

## NC Math 2

Changed* or Added Concepts/Skills	Removed Concepts/Skills from Course Standards	Additional Concepts for Implementation Year
<ul style="list-style-type: none"> <li>• <b>Rewriting algebraic expressions with rational exponents</b> (NC.M2.N-RN.1 and NC.M1.N-RN.2 from Math I)</li> <li>• <b>Rational and irrational numbers</b> (NC.M2.N-RN.3, from Math III)</li> <li>• <b>Defining a complex number</b> (NC.M2.N-CN.1 from Math III)</li> <li>• <b>Completing the square</b> (NC.M2.A-SSE.3, NC.M2.A-REI.4a, and NC.M2.F-IF.8a from Math III)</li> <li>• <b>Write non-real solutions of quadratic equations as complex numbers</b> (NC.M2.N-CN.1 and NC.M2.A-REI.4b from Math III)</li> <li>• <b>Extend functions to include geometric transformations</b> (NC.M2.F-IF.1, new)</li> <li>• <b><u>Vertical and horizontal translations</u> and vertical stretching of functions</b> (NC.M2.F-BF.3 changes from Math I)</li> <li>• <b>Prove theorems about lines and angles</b> (NC.M2.G-CO.9, from Math III)</li> <li>• <b>Prove theorems about triangles – <u>exterior angles</u> and <u>base angles of isosceles</u></b> (NC.M2.G-CO.10, changes from Math III)</li> <li>• <b>Similarity through transformations</b> (NC.M2.G-SRT.2, NC.M2.G-SRT.3, NC.M2.G-SRT.4, and NC.M2.G-SRT.5, from Math III)</li> <li>• <b>Using special right triangles to solve problems</b> (NC.M2.G-SRT.12, new)</li> <li>• <b>Two-Way Tables</b> (NC.M2.S-ID.5 from Math I)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Unit analysis, scale, level of accuracy</b> (N-Q.1, 2, and 3 – Incorporated into the Standards for Mathematical Practice)</li> <li>• <b>Using structure to rewrite expressions</b> (A-SSE.2 - Incorporated into the Standards for Mathematical Practice)</li> <li>• <b>Geometric Definitions</b> (G.CO.1 – Incorporated into the associated standards)</li> <li>• <b>Geometric Constructions</b> (G.CO.13 - Incorporated into Instructional Documents)</li> <li>• <b>Rewrite exponential expressions</b> (to NC Math 3, NC.M3.A-SSE.3c)</li> <li>• <b>Understand the relationship between factors, solutions, and zeros of a quadratic function</b> (to NC Math 1, NC.M1.A-APR.3)</li> <li>• <b>Solving for a variable in formulas</b> (Fully in NC Math 1, NC.M1.A-CED.4)</li> <li>• <b>Solving quadratic equations using square roots and factoring</b> (Fully in NC Math 1, NC.M1.A-REI.4)</li> <li>• <b>Understanding the relationship between the graph of an equation and the solutions</b> (Fully in NC Math 1, NC.M1.A-REI.10)</li> <li>• <b>Building a new function from other functions</b> (to NC Math 1, NC.M1.F-BF.1b and to NC Math 3, NC.M3.F-BF.1b)</li> <li>• <b>Deriving the formula for the area of a triangle using trigonometry</b> (G-SRT.9 to a fourth level math).</li> <li>• <b>Laws of Sines and Cosines</b> (G-SRT.11 to a fourth level math)</li> <li>• <b>Derive the equation of circles</b> (to NC Math 3, NC.M3.G-GPE.1)</li> <li>• <b>Find the point on segment partitions with a given ratio</b> (G-GPE.6, to a fourth level math)</li> <li>• <b>Cross-sections of three dimensional objects</b> (to NC Math 3, NC.M3.G-GMD.4)</li> <li>• <b>Modeling with Geometry</b> (to NC Math 3, NC.M3.G-MG.1)</li> <li>• <b>Using permutations and combinations to compute probabilities</b> (S-CP.4 to a fourth level math)</li> </ul>	<p><i>For the implementation year:</i></p> <ul style="list-style-type: none"> <li>• <b>Understand the relationship between factors, solutions, and zeros of a quadratic function</b> (to NC Math 1, NC.M1.A-APR.3)</li> <li>• <b>Solving quadratic equations using square roots and factoring</b> (Fully in NC Math 1, NC.M1.A-REI.4)</li> </ul>

\*The changed concepts/skills are underlined.