

Measures of Academic Progress (MAP) North Carolina NSP State-Aligned Version 2

The NWEA Goal Structure is a document that represents the content and structure of a state's standards documents. Goal structures are created through an alignment process that links state standards documents to the NWEA item bank. The MAP tests and associated reports for teachers and students are based upon this structure and alignment.

The alignment process begins with a thorough review of a state's standards documents by NWEA's curriculum specialists. The general goal areas or strands within a state's standards that appear across grade levels become the goals in the goal structure (indicated below as bold). Areas in a state's standards documents that are determined to be sub-domains of the goals/strands become the sub-goals in the goal structure (indented under each goal below).

Goal and sub-goal names from the Goal Structure are shortened for technical reasons to create the headings in DesCartes. Report Names are shortened further to accommodate report specifications.

Mathematics 9+ Goal Structure	Mathematics 9+ DesCartes	Mathematics 9+ Report Names
Number and Operations	Number and Operations	Number and Operations
The learner will perform operations with real numbers, complex numbers, and matrices to solve problems: Develop number sense for the real numbers; develop flexibility in solving problems by selecting strategies; simplify and perform operations with rational exponents and logarithms to solve problems; use the trigonometric ratios to model and solve problems involving right triangles; use length, area, and volume of geometric figures to solve problems	Operations: Real and Complex Numbers, Matrices	

The learner will perform operations with expressions and polynomials: apply the laws of exponents; operate with polynomials; factor polynomials; use formulas and algebraic expressions, including iterative and recursive forms, to model and solve problems; model and solve problems using direct and inverse variation	Operations: Expressions and Polynomials	
Geometry and Measurement	Geometry and Measurement	Geometry and Measurement
The learner will use properties and relationships in geometry and measurement concepts and describe geometric figures in the coordinate plane; apply geometric properties and relationships, including the Pythagorean theorem, to solve problems; find the lengths and midpoints of segments to solve problems; use the parallelism or perpendicularity of lines and segments to solve problems; identify, predict, and describe transformations of polygons in the coordinate plane	Properties and Relationships in Geometry	
The learner will use geometric and algebraic properties of figures to solve problems and write proofs; use logic and deductive reasoning to draw conclusions and solve problems; apply properties, definitions, and theorems of angles and lines to solve problems; apply properties, definitions, and theorems of two-dimensional figures to solve problems; determine the effect on perimeter, area or volume when one or more dimensions of two- and three-dimensional figures are changed; apply and use concepts of indirect measurement	Properties, Definitions, Theorems of 2-D Figures	
Data Analysis and Probability	Data Analysis and Probability	Data Analysis and Probability
The learner will collect, organize, display, and interpret data to solve problems; 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; identify misuses of statistical and numerical data	Data Analysis: Organize, Display, Interpret	

<p>The learner will understand and determine probabilities; use length, area, and volume to model and solve problems involving probability; develop fluency with counting strategies to determine the sample space for an event. Include lists, tree diagrams, frequency distribution tables, permutations, combinations, and the Fundamental Counting Principle; determine theoretical probabilities for simple and compound events; determine theoretical probabilities for independent and dependent events</p>	<p>Probability Concepts: Geometric and Theoretical</p>	
<p>Algebra</p>	<p>Algebra</p>	<p>Algebra</p>
<p>The learner will use relations and functions to solve problems; develop an understanding of function; write an equation of a linear relationship; solve problems using linear equations and inequalities; use systems of linear equations or inequalities in two variables to model and solve problems; create and use best-fit mathematical models of quadratic functions to solve problems involving sets of data</p>	<p>Relations, Linear Functions & Inequalities</p>	
<p>The learner will use relations and functions to solve problems; graph and evaluate quadratic functions and exponential functions; use the inverse relationships of addition and subtraction, multiplication and division, and squares and square roots; use the composition and inverse of functions; use and model rational equations, equations and inequalities with absolute value, equations of parabolas, systems of two or more equations or inequalities, and equations with radical expressions</p>	<p>Nonlinear Functions & Inequalities</p>	