

Algebra II

1st Trimester Study Guide

Chapter 1:

1. Rational/Irrational/Real/Integers/Whole/Natural numbers
2. Additive Inverse of a number, and basic operations (+ - * /) with fractions
3. Evaluating an algebraic expression
4. Additive and Multiplicative identity and inverse
5. Associative/Commutative properties
6. Distributive Property, coefficients, factors, terms, combining like terms
7. Solving equations
8. Exponential Notation
 - a. Simplification, multiplication, division
 - b. Negative exponents
9. Scientific Notation
 - a. Addition/subtraction/multiplication/division

Chapter 2:

1. Solving formulas
2. Solving inequalities
3. Solving compound inequalities
 - a. Conjunctions
 - b. Disjunctions
4. Absolute value
 - a. *Solving inequalities with absolute value
5. Equivalent Expressions

Chapter 3:

1. Ordered pairs (abscissa, ordinate)
2. Domain / Range
 - a. Find the D/R from an equation/function
 - b. Find the D/R from set notation
3. Graphing points, lines, quadratics, absolute value, etc.
 - a. Using a table of values
 - b. Using slope-intercept form
4. The four quadrants

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5. Functions
 - a. Recognizing functions using the vertical line test
 - b. Recognizing functions from set notation
6. Finding the x- and y- intercepts of a linear equation (know what a linear eq. is!)
7. Calculate the slope of a linear equation
8. Equations of lines
 - a. Slope-intercept form
 - b. Two-point form
 - c. Point-slope form
 - d. Standard form
9. Finding the equations of lines given two points, a point and a slope, or intercepts
10. Are lines parallel / perpendicular?
 - a. Find a line parallel to another line going through a point
 - b. Find a line perpendicular to another line going through a point

Chapter 3:

1. Solve a system of two equations in two variables
 - a. By graphing
 - b. By substitution
 - c. By elimination
 - d. Using Cramer's Rule
2. Solve a system of three equations in three variables through elimination / substitution
3. Is a system of equations Consistent / Inconsistent, Dependent / Independent?
4. Using systems of equations to solve problems (sec 4.5)
5. Solving systems of inequalities graphically (shading and dotted / solid lines)

Chapter 13:

1. Find the dimensions of a matrix
2. Add / Subtract matrices (if possible)
3. Multiply matrices (if possible)
4. Find the determinant of a 2 x 2 matrix. (3 x 3 is extra credit on the final)
5. ****Write a matrix equation equivalent to the systems of equations:****