

9-12 Math Standards

An overview of changes from 2011 - 2026

The following is intended to be an **overview** of shifts in the Montana 9-12 Mathematics Content Standards that clarifies conceptual changes and similarities for **9-12 educators**. For a full analysis, please review the files and historical documents provided on the [Math Revisions Website](#).

“The K-12 content standards describe what **students shall know, understand, and be able to do...define end-of-year expectations** and a cumulative progression designed to enable students to meet **college and career readiness expectations no later than the end of high school.**”

- Administrative Rules of Montana 10.53.101

150
standards

2011 expectation for **all students** upon graduation (2011 Montana Standards)

50
standards

2026 expectation for **all students** to meet the **minimum state requirement** for graduation (MT Core)

81
standards

2026 expectation for **all students** to be considered **college and career ready** (MT Core + Core Plus)

80%

of the 2026 standards were adapted from concepts present in the 2011 standards.

Shifts in Content Focus

Required: Topics **included** in the 2026 MT Core/Plus Standards and expected within all MT mathematics programs.

Elective Concepts: Topics **not included** in the 2026 standards that are recommended as enrichment or elective content within a student’s 9-12 mathematics experience.

★: Indicates a new or expanded concept in the 2026 MT Core/Plus Standards.

	Required:	Elective Concepts:
Numbers & Quantity	<p>Real Numbers:</p> <ul style="list-style-type: none"> Rational Exponents & Properties Number Systems ★ Scientific Notation <p>Quantities:</p> <ul style="list-style-type: none"> Measurement Modeling <p>Complex Numbers</p> <ul style="list-style-type: none"> Basic Operations & Solutions 	<p>Matrices</p> <p>Vectors</p> <p>Complex Numbers:</p> <ul style="list-style-type: none"> Advanced Representations & Theory
Algebra & Functions	<p>Expressions:</p> <ul style="list-style-type: none"> Interpretation Structure Rewriting <p>Polynomials & Rationals:</p> <ul style="list-style-type: none"> Factored Form Zeros Graphing <p>Equations:</p> <ul style="list-style-type: none"> Creating Equations and Inequalities Applications to context Systems of equations Rearranging ★ Trig Equations <p>Equations & Systems</p> <ul style="list-style-type: none"> Quadratics Systems Graph Interpretation <p>Interpreting Functions</p> <ul style="list-style-type: none"> Linear, Quadratic, Polynomials, Trigonometric, Exponential & Logarithmic Interpretations Features Representations ★ Multiple Representations ★ Form Relationships <p>Building Functions</p> <ul style="list-style-type: none"> Writing Inverses Modeling Transformations <p>Modeling</p> <ul style="list-style-type: none"> Linear, Quadratic, Polynomials, Trigonometric, Exponential & Logarithmic <p>Trig Functions</p> <ul style="list-style-type: none"> Unit Circle Special Triangles 	<p>Expressions:</p> <ul style="list-style-type: none"> Geometric series <p>Polynomials & Rationals:</p> <ul style="list-style-type: none"> Operations & Theorems <p>Equations & Systems</p> <ul style="list-style-type: none"> Inequalities Advanced Methods (Matrices & Vectors) <p>Interpreting Functions</p> <ul style="list-style-type: none"> Sequences Piecewise Rational Functions <p>Building Functions</p> <ul style="list-style-type: none"> Sequences Recursive Processes Compositions <p>Trig Functions</p> <ul style="list-style-type: none"> Identities Inverses Advanced Relationships
Geometry & Geometric Reasoning	<p>Congruence</p> <ul style="list-style-type: none"> Transformations Proofs Constructions <p>Similarity, Right Triangles, and Trig</p> <ul style="list-style-type: none"> Proportional Reasoning Right Triangles Theorems & Proofs <p>Circles</p> <ul style="list-style-type: none"> Angle Relationships & Proportionality Measurement Arcs & Sectors <p>Geometric Properties</p> <ul style="list-style-type: none"> Proofs Coordinate Geometry Circles Algebraic Proof Lines and Measurement <p>Geometric Measurement & Dimension</p> <ul style="list-style-type: none"> Volume Problem Solving <p>Geometric Modeling</p> <ul style="list-style-type: none"> Shapes & Design ★ Scale Factor Relationships 	<p>Congruence</p> <ul style="list-style-type: none"> Precise Definitions Development of Definitions Inscribed Constructions <p>Similarity, Right Triangles, and Trig</p> <ul style="list-style-type: none"> Dilations Specialized Trig Relationships <p>Circles</p> <ul style="list-style-type: none"> Constructions Advanced Theorems <p>Geometric Properties</p> <ul style="list-style-type: none"> Conics Advanced Coordinate Proofs <p>Geometric Measurement & Dimension</p> <ul style="list-style-type: none"> Formula Derivation Cross Sections Cavalieri’s Principle <p>Geometric Modeling</p> <ul style="list-style-type: none"> Density Applications
Statistics & Probability	<p>Data Analysis</p> <ul style="list-style-type: none"> Representation Computation Interpretation Modeling ★ Use of Technology <p>Statistical Inference</p> <ul style="list-style-type: none"> Sampling <ul style="list-style-type: none"> ★ Sampling vs. Assignment ★ Distributions ★ Variability Experiments Conclusions ★ Group Mean Comparison <p>Probability</p> <ul style="list-style-type: none"> Events & Sample Spaces Conditional Reasoning Independence 	<p>Data Analysis</p> <ul style="list-style-type: none"> Residual Fit Analysis <p>Probability</p> <ul style="list-style-type: none"> Compound Event Rules Combinatorics Expected Value Advanced Decision Modeling

This overview is intended to highlight major conceptual shifts in content focus. **It is not** a comprehensive comparison of every standard. **It is** a tool to support understanding of priorities, coherence, and instructional implications within the 2026 Montana Mathematics Content Standards.

What This Means for Educators

- 1** **Depth Over Breadth**
Teachers can focus on essential concepts, increasing the likelihood that students develop deep understanding and sustained mathematical proficiency.
- 2** **Streamlined Expectations for Clarity**
This provides clearer targets for instruction for ensuring all students build a mathematical foundation that is necessary for graduation and beyond.
- 3** **Expanded Opportunities for Extension & Career Alignment**
Conceptual shifts and flexible pathways enable teachers and schools to design relevant and rigorous experiences that align to students’ life goals.
- 4** **Planning for Coherence and Conceptual Understanding**
Supporting all strands of mathematical proficiency: conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, & productive disposition.
- 5** **Integrated Mathematical Practices & Applications**
Greater emphasis is placed on practices and conceptual areas like data literacy to prepare students to utilize mathematics strategically in rapidly evolving world.

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