

North Carolina Tutorials are designed specifically for the Common Core State Standards for English language arts, the North Carolina Standard Course of Study for Math, and the North Carolina Essential Standards, to prepare students for the READY End-of-Course Assessments.

Math Tutorials offer targeted instruction, practice and review designed to develop computational fluency, deepen conceptual understanding, and apply mathematical practices. They automatically identify and address learning gaps down to elementary-level content, using adaptive remediation to bring students to grade-level no matter where they start. Students engage with the content in an interactive, feedback-rich environment as they progress through standards-aligned modules. By constantly honing the ability to apply their knowledge in abstract and real world scenarios, students build the depth of knowledge and higher order skills required to demonstrate their mastery when put to the test.

In each module, the Learn It and Try It make complex ideas accessible to students through focused content, modeled logic and process, multi-modal representations, and personalized feedback as students reason through increasingly challenging problems. The Review It offers a high impact summary of key concepts and relates those concepts to students' lives. The Test It assesses students' mastery of the module's concepts, providing granular performance data to students and teachers after each attempt. To help students focus on the content most relevant to them, unit-level pretests and posttests can quickly identify where students are strong and where they're still learning.

### Unit 1: Real Number System

- LAWS OF EXPONENTS
- MONITORING PRECISION AND ACCURACY

### Unit 2: Expressions, Equations, and Inequalities

- ONE-STEP EQUATIONS AND INEQUALITIES
- MULTI-STEP EQUATIONS AND INEQUALITIES
- AXIOMS OF EQUALITY
- LITERAL EQUATIONS

### Unit 3: Writing Equations and Inequalities

- FORMULATING AND SOLVING EQUATIONS FROM WORD PROBLEMS
- FORMULATING AND SOLVING INEQUALITIES FROM WORD PROBLEMS

### Unit 4: Functions

- FUNCTIONS AND RELATIONS
- DOMAIN AND RANGE
- EVALUATING FUNCTIONS

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**Unit 5: Graphing Linear Equations and Inequalities**

- **GRAPHING AND ANALYZING LINEAR FUNCTIONS**
- **GRAPHING AND MANIPULATING  $Y = MX + B$**
- **GRAPHS OF LINEAR INEQUALITIES**

**Unit 6: Linear Equations**

- **SLOPE**
- **SLOPE-INTERCEPT FORM OF A LINEAR EQUATION**
- **POINT-SLOPE FORM OF A LINEAR EQUATION**

**Unit 7: Linear Systems**

- **SOLVING SYSTEMS OF LINEAR EQUATIONS: GUESS AND CHECK**
- **SOLVING SYSTEMS OF LINEAR EQUATIONS: GRAPHING**
- **SOLVING SYSTEMS OF LINEAR EQUATIONS: SUBSTITUTION**
- **SOLVING SYSTEMS OF LINEAR EQUATIONS: ELIMINATION**
- **SOLVING SYSTEMS OF LINEAR INEQUALITIES**

**Unit 8: Exponential Functions, Equations, and Inequalities**

- **EXPONENTIAL FUNCTIONS**
- **EXPONENTIAL GROWTH AND DECAY**
- **SOLVING EXPONENTIAL INEQUALITIES**

**Unit 9: Factoring**

- **FACTORING QUADRATIC TRINOMIALS**
- **FACTORING SPECIAL CASES**

**Unit 10: Quadratic Equations and Functions**

- **QUADRATIC FUNCTIONS**
- **SOLVING QUADRATIC FUNCTIONS WITH FACTORING**
- **REPRESENTATIONS OF QUADRATIC FUNCTIONS**
- **ANALYZING GRAPHS OF QUADRATIC FUNCTIONS**

**Unit 11: Working with Functions**

- **LINEAR VERSUS NONLINEAR**
- **LINEAR AND EXPONENTIAL PARENT FUNCTIONS**
- **TRANSFORMATIONS OF THE LINEAR AND EXPONENTIAL PARENT FUNCTIONS**
- **QUADRATIC PARENT FUNCTION**
- **TRANSFORMATIONS OF THE QUADRATIC PARENT FUNCTION**

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**Unit 12: Polynomial Expressions**

- **POLYNOMIAL BASICS**
- **ADDITION AND SUBTRACTION OF POLYNOMIALS**
- **MULTIPLICATION OF POLYNOMIALS**
- **ARITHMETIC OPERATIONS ON FUNCTIONS**

**Unit 13: Points, Lines, and Angles**

- **POINTS, RAYS, LINE SEGMENTS, LINES, AND FIGURES**
- **PARALLEL AND PERPENDICULAR LINES**

**Unit 14: Circumference and Area of Circles**

- **CIRCUMFERENCE AND ARC LENGTH**
- **AREA OF CIRCLES AND SECTORS**

**Unit 15: Coordinate Geometry**

- **LENGTH AND THE DISTANCE FORMULA**
- **MIDPOINT FORMULA ON THE COORDINATE PLANE**
- **PERIMETER ON THE COORDINATE PLANE**
- **AREA ON THE COORDINATE PLANE**
- **CONJECTURES IN COORDINATE GEOMETRY**

**Unit 16: Surface Area and Volume**

- **SURFACE AREA AND VOLUME OF SPHERES**
- **VOLUME OF PRISMS AND PYRAMIDS**
- **VOLUME OF CYLINDERS AND CONES**
- **VOLUME OF COMPOSITE SOLIDS**

**Unit 17: Sequences**

- **SEQUENCES**
- **ARITHMETIC AND GEOMETRIC SEQUENCES**

**Unit 18: Statistics**

- **DATA ANALYSIS**
- **FREQUENCY TABLES**
- **SCATTERPLOTS**
- **SCATTERPLOTS AND MODELING**