

Algebra I

We will be studying the following topics, not necessarily in order. We may have to skip a couple and may also not get to quadratic or radical functions, however, these will be covered in algebra 2.

1. Foundations for Algebra
2. Solving Equations
3. Solving Inequalities
4. Introduction to Functions
5. Linear Functions
6. Systems of Equations and Inequalities
7. Exponents and Exponential Functions
8. Polynomials and Factoring
9. Quadratic Functions and Equations
10. Radical Expressions and Equations

Algebra II

We will be studying the following topics, not necessarily in order. We may have to skip a few; we will probably get to about chapter 9.

1. Expressions, Equations, and Inequalities
2. Functions, Equations, and Graphs
3. Linear Systems
4. Quadratic Functions and Equations
5. Polynomials and Polynomial Functions
6. Radical Functions and Rational Exponents
7. Exponential and Logarithmic Functions
8. Rational Functions
9. Sequences and Series
10. Quadratic Relations and Conic Sections
11. Probability and Statistics
12. Matrices
13. Periodic Functions and Trigonometry
14. Trigonometric Identities and Equations

Advanced Algebra and Statistics

We will study a few miscellaneous topics from pre-calculus as well as much introductory statistics. A solid grasp of Algebra I and II topics will be of advantage to you. This class and the other two algebra classes help prepare the student for college courses in statistics and calculus.

1. Systems of Linear Equations
2. Matrices
3. Sequences and Series, Counting Principles
4. Conics, Parametrics, Polar Coordinates ?maybe not this section depending on time
5. Introduction to Statistics
6. Describing Data

7. Probability
8. Binomial and Poisson Distributions
9. Standard Normal Distribution
10. Estimates and Sample Sizes
11. Hypothesis Testing ?hopefully we get this far... basis for much statistics in other fields too

Trigonometry and Calculus

Below are a few of the chapters we'll be studying regarding trigonometry and introductory differential and integral calculus. One of my intentions with this course is for it to serve as college preparation (for a college-level trig or calc class) dependent upon student interest. We may not get to integral calculus (typically a college level calculus 2 class).

1. Trigonometry
2. Analytic Trigonometry
3. Additional topics in Trigonometry
4. Limits and Continuity
5. Derivatives
6. Applications of Derivatives
7. Some Definite Integrals
8. Applications of Definite Integrals

... and potentially other topics and sources to be determined.