation • Using creative, appropriate strategies • Exceeding the minimum requirements of the task
Satisfactory		3	4	Student shows understanding of the concept by: <ul style="list-style-type: none"> • Having 2 to 3 minor errors, but correct process • Providing a logical and complete process but lacking clarity • Using appropriate strategies • Satisfying the requirements of the task
Satisfactory, With Minor Flaws	2	2	3	Student shows understanding of the concept by: <ul style="list-style-type: none"> • Using appropriate strategies • Showing work, but process haphazard • Writing an explanation that is mainly clear, but may show some gaps • Satisfying some elements of the task
Satisfactory, With Major Flaws	1	1	2	Student shows rudimentary understanding of the concept by: <ul style="list-style-type: none"> • Providing haphazard, illogical, or unclear work • Not checking work • Writing an explanation that did not connect to the problem or the solution • Answering only (without supporting work) • Satisfying few elements of the task
Unsatisfactory	0	0	0 – 1	Student shows little or no understanding of the concept by: <ul style="list-style-type: none"> • Attempting the problem, but no idea • Not using a recognizable process • Calculating incorrectly • Using inappropriate charts and graphs • Satisfying no elements of the task

Class Format

In general, class will proceed as follows:

1. When students arrive, there is a warm-up problem to complete.
2. Occasionally, homework notebooks will be collected and checked for completion. There is no excuse for not having your assignment notebook with you. If you are absent, you should return with an up to date assignment notebook.
3. Homework answers are provided, and all problems are reviewed in class as time allows.
4. The warm-up problem is reviewed, which is a lead in to a new topic.

5. New material is introduced in varying formats.

Generally, we complete at least one section per day. A short quiz may be given at end of the chapter sections, and a test at least at the end of each chapter.

Class Rules

The only rules in this class revolve around one word:

RESPECT

Of course, this applies to everyone in the classroom. Students should respect themselves, each other, and the teacher. In turn, the teacher will respect all students. Some common actions that are considered disrespectful:

- disrupting the learning process for any student
- disrupting the class
- speaking out of turn
- being tardy to class
- leaving garbage on the floor

In addition to these actions, there are of course other disrespectful actions. I expect students to use common sense in determining what these are.

The Honor Code

Since this is a Pre-AP Class, there are certain things that go without saying. The Honor Code is an unwritten set of rules that speaks to a student's own sense of integrity. Infractions to the code are considered extremely serious. Infractions will result in a grade of ZERO (0). Some of these infractions are:

- cheating on a test by giving out information
- cheating on a test by receiving information
- not reporting (to the teacher) infractions of the Honor Code

Again, breaking the Honor Code will result in serious disciplinary action.

Grading

Students will be graded on their performance in five areas: Class Participation, Homework, Quizzes, and Tests. Homework should be kept in a separate notebook that will be collected and graded without notice. Students should bring this notebook to class every day! There is no excuse for not having the homework notebook in class. Students should show all of the work for every homework assignment. Tests will be given as

indicated on the Homework page or announced in class. Projects will be worth two test grades each. Nine week cycle grades will be weighted as follows:

Category	Percent of Cycle Grade
Class Participation	20%
Quizzes, Homework, Notebook	20%
Tests, Projects	60%

Grading periods are separated into 9-week cycles, with progress reports being given out every 3 weeks during those cycles. Each grading period will be weighted as follows:

Grading Period	Percent of Semester Grade
Cycle 1	40%
Cycle 2	40%
Final Exam	20%

ALGEBRA 2

Period	Class	Room
1	Algebra 2	254C
2	Algebra 2	254C
3	Conference	254 office
4	ALGEBRA 2	254C
5	Department Planning /Conference	254 office
6	Algebra 2	254C
7	Algebra 2	254C
8	Algebra 2	254C

ALGEBRA 2

Supplies

3-inch Binder

Protractor

6-in Ruler

Pencils

Binder Supply Pouch

Grid Paper

Binder Dividers