M 121 College Algebra

Mrs. Heine
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Course Materials

Textbook: Algebra and Trigonometry by Robert Blitzer, 6th Ed
Mymathlab.com
Graphing Calculator: if you do not have a graphing calculator you can either purchase one or rent one from the school for $10 a semester

Course Description

3 credits
Prerequisite: M 095 or appropriate placement score.
A course that can meet the Mathematics requirement of General Education Courses, College Algebra introduces functions and associated equations. It covers the concepts of functions, linear and non-linear equations, complex numbers as solutions to quadratic equations, and systems of equations. Further, we investigate polynomial, rational, exponential and logarithmic functions and equations.

Learning Outcomes

The main objective of college algebra is to enable students to read and evaluate real-world problems and quantitatively solve those problems using mathematical reasoning. Upon successful completion of the course, students should be able to

- Simplify, factor, and perform any of the basic arithmetic operations on polynomials and rational expressions.
- Perform arithmetic operations and simplify algebraic expressions with rational exponents including rationalize a denominator.
- Solve linear, quadratic, and rational, exponential and logarithmic equations and be able to use each of these to model and solve applied problems.
- Solve absolute value equations and inequalities and express solutions of inequalities in interval notation.
- Identify relations vs. functions; use function notation; identify domain, range, intervals of increasing/decreasing/constant values; algebraically and graphically identify even and odd functions.
- Find zeros, asymptotes, and domain of rational functions.
- Evaluate and sketch graphs of piecewise functions and find their domain and range.
- Use algebra to combine functions and form composite functions, evaluate both combined and composite functions and their graphs, and determine their domains.

- Identify one-to-one functions, find and verify inverse functions, and sketch their graph.
- Write logarithms as exponentials and vice versa.
- Solve exponentials and logarithms using the one to one property or inverse properties.
- Expand and condense logarithmic expressions.

Grading
Assignments 20%
Quiz 30%
Test 40%
Final 10%

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
90	87	83	80	77	73	70	67	63	60	57	

Homework
Homework will account for 20% of your grade. MyMathLab homework problems focus on the understanding, interpretations and manipulations of the concepts discussed in class and the textbook. The problem sets closely correspond to the material covered in the course textbook. There will also be written assignments to supplement mymathlab homework when needed. There will be deadlines assigned for each assignment. The website will provide you with immediate feedback when you submit your answers. You can attempt a problem up to twenty times. Make sure that you are keeping on top of your assignments, as some problems take longer than others.

Quizzes and Tests
There will be multiple quizzes and tests throughout the semester. Quizzes account for 30% of your grade and test account for 40% of your grade. If you miss a quiz or a test, it must be completed within one week of the quiz or test given. You need to arrange a time with me to come in before or after school to complete the missed quiz or test.

Final
There will be a comprehensive final at the end of the semester. This final will account for 10% of your grade.

Help
I am available before or after school for extra help. Math tutoring is also available. The schedule is posted in my classroom.

Academic Integrity
The students of Billings Senior High School, united in a spirit of mutual trust and fellowship, mindful of the values of a true education and the challenges posed by the

world, agree to accept the responsibilities for honorable behavior in all academic activities, to assist one another in maintaining and promoting personal integrity, and to follow the principles and procedures in this Code of Academic Integrity.[1]

Violations of the Code of Academic Integrity

- Plagiarism
- Cheating
- Duplication by copying (or allowing to be copied) another's work
- Duplication in any manner of another's work during an exam;
- Paraphrasing of another's work closely with minor changes with the essential meaning, form and/or progression of ideas maintained;
- Piecing together sections of the work of others into a new whole;
- Submitting one's own work which has already been submitted for assessment purposes in another subject;
- Producing assignments in conjunction with other people which should be your own independent work

Any incidences of cheating/plagiarizing will be reported by the instructor to the Assistant Principal and will be recorded in the student's discipline file (see page 28 of your student handbook).