

Intermediate Algebra and Trig Curriculum

2009 - 2010

Chapter 1: Concepts of Elementary Algebra (September)

- Operations with polynomials
- Factoring polynomials (GCF, DOTS, TRI, TRICK, GROUPING, CUBES)
- Solving linear and literal equations
- Solving equations by factoring

Chapter 2: Introduction to Graphs and Functions (October)

- Distance formula
- Review graphing linear functions and slope
- Review parallel and perpendicular lines
- Review graphing quadratic functions
- Relations and functions (definition, function notation, evaluating)
- Finding domain of a function algebraically
- Vertical line test
- Composition and inverses
- Domain and range graphically
- Transformations of functions

Chapter 3: Linear Functions, Equations and Inequalities (November)

- Writing equations of lines
- Word problems
- Linear Inequalities
- Absolute value equations and inequalities

Chapter 4: Systems of Linear Equations and Inequalities (November - December)

- Solving systems graphically, substitution, elimination
- Solving systems with three variables
- Intro to Matrices
- Adding/Subtracting matrices
- Multiplying matrices
- Solving matrices
- Determinant
- Area of Triangle
- Collinear points

- Inverse
- Cramer's Rule

Chapter 5: Radicals and Complex Numbers (January)

- Properties of exponents, negative exponents, zero as an exponent
- Fractional exponents
- Simplifying radicals
- Add/Sub radicals
- Rationalizing the denominator
- Multiplying and dividing radicals
- Radical Equations
- Powers of "i"
- Add/Sub complex numbers
- Mult/Div complex numbers

Trigonometry (February - April)

- Coterminal angles
- Normal rotations, negative rotations
- Degrees and Radians
- SOHCAHTOA
- Pythagorean theorem
- Quadrants
- Unit circle
- Reference angles
- Bow-Tie problems
- Reciprocals
- Basic graphs
- Trig identities
- 1st degree trig equations
- 2nd degree trig equations
- Trig equations with different functions
- Law of Cosines
- Law of Sines
- Ambiguous case
- Area of triangle

May - June Review for final exam in June