ALGEBRA 2 – COURSE OUTLINE

Teacher: Mr. G. Tang **Phone:** (650) 851-6129 **Email:** gtang@woodsideprioy.com

Office Hours: 8:00 AM – Start of 1st Class (Excepts Wednesdays)
End of Last Class – 4:00 PM (Tuesdays and Thursdays); B and G Blocks

Required Text: Stewart J., Redlin L., and Watson S. *Alegbra and Trigonometry*. 2nd Ed. Thomson, 2007

Websites: http://www.doctortang.com and http://info.woodsidepriory.com/faculty/smarsheck/

Required Material: TI-83 Plus or TI-84 Plus Graphing Calculator, 1½-inch 3-ring Binder, Dividers

Course Description:

Algebra 2 provides a review and extension of the concepts taught in Algebra 1. Topics covered will include equations and inequalities, coordinates and graphs, general functions, polynomial and rational functions, expoenetial and logarithmic function. trigonometric functions of angles and of real numbers, analytic trigonometry, systems of equations and inequalities, sequences and series. Graphing calcultor skills will be taught and use extensively in this course. Throughout this course, students will develop learning strategies, critical thinking skill, and problem solving techniques to prepare for future math courses and college entrance exams.

Course Content:

Semester 1
Prerequisites: Review of Algebra 1
Chapter 1: Equations and Inequalities
Chapter 2: Coordinates and Graphs
Chapter 3: Functions
Chapter 4: Polynomial and Rational Functions

Semester 2
Chapter 5: Exponential and Logarithmic Functions
Chapter 6: Trigonometric Functions of Angles
Chapter 7: Trigonometric Functions and Real Numbers
Chapter 8: Solving Trigonometric Equations
Chapter 10: Systems of Equations and Inequalities
Chapter 12: Sequences and Series

Course Evaluation:

All Chapters are weighted equally. The semester mark and grade assignments are as follow.

Chapter Quiz / Tests	**70%**
Homework	**30%**
Total Quarter Grade	**100%**

Quarter Grades	**80%**
Semester Final	**20%**
Total Semester Grade	**100%**

Homework (50% from Homework Checks; 50% from Homework Quiz)

a. **Homework Expectations**: Homework checks occur daily. To receive full credit, a student must:
   - complete work neatly
   - include a heading in the upper right hand corner (name, and assignment data)
   - show all the work.
   - be ready to show the assignment upon daily homework check
   - each homework assignment is worth 10 pts; one day late equate to 7.5 pts; more than 1 day late but before homework quiz date has a maximum of 5 pts.

b. **Homework Quiz:** There will be a homework quiz at the end of a chapter. Two homework questions from each section taught will be randomly chosen by the teacher. Students are to copy the complete answers from their homework and hand them in for grading. Each of these questions is worth 5 points.

Chapter Quiz and Test: - there will be one quiz and test per chapter. A quiz is usually worth ¼ to ½ of the points of a chapter test.

Test and Quiz MAKE UP Guidelines;

A student who is absent the day of a test or quiz has two school days (not classes) to make up the missed assessment. A student who is absent the day of the test and the day before has three school days to make up the missed quiz/test. Other circumstances will be dealt with individually. If you feel that you have an unique circumstance that deserves an exception, please talk to the teacher in advance.

Test Corrections:
First of all, test corrections are structured to be time-consuming. This structure serves two purposes: a) it helps to teach you the material that you did not grasp the first time around, and b) it is not an easy alternative to studying for (definitely your best line of defense) and performing well on the test. If done correctly when needed, test corrections can be a huge help to getting a better grade.

Corrections Scale:

Test Score	Make Up Points
90 to 100	Too Bad
80 to 89	+5, up to a 90
65 to 79	+10, up to an 85
Below 65	+15, up to a 75

How Many: One (that's right, 1) per quarter

Rules:

1. You must have at least an 80% grade on that chapter's homework in order to be eligible. If you do not stay at least close to caught up on the homework, the corrections will not be an option.
2. You must turn in your corrections, along with your test, within 1 week of the test being handed back to you.
3. I will give it back to you and then you will hold on to your test correction until the end of the quarter.
4. You may turn in as many test corrections as you choose to; however, at the end of the quarter you will choose the one that you want me to apply to your grade. It will be your responsibility to turn it in at the proper time.

How to do a Proper Test Correction:

1. Every wrong answer must be corrected. And by corrected I mean correct. You have myself, other math teachers and other students as resources.
2. You must write out every step of the corrected problem from the place where you made your first mistake.
3. You must explain in writing the logic and process behind the problem, not just what you did wrong, but what you need to know to solve the problem and then how you successfully solved it.

Here's an example for you:

Mr. Riebhoff's last test was sooooo hard that he decided to scale his grades upward. He decided to raise the lowest score of a 51 to a 67 and the highest score of an 85 to a 93. Find a linear function that would be a fair way to convert other test scores.

Corrected Answer:

$f(51) = 67 \Rightarrow (51,67)$
$f(85) = 93 \Rightarrow (85,93)$
$m = \frac{93-67}{85-51} = \frac{13}{17}$

$y - 67 = \frac{13}{17}(x - 51)$
$y = \frac{13}{17}x - 39 + 67$

$y = \frac{13}{17}x + 28$

We know this problem involves a linear function. The original test scores are the independent variable, so they must be x. The converted test scores are the y's. Originally I mixed the order of the variables. We now have two points, so we can make a line. We first find the slope, then we plug in the information into the point-slope equation and simplify.

General Classroom Policies:

The classroom is a place for learning and exploration. As such, it is essential that each of us work to create and maintain that environment. To that end each student is expected to:

- ☞ Come to class on time, with all required materials, ready to learn
- ☞ Complete assignments on time, ready to contribute to homework review
- ☞ Actively participate, both in group work and individual board work
- ☞ Respect each other, the teacher and the environment
- ☞ Take responsibility for learning, asking questions when necessary
- ☞ Abide by all school rules inside the classroom

Honors Program Policy:

Introduction: The Priory recognizes that we serve students of a wide range of mathematical abilities, many of whom would benefit and welcome the challenges of an honors math course in Algebra 2. To address this need, we offer a honors tracks in the existing class. Entrance and continued participation into honors must be earned by current performance and is not solely dependent upon past grades in math. Students looking to accelerate past grade level over the summer need to have an A in honors as well as meeting other criteria.

Expectations: Students in the honors program will be strong academically, highly motivated and be able to work independently. Extra emphasis will be placed on the honors students to learn on their own and to initiate the process of getting extra help when required. Many problems will be more conceptual in nature.

Structure: All students are together in the same class covering the same topics. Honors students will be given a more challenging daily homework and test/quiz regime. They may also be given additional material to cover on their own. Questions on honors topics are welcome during the class work time of the class and after school. Extra help is available daily for any student during office hours.

Admission: Students are invited to join the honors track in the following way: Students with a B+ after the first two chapters have the option of choosing to enter the honors program on a trial basis for the third chapter. A student who completes the material covered on the third test with a grade of B– or better may continue in the program. Continued participation in the honors program requires minimum grade of B– at any quarterly grading period.