Pre-Algebra Curriculum

Content Standards	*Performance Standards*	*Sample Activities*	*Assessment Strategies*	*Resources*
Understand that a variety of numerical representations can be used to describe quantitative relationships.	Extend the understanding of number to include integers, rational numbers, and real numbers.	• Compare, locate and order real numbers on number lines, scales, coordinate grids and measurement tools. • Select and use an appropriate form of number (integer, fraction, decimal, ratio, percent, exponential, scientific notation) to solve practical problems involving order, magnitude, measures, labels, locations and scales. • Justify mathematical procedures and determine how they apply to invented operations using field properties	1. Tests 2. Quizzes 3. Projects 4. Homework 5. Class work 6. Take-Home Tests 7. Extra Credit Assignments 8. Rubrics	1. Text 2. Course Organizers 3. State Of CT Mathematics Curriculum Framework 4. Graphing Calculator 5. Cooperative Learning Groups 6. Instructional Center 7. Geometer Sketch Pad

Use numbers and their properties to compute flexibly and fluently, and to reasonable estimate measures and quantities. . Collect, organize and display data using appropriate statistical and graphical methods. Analyze data sets to	Develop strategies for computations and estimation using properties of number systems to solve problems. Create the appropriate visual or graphical representation of real data.	(closure, associative, commutative, distributive, identity, and inverse). • Judge the effects of computations with powers and roots on the magnitude of results. • Select and use appropriate methods for computing to solve problems in a variety of contexts. • Solve problems involving scientific notation and absolute value. • Develop and use a variety of strategies to estimate values of formulas, functions and roots; to recognize the limitations of estimation; and to judge the implications of the results.		

form hypotheses and make predictions. Understand and apply basic concepts of probability.	Analyze real world problems using statistical techniques. Describe and analyze sets of data using statistical models. Understand and apply the principles of probability in a variety of situations.	• Create real data and create meaningful graphical representations of the data. • Determine and use measures of spread and central tendency to describe and compare sets of data. • Determine statistical measures to describe univariate data. • Describe characteristics of sampling methods and analyze the effects of random verses biased sampling. • Solve problems involving the probabilities of mutually exclusive events or complementary events. • Explore the		

Understand and apply basic concepts of probability	Solve problems using the methods of discrete mathematics.	concepts of conditional probability and independent events in real world context. • Use theoretical probabilities to solve problems and predict experimental outcomes. • Understand and use permutations, combinations, recursion, and mathematical induction to solve problems. • Solve problems using finite graphs.		