Northpoint Horizons

Math Elevations™(Comprehensive Intervention System)
Correlated to Grade 8 of
The North Carolina Mathematics Standard Course of Study

This document provides a sampling of the extensive math directives offered throughout the *Math Elevations* program that meet **The North Carolina Mathematics Standard Course of Study.**

Grade 8

Math Content Standard	Math Elevations Level H (Grade 8) Teacher's Guide Examples/Lessons
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.	Unit 1 – Lesson 8: *Square Roots* pp. 40-42
b) Compare and order.	Unit 1 – Lesson 8: *Square Roots* pp. 40-42
c) Use estimates of irrational numbers in appropriate situations.	Unit 1 – Lesson 8: *Square Roots* pp. 40-42
1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	Unit 1 – Lesson 8: *Square Roots* pp. 40-42
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- and three-dimensional figures are changed.	Unit 4 – Lesson 2: *Writing and Solving Proportions* pp. 108-110
2.02 Apply and use concepts of indirect measurement.	Unit 7 – Lesson 2: *Circumference of a Circle* pp. 193-195
COMPETENCY GOAL 3: The learner will understand and use properties and relationships in geometry.	
3.01 Represent problem situations with geometric models.	Unit 7 – Lesson 5: *Surface Area of a Cylinder* pp. 202-204 Lesson 6: *Surface Area of a Pyramid and a Cone* pp. 205-207
3.02 Apply geometric properties and relationships, including the Pythagorean theorem, to solve problems.	Unit 3 – Lesson 8: *Pythagorean Theorem* pp. 98-101 Unit 4 – Lesson 1: *Ratios and Rates* pp. 104-107 Lesson 2: *Writing and Solving Proportions* pp. 108-110

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3.03 Identify, predict, and describe dilations in the coordinate plane.	Unit 6 – Lesson 6: *Similarity and Dilations* pp. 177-179
COMPETENCY GOAL 4: The learner will understand and use graphs and data analysis.	
4.01 Collect, organize, analyze, and display data (including scatter plots) to solve problems.	Unit 8 – Lesson 4: *Scatter Plots* pp. 227-229 Lesson 5: *Box-and-Whiskers Plots* pp. 230-233 Lesson 6: *Line Graphs* pp. 234-237 Lesson 7: *Circle Graphs* pp. 238-240 Lesson 8: *Appropriate Graphs* pp. 241-243
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.	Unit 8 – Lesson 4: *Scatter Plots* pp. 227-229
4.03 Identify misuses of statistical and numerical data.	Unit 8 – Lesson 1: *Counting Methods* pp. 216-219
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.	Unit 5 – Lesson 4: *Relations and Functions* pp. 141-143 Lesson 6: *Graphing Linear Functions* pp. 147-150 Lesson 7: *Interpreting Linear Functions* pp. 151-153
b) Identify relations and functions as linear or nonlinear.	Unit 5 – Lesson 4: *Relations and Functions* pp. 141-143 Lesson 6: *Graphing Linear Functions* pp. 147-150 Lesson 7: *Interpreting Linear Functions* pp. 151-153
c) Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation.	Unit 5 – Lesson 8: *Slope* pp. 154-157
d) Interpret and compare properties of linear functions from tables, graphs, or equations.	Unit 5 – Lesson 4: *Relations and Functions* pp. 141-143 Lesson 6: *Graphing Linear Functions* pp. 147-150 Lesson 7: *Interpreting Linear Functions* pp. 151-153
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.	Unit 5 – Lesson 6: *Graphing Linear Functions* pp. 147-150 Lesson 7: *Interpreting Linear Functions* pp. 151-153
5.03 Solve problems using linear equations and inequalities; justify symbolically and graphically.	Unit 5 – Lesson 1: *Solving Two-Step Equations* pp. 132-134

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	Lesson 2: *Solving Multi-Step Equations* pp. 135-137 Lesson 5: *Two-Variable Equations* pp. 144-146
5.04 Solve equations using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	Unit 5 – Lesson 1: *Solving Two-Step Equations* pp. 132-134 Lesson 2: *Solving Multi-Step Equations* pp. 135-137 Lesson 5: *Two-Variable Equations* pp. 144-146