

NC Math 1 Curriculum Overview

Solving Equations and Inequalities in One Variable

Introduction to Functions and Graph Behaviors

Linear Functions

Parallel and Perpendicular Lines

Graphing Linear Inequalities in Two Variables

Systems of Equations and Inequalities

Introduction to Exponential Functions

Compound Interest

Arithmetic and Geometric Sequences

Linear and Exponential Regression

Midpoint and Distance on a Coordinate Plane

Descriptive Statistics

Properties of Exponents

Introduction to Polynomials

Introduction to Quadratic Functions

Details sourced from the Unpacking Document for the North Carolina Math 1 Standard Course of Study:

Algebra, Functions, & Function Families

NC MATH 1	LOOKING AHEAD TO NC MATH 2
Focus on comparing properties of linear function to specific non-linear functions and rate of change. <ul style="list-style-type: none"> • Linear • Exponential • Quadratic 	Focus on properties of quadratic functions and an intro to inverse functions through the inverse relationship between quadratic and square root functions. <ul style="list-style-type: none"> • Quadratic • Square Root • Inverse Variation

Algebra and Functions are inter-related. The Function standards focus more on the characteristics (e.g. domain/range or max/min points), function definition, etc. whereas the Algebra standards provide the computational tools and understandings that students need to explore specific instances of functions.

Geometry

NC MATH 1	LOOKING AHEAD TO NC MATH 2
Focus on coordinate geometry. <ul style="list-style-type: none"> • Distance on the coordinate plane • Midpoint of line segments • Slopes of parallel and perpendicular lines • Prove geometric theorems algebraically 	Focus on triangles. <ul style="list-style-type: none"> • Congruence • Similarity • Right triangle trigonometry <ul style="list-style-type: none"> ◦ Special right triangles

Integrating Algebra and Geometry: Building on 5th-8th-grade knowledge in the coordinate plane, Pythagorean theorem, and functions. Students use algebraic reasoning to prove geometric theorems, establishing a foundation for advanced geometric proofs.

Probability and Statistics

NC MATH 1	LOOKING AHEAD TO NC MATH 2
Focus on analysis of univariate and bivariate data. <ul style="list-style-type: none"> • Use of technology to represent, analyze and interpret data • Shape, center & spread of univariate numerical data • Scatter plots of bivariate data • Linear and exponential regression • Interpreting linear models in context. 	Focus on probability. <ul style="list-style-type: none"> • Categorical data and two-way tables • Understanding and application of the Addition and Multiplication Rules of Probability • Conditional Probabilities • Independent Events • Experimental vs. theoretical probability

A continuation of the work from middle grades mathematics on summarizing and describing quantitative data distributions of univariate (6th grade) and bivariate (8th grade) data.