Adv Algebra w/ Financial Applications - Mr. Ko

Prerequisite : C or better in Geometry, placement based on grades in Algebra 2/Math 2/Geometry

Office Hours (Tutoring)
I will be available before school from 7:15am to 7:40am. You need to contact me at least 1 day before you come to tutoring so that I can be in my room. My email address is hko@murrieta.k12.ca.us.

Required Text
Financial Algebra: Adv Algebra w/ Financial Applications [Click book title for online resources.] by Gerver, R. & Sgroi, R., South-Western/Cengage Learning. 2014
Prentice Hall Mathematics: California Algebra 2 by Bellman, et al., Pearson, 2009.

Course Description
Advanced Algebra with Financial Applications (AAFA) satisfies the minimum competency requirement in mathematics for graduation as well as UC/CSU (C) requirements. AAFA provides students mathematical tools to become financially literate and responsible. Students will apply advanced mathematics to analyze and solve real-world problems in investments, credit, banking, auto insurance, mortgages, employment, income taxes, budgeting, and planning for retirement. Field projects, computer spreadsheets and graphing calculators are key components of this course. The interrelated instructional approach provides students with analytical understanding of fundamental business and finance issues while providing an engaging context to master the foundational Algebra II concepts. Students routinely use the standards for mathematical practice to make sense of problems, justify solutions and conclusions, model with mathematics, and strategically use technology to analyze and solve application problems. Students will be continually asked to explain, justify, verify, and interpret- in short, to think critically. Topics to be covered in depth are listed below as approved by the mathematics department.

Semester 1:
Chapter 5: Employment Basics (Sequences)
Chapter 2: Banking Services (Exponential & Logarithmic Functions)
Section 1-5: Personal Expenses (Correlation & Regression)
Chapter 3: Consumer Credit (Exponential & Logarithmic Functions, Regression)
Chapter 4: Automobile Ownership (Functions and Their Graphs)

Semester 2:
Chapter 6: Income Taxes (Inequalities, Linear equations
Chapter 7: Independent Living (Radical & Rational Functions)
Chapter 10: Planning for Retirement (Mathematical Modeling)
Chapter 11: Preparing a Budget (Mathematical Modeling)
If Time Permits:
Chapter 9: Modeling a Business (Linear & Quadratic Functions)
Chapter 8: The Stock Market (Linear & Quadratic Equations)

Course Goals
In addition to state and district standards, students should:
1) Be a good problem solver.
2) Be an effective communicator.
3) Be familiar of current technology applications.

Content Standards
See California High School Math Standards from California Department of Education website.
Recommended Supplies
(2) 1-Subject Spiral/Graphing Notebook
Colored Pens/Highlighters
Ruler
Pencils w/ Eraser
College-Ruled Paper

Grading
Students earn their own grades. Each assignment is worth a certain amount of points and given a percentage grade. Student letter grades depend upon the percentage of their total assignments throughout the semester. Periodically, grades will be posted on Aeries (ABI) . The percentage breakdown is as follows:

Grading Criteria
Assessments: 60%
Participation/Assignments: 50%

Grading Scale
90% - 100% = A
80% - 89% = B
70% - 79% = C
60% - 69% = D
Below 59% = F

*Tests consist of multiple-choice and/or open-ended questions. Absence on a test day MUST be cleared with attendance office. Some projects may be counted as a test when the same standards are met. Individual quiz/Benchmark checks for understanding of new topics.
*Notebook binders need to be organized. Notes in Cornell Style are a simple way to record what you have learned in class each day or what you have read in your textbook. A good set of notes will help with your assignments and preparation for the test. A complete and on-time assignment must be stamped or signed by teacher the day after it has been assigned-- based on completion. Students keep notebook, assignments, and quizzes in their notebook binder until submitted as a packet on the day of the test. No late assignments will be stamped or signed by teacher but may be submitted in the packet.

Each assignment will receive points as follows:
5 pts = On-Time, Complete (with work shown), Corrected
4 pts = On-Time, 80% Complete or Weak/No Corrections
3 pts = 50% Complete or No Corrections or Late
0 pt = Less than 50% Complete.

*Assignments also include field projects, computer spreadsheets, and PowerPoint presentations. These assignments will require more time. Hence, these will count for more points than regular assignments described above. More details about such assignments will be given during the year!

*Prompt and regular attendance is very important. Warm-up exercises and/or quizzes are given at the beginning of class. Students must be ready to participate in daily warm-ups and discussions. Students must check course website (first) or contact teacher for any missed assignments.

Citizenship
Citizenship grades will be determined by a student's contribution in class, with "G" (Good) and "E" (Excellent) grades denoting positive contributions. Behavior that is detrimental to the learning of others and unexcused absences or tardiness will result in "N" (Needs Improvement) or "U" (Unsatisfactory) grades.

Classroom Guidelines
I will adhere to School-Wide Rules and Regulations (see Student Handbook), as well as the following guidelines:
1) Be respectful.
2) Be in class on time.
3) Be prepared.
*Food, drinks (except bottled water), candy, or gum are prohibited in class.
*Cell phones and other electronic devices must be turned off at all times.

Consequence & Policies
Please refer to consequence and policy on tardy and electronic devices (see Student Handbook). Major infractions and consistent defiance will result in loss of ALL classroom privileges!

Groups or Study Teams
* Each member of the team or cooperative group is responsible for his/her own behavior.
* Each member of the team must be willing to help any other team member who asks for help.
* Ask the teacher for help when all team members have the same question.
* Use a team voice.

Technology
Students will be empowered to continue their study of mathematics because of technology incorporated with the lesson— TI-Graphing Calculator Technology, Online Instruction from websites such as Khan Academy or CollegeBoard: SAT Practice and Power Point presentations. Exposure to such technology enhances their knowledge about career research and preparation.

School-to-Career
Students will be collaborative workers as they take an active role in learning with a variety of instructional formats, such as small groups, individual exploration, peer instruction, whole-class discussion, and project work.