

**THE FOLLOWING STATE CURRICULUM STANDARDS ARE ADDRESSED BY
THE QUARTER MILE MATH SOFTWARE
FOR THE STATE OF NORTH DAKOTA**

Grades K - 4

Subject: MATH

Standard: Algebra, Functions, And Patterns

Strand: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Substrand	Titles that Address the Substrand
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(Gr. K-4) 4.5.1 Understand when a simple pattern exists, identify the rule that generates the pattern, and use that information to solve problems.

Quarter Mile Math Level 1

(Gr. K-4) 4.5.2 Represent and describe mathematical relationships using symbols for variables.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) 4.5.3 Solve problems with unknown variables.

Quarter Mile Math Level 2

(Gr. K-4) 4.5.4 Use basic counting strategies to determine all possible outcomes.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

Subject: MATH

Standard: Number And Operation

Strand: Students understand and use basic and advanced concepts of number and number systems.

Substrand	Titles that Address the Substrand
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(Gr. K-4) 4.1.2 Understand the characteristics and properties of our numeration system.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) 4.1.3 Understand how arithmetic operations are related to one another in addition, subtraction, multiplication, and division.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) 4.1.4 Rename, order, and compare numbers.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) 4.1.5 Know and use basic facts and computational algorithms for whole numbers, fractions and decimals.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) 4.1.6 Use estimation strategies in working with quantities, measurement, computation, and problem solving.

Quarter Mile Math Level 1
Quarter Mile Math Level 2

(Gr. K-4) 4.1.7 Understand and communicate strategies to solve a wide variety of problems.

Quarter Mile Math Level 1
Quarter Mile Math Level 2

Grades 5 - 8

Subject: MATH

Standard: Algebra, Functions, And Patterns

Strand: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Substrand **Titles that Address the Substrand**

(Gr. 5-8) 8.5.1 Find, represent, describe, and analyze patterns, functions, and relations using tables, graphs, verbal descriptions, and standard algebraic notation.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.5.2 Understand the concepts of functions, variables, expressions, equations, and inequalities.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.5.3 Solve linear equations, inequalities, and systems of equations in problem-solving situations using a variety of methods and a variety of tools.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH

Standard: Number And Operation

Strand: Students understand and use basic and advanced concepts of number and number systems.

Substrand **Titles that Address the Substrand**

(Gr. 5-8) 8.1.1 Understand numbers, number systems and ways of representing numbers.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.1.2 Apply number theory concepts in mathematical problems.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.1.3 Determine appropriate information and methods to solve problems.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.1.4 Compute with real numbers using appropriate computational methods for given situations.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 5-8) 8.1.5 Apply appropriate estimation strategies to determine if a solution is reasonable.

Quarter Mile Math Level 2

Grades 9 - 12

Subject: MATH

Standard: Algebra, Functions, And Patterns

Strand: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Substrand Titles that Address the Substrand

(Gr. 9-12) 12.5.1 Use algebraic procedures to manipulate mathematical expressions.

Quarter Mile Math Level 3

(Gr. 9-12) 12.5.2 Solve equations, inequalities, and systems.

Quarter Mile Math Level 3

(Gr. 9-12) 12.5.3 Represent and describe relations algebraically, numerically, and graphically.

Quarter Mile Math Level 3

Subject: MATH

Standard: Number And Operation

Strand: Students understand and use basic and advanced concepts of number and number systems.

Substrand Titles that Address the Substrand

(Gr. 9-12) 12.1.1 Know and use the real number system, its subsets and properties.

Quarter Mile Math Level 3

(Gr. 9-12) 12.1.2 Identify complex numbers and understand their relevance in solving equations.

Quarter Mile Math Level 3

(Gr. 9-12) 12.1.3 Use basic set relations and operations with appropriate notation.

Quarter Mile Math Level 3

(Gr. 9-12) 12.1.4 Understand the meaning of operations and how they relate to each other.

Quarter Mile Math Level 3

(Gr. 9-12) 12.1.5 Apply advanced estimation skills and appropriate computational methods to attain reasonable solutions.

Quarter Mile Math Level 3

(Gr. 9-12) 12.1.6 Understand the properties and basic theorems of roots, exponents, and logarithms.

Quarter Mile Math Level 3