

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

Grades K - 4

Subject: MATH

Standard: Data Analysis, Statistics And Probability

Strand: The student will apply probability and statistical concepts in problem-solving and decision-making situations.

Substrand Titles that Address the Substrand

(Gr. K-4) DSP. 3.2. Make a true statement based on a simple concept of average (median, mean, mode and range) for a small sample size.

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense, Properties, And Operations

Strand: The student will communicate an understanding of the properties of numbers and operations (add, subtract, multiply, divide).

Substrand Titles that Address the Substrand

(Gr. K-4) NPO. 1.2. Develop meaning for the operations (add, subtract, multiply, and divide) by modeling and discussing a variety of problem situations.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) NPO. 1.3. Apply and master counting, grouping, place value, and estimation.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) NPO. 1.4. Solve problems using terminology and symbols of operations (add, subtract, multiply, and divide).

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) NPO. 1.5. Demonstrate competency of operations (add, subtract, multiply and divide) using mental math and technology.

Quarter Mile Math Level 1

Quarter Mile Math Level 2

(Gr. K-4) NPO. 1.6. Use manipulatives to demonstrate and compare rational numbers/ fractions (e. g., find simple parts of a whole).

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense, Properties, And Operations

Strand: The student will demonstrate and apply knowledge of numbers and numerical relationships to real-world situations.

Subject: MATH

Standard: Patterns, Algebra And Functions

Strand: The student will use algebraic concepts to model, to solve, and to test solutions of mathematical and real-world problems.

Substrand Titles that Address the Substrand

(Gr. 5-8) PAF. 2.3. Write and solve equations and inequalities (using manipulatives and technology).

Quarter Mile Math Level 3

Subject: MATH

Standard: Patterns, Algebra And Functions

Strand: The student will use the language/ symbols of algebra to represent patterns and functions.

Substrand Titles that Address the Substrand

(Gr. 5-8) PAF. 1.1. Represent arithmetic as algebra (change $25 = ___ + 13$ to $25 = m + 13$).

Quarter Mile Math Level 2

Quarter Mile Math Level 3

(Gr. 5-8) PAF. 1.2. Through the use of manipulatives and computer technology, develop the concepts of variables, expressions, and equations (algebra tiles, two color counters, graphing calculators, balance scale model, etc.).

Quarter Mile Math Level 3

Grades 9 - 12

Subject: MATH

Standard: Algebra I

Strand: Functions, Relations, & Patterns

Substrand Titles that Address the Substrand

(Gr. 9-12) 4.1 Use function notation

Quarter Mile Math Level 3

(Gr. 9-12) 4.6 Communicate graphically, algebraically, and verbally real-world problems

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Language of Algebra

Substrand Titles that Address the Substrand

(Gr. 9-12) 1.1 Real number system - recognize and use counting numbers, whole numbers, integers, rational numbers, irrational numbers

Quarter Mile Math Level 3

(Gr. 9-12) 1.2 Know the fundamental language of algebra - sum, difference, product, quotient, factor, term, prime, composite, exponent, root, etc.

Quarter Mile Math Level 3

(Gr. 9-12) 1.3 Demonstrate ability to use the order of operations

Quarter Mile Math Level 3

(Gr. 9-12) 1.4 Understand the concept of variable as used in algebraic modeling

Quarter Mile Math Level 3

(Gr. 9-12) 1.6 Distinguish between 'expression' & 'equation' and 'simplify' & 'solve'

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Polynomial Operations

Substrand

Titles that Address the Substrand

(Gr. 9-12) 5.1 Add, subtract, multiply polynomials (combining similar terms)

Quarter Mile Math Level 3

(Gr. 9-12) 5.3 Solve second degree equations by factoring and graphing

Quarter Mile Math Level 3

(Gr. 9-12) 5.4 Solve problems involving scientific notation

Quarter Mile Math Level 2

Subject: MATH

Standard: Algebra I

Strand: Solve Equations and Inequalities

Substrand

Titles that Address the Substrand

(Gr. 9-12) 2.3 Express answers using: - estimation - appropriate units - sentence form

Quarter Mile Math Level 3

Subject: MATH

Standard: Number Sense, Properties, And Operations

Strand: The student will communicate an understanding of the properties of numbers and operations (add, subtract, multiply, and divide).

Substrand

Titles that Address the Substrand

(Gr. 9-12) NPO. 1.1. Represent numbers in a variety of equivalent forms. (e. g., fraction, decimal, percent, scientific notation, powers and roots)

Quarter Mile Math Level 2

Quarter Mile Math Level 3

(Gr. 9-12) NPO. 1.2. Make estimates appropriate to a given situation.

Quarter Mile Math Level 2

Quarter Mile Math Level 3

(Gr. 9-12) NPO. 1.3. Verify results and determine the reasonableness of solutions.

Quarter Mile Math Level 2

Quarter Mile Math Level 3

(Gr. 9-12) NPO. 1.6. Demonstrate understanding of relationships between the complex number system and its major subsystems. (natural or counting, whole, integer, rational, irrational, imaginary)

Quarter Mile Math Level 2

Quarter Mile Math Level 3

Subject: MATH

Standard: Patterns, Algebra And Functions

Strand: The student will use algebraic concepts to model, to solve, and to test solutions of mathematical and real-world problems.

Substrand	Titles that Address the Substrand
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(Gr. 9-12) PAF. 2.1. Use equations, absolute value equations, inequalities, absolute value inequalities, and systems of equations and inequalities to solve mathematical and real-world problems.	
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Quarter Mile Math Level 3

(Gr. 9-12) PAF. 2.3. Solve equations with real and complex roots using a variety of algebraic and graphical methods and using appropriate tools.	
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Quarter Mile Math Level 3

(Gr. 9-12) PAF. 2.4. Use approximation in problem solving and in assessing reasonableness of solutions.	
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Quarter Mile Math Level 2