

## Math 903/903M: Elementary Algebra Course Topics

**TEXT:** *Beginning and Intermediate Algebra by Martin-Gay (Pearson, 4th ed., 2009)*

- Categories:** 1. Must be covered in detail.  
**(CAT)** 2. Must be covered at least briefly.  
 3. Do not cover unless you have extra time after adequately doing 1 and 2.

<u>CAT</u>	<u>SEC</u>	<u>TOPICS</u>
1	1.1	Tips for Success in Mathematics
1	1.2	Symbols and Sets of Numbers
1	1.3	Fractions
1	1.4	Introduction to Variable Expressions and Equation
1	1.5	Adding Real Numbers
1	1.6	Subtracting Real Numbers
1	1.7	Multiplying and Dividing Real Numbers
1	1.8	Properties of Real Numbers
<hr/>		
1	2.1	Simplifying Algebraic Expressions
1	2.2	The Addition and Multiplication Properties of Equality
1	2.3	Solving Linear Equations
1	2.4	An Introduction to Problem Solving
1	2.5	Formulas and Problem Solving
1	2.6	Percents and Mixture Problem Solving
1	2.7	Further Problem Solving
1	2.8	Solving Linear Inequalities
<hr/>		
1	3.1	Reading Graphs and the Rectangular Coordinate System
1	3.2	Graphing Linear Equations
1	3.3	Intercepts
1	3.4	Slope and Rate of Change
1	3.5	Equations of Lines
1	3.6	Functions
<hr/>		
1	4.1	Solving Systems of Linear Equations by Graphing
1	4.2	Solving Systems of Linear Equations by Substitution
1	4.3	Solving Systems of Equations by Addition
3***	4.4	Solving Systems of Linear Equations in Three Variables
1	4.5	(Objective 1&2) Systems of Linear Equations and Problem Solving in Two Variables
3***	4.5	(Objective 3) Systems of Linear Equations and Problem Solving in Three Variables
<hr/>		
<i>*** is to be covered in Math C Intermediate Algebra</i>		
<hr/>		
1	5.1	Exponents
1	5.2	Polynomial Functions and Adding and Subtracting Polynomials
1	5.3	Multiplying Polynomials
1	5.4	Special Products
1	5.5	Negative Exponents and Scientific Notation
1	5.6	Dividing Polynomials
3	5.7	Synthetic Division and the Remainder Theorem

<b><u>CAT</u></b>	<b><u>SEC</u></b>	<b><u>TOPICS</u></b>
1	6.1	The Greatest Common Factor and Factoring by Grouping
1	6.2	Factoring Trinomials of the Form $x^2 + bx + c$
1	6.3	Factoring Trinomials of the Form $ax^2 + bx + c$ and Perfect Square Trinomials
1	6.4	Factoring Trinomials of the Form $ax^2 + bx + c$ by Grouping
1	6.5	Factoring Binomials
1	6.6	Solving Quadratic Equations by Factoring
1	6.7	Quadratic Equations and Problem Solving
<hr/>		
1	7.1	Rational Functions and Simplifying Rational Expressions
1	7.2	Multiplying and Dividing Rational Expressions
1	7.3	Adding and Subtracting Rational Expressions with Common Denominators and Least Common Denominator
1	7.4	Adding and Subtracting Rational Expressions with Unlike Denominators
1	7.5	Solving Equations Containing Rational Expressions
1	7.6	Proportion and Problem Solving with Rational Equations
1	7.7	Simplifying Complex Fractions