

2003 North Carolina Standard Course of Study, Grade 8,
Correlated to *Glencoe Mathematics: Applications and Concepts*, Course 3

Competency Goals and Objectives		Student Edition Lesson
Competency Goal 1: The learner will understand and compute with real numbers.		
1.01	Develop number sense for the real numbers. a) Define and use irrational numbers. b) Compare and order. c) Use estimates of irrational numbers in appropriate situations.	1-3, 2-2, 3-2, 3-3, 3-5, 3-5b, 3-6
1.02	Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	1-8a, 2-3, 2-4, 2-6, 2-8a, 3-3a, 4-5a, 5-4, 5-5a, 5-5, 5-7, 8-1, 8-2a, 8-6, 9-1a, 10-4b, 11-6a, 12-7a
Competency Goal 2: The learner will understand and use measurement concepts.		
2.01	Determine the effect on perimeter, area or volume when one or more dimensions of two- or three-dimensional figures are changed.	7-1, 7-2, 7-5, 7-6, 7-7, 7-8b
2.02	Apply and use concepts of indirect measurement.	3-5, 4-6, 4-7, 4-7b
Competency Goal 3: The learner will understand and use properties and relationships in geometry.		
3.01	Represent problem situations with geometric models.	4-6, 7-1, 7-2, 7-3a, 7-3, 7-4a, 7-4, 7-5, 7-6, 7-7a, 7-7, 7-8, 7-8b, 7-9, 12-7a
3.02	Apply geometric properties and relationships, including the Pythagorean theorem, to solve problems.	3-4, 3-5, 3-5b, 3-6, 4-5, 4-5b, 4-6, 4-7, 4-7b, 6-1, 6-2, 6-3, 6-4, 6-5a, 6-5, 6-6, 6-7, 6-8, 6-9
3.03	Identify, predict, and describe dilations in the coordinate plane.	4-8
Competency Goal 4: The learner will understand and use graphs and data analysis.		
4.01	Collect, organize, analyze, and display data (including scatterplots) to solve problems.	9-1, 9-1b, 9-2, 9-3, 9-3b, 9-4, 9-4b, 9-5, 9-6, 9-7, 9-8, 11-6a, 11-6, 11-6b
4.02	Approximate a line of best fit for a given scatterplot; explain the meaning of the line as it relates to the problem and make predictions.	11-6
4.03	Identify misuses of statistical and numerical data.	8-7, 9-7
Competency Goal 5: The learner will understand and use linear relations and functions.		
5.01	Develop an understanding of function. a) Translate among verbal, tabular, graphic, and algebraic representations of functions. b) Identify relations and functions as linear or nonlinear. c) Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation. d) Interpret and compare properties of linear functions from tables, graphs, or equations.	1-3b, 4-3, 11-2, 11-3a, 11-3, 11-4, 11-5a, 11-5, 11-6, 11-6b, 11-7, 11-8, 12-1, 12-2a, 12-2
5.02	Write an equation of a linear relationship given: two points, the slope and one point on the line, or the slope and y -intercept.	11-5, 11-6
5.03	Solve problems using linear equations and inequalities; justify symbolically and graphically.	1-8, 1-9, 2-7, 5-6, 5-8, 11-5, 11-6, 11-7, 11-8
5.04	Solve equations using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	1-8, 1-9, 2-7, 3-1, 3-2, 5-6, 5-8, 10-1, 10-2, 10-3, 10-4a, 10-4, 10-5, 10-6, 10-7