

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

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Sets

Substrand **Titles that Address the Substrand**

(Gr. PreK-1) Identify even and odd numbers.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Spatial Sense

Substrand **Titles that Address the Substrand**

(Gr. PreK) Uses ordinal numbers to indicate positions first through fifth.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Betweenness

Substrand **Titles that Address the Substrand**

(Gr. PreK) Identifies a number between two given numbers, and a number before and after a number in numerals (0 through 10) or words (zero through ten).
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Counting

Substrand **Titles that Address the Substrand**

(Gr. PreK) Counts, by rote, 0 through 10 forward and backward. Skip counts.
Quarter Mile Math Level 1

Subject: MATH
Standard: Geometry & Spatial Sense; Measurement
Strand: Geometric Relationships

Substrand **Titles that Address the Substrand**

(Gr. 1) Identifies relationships (larger than, largest, smaller than, smallest, same size as, same shape as, inside, outside, on, left, right).

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Counting

Substrand **Titles that Address the Substrand**

(Gr. 1) Connect number words and numerals to the quantities they represent, using various physical models and representations through 100.

Quarter Mile Math Level 1

(Gr. 1) Counts by ones, fives, and tens to 100 and by twos to 20. Counts backwards from 20.

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Number Names

Substrand **Titles that Address the Substrand**

(Gr. 1) Translates words to numerals and numerals to words (0 to 20).

Quarter Mile Math Level 1

(Gr. 1) Recognizes, writes, and orally names numerals 0 through 99.

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Number Sentences

Substrand **Titles that Address the Substrand**

(Gr. 1) Recognizes different names for whole numbers through 20 (e.g., $4 = 2 + 2$, $4 = 3 + 1$).

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Place Value

Substrand **Titles that Address the Substrand**

(Gr. 1) Identifies place value by determining number of tens and ones in a given number.

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Rounding

Substrand **Titles that Address the Substrand**

(Gr. 1) Round whole number to nearest ten.

Quarter Mile Math Level 1

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Sequencing

Substrand Titles that Address the Substrand

(Gr. 1) Identifies numerical relations (greater than, less than, equal to) in ascending order.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Estimation

Substrand Titles that Address the Substrand

(Gr. 1) Explores estimation of quantities of less than 100.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Addition and Subtraction

Substrand Titles that Address the Substrand

(Gr. 1) Adds and subtracts two-digit whole numbers without regrouping vertically and horizontally (rewrite vertically).

Quarter Mile Math Level 1

(Gr. 1) Determines addition and subtraction facts up to 18 using strategies such as counting all of a set, part-whole, counting on, counting back, counting up, doubles, property of zero, and commutativity of addition.

Quarter Mile Math Level 1

(Gr. 1) Recalls addition facts (sums to 18) and related subtraction facts presented vertically and horizontally (rewrite vertically).

Quarter Mile Math Level 1

(Gr. 1) Use a variety of methods and tools to compute, including objects, mental computation, and paper and pencils.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Addition

Substrand Titles that Address the Substrand

(Gr. 1) Adds two and three single-digit whole numbers presented vertically and horizontally (rewrite vertically) without regrouping.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Mathematical Symbols

Substrand Titles that Address the Substrand

(Gr. 1) Uses appropriate mathematical symbols (+, -, =).

Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Zero Properties

Substrand **Titles that Address the Substrand**

(Gr. 1) Explores the property of zero in addition and subtraction.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Counting and Multiplication Readiness

Substrand **Titles that Address the Substrand**

(Gr. 2) Counts by ones, twos, fives, and tens up to 100, threes to 36; and fours to 48.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Number Names

Substrand **Titles that Address the Substrand**

(Gr. 2) Translates words to numerals through 999 and numerals to words, both orally and in writing.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Ordinals

Substrand **Titles that Address the Substrand**

(Gr. 2) Determines ordinal numbers through twentieth.
Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Place Value

Substrand **Titles that Address the Substrand**

(Gr. 2) Identifies place value through hundreds and identifies the number of hundreds, tens, and ones in a given numeral.
Quarter Mile Math Level 1

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Number Sentences

Substrand **Titles that Address the Substrand**

(Gr. 2) Uses appropriate symbols (+, -, =, <, >).
Quarter Mile Math Level 1

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Sequencing

Substrand **Titles that Address the Substrand**

(Gr. 2) Selects number before and after a given number, between two given numbers, and closest to a given number.
Quarter Mile Math Level 1

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Numerical Relationships

Substrand **Titles that Address the Substrand**

(Gr. 2) Identifies numerical relations (greater than, less than, and equal to).
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Estimation

Substrand **Titles that Address the Substrand**

(Gr. 2) Explores concept of estimates (finding numbers close to a given value and recognizing which of two numbers is closer to a third number).
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Number Sentences

Substrand **Titles that Address the Substrand**

(Gr. 2) Determines the missing number or symbol in addition or subtraction number.
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Number Theory

Substrand **Titles that Address the Substrand**

(Gr. 2) Uses commutative property of addition and the property of zero in computation.
Quarter Mile Math Level 1

(Gr. 2) Identify even and odd numbers.
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Addition and Subtraction

Substrand **Titles that Address the Substrand**

(Gr. 2) Determines basic addition facts (sums to 20) and related subtraction facts by using strategies such as near doubles, making ten, and using known facts to determine unknown facts.

Quarter Mile Math Level 1

(Gr. 2) Recalls addition facts (sums to 20) and related subtraction facts presented orally, vertically and horizontally (rewrite vertically).

Quarter Mile Math Level 1

(Gr. 2) Develop fluency with basic number combinations for addition and subtraction.

Quarter Mile Math Level 1

(Gr. 2) Use a variety of methods and tools to compute, including objects, mental computation, estimation, and paper and pencil.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Multiplication Readiness

Substrand

Titles that Address the Substrand

(Gr. 2) Uses concrete objects to explore combining equivalent sets and uses skip-counting as readiness for multiplication.

Quarter Mile Math Level 1

Subject: MATH

Standard: Geometry & Spatial Sense; Measurement

Strand: Money

Substrand

Titles that Address the Substrand

(Gr. 3) Determines and estimates amounts of money up to \$5.00. Include amounts spent, change received, and equivalent amounts.

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Number Names

Substrand

Titles that Address the Substrand

(Gr. 3) Recognizes different names for whole numbers through 9,999 including names in expanded notation form (9000 + 900 + 90 + 9; 9 thousands, 9 hundreds, 9 tens, 9 ones; nine thousand, nine hundred, ninety-nine).

Quarter Mile Math Level 1

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Number Theory

Substrand

Titles that Address the Substrand

(Gr. 3) Identifies even and odd numbers.

Quarter Mile Math Level 1

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Rounding

Substrand **Titles that Address the Substrand**

(Gr. 3) Rounds two-, three-, and four-digit numbers to the nearer ten, hundred, or thousand.
Quarter Mile Math Level 1

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Sequencing

Substrand **Titles that Address the Substrand**

(Gr. 3) Compares and orders whole numbers through 9,999.
Quarter Mile Math Level 1

Subject: MATH
Standard: Problem Solving
Strand: Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 3) Selects appropriate operation (addition, subtraction, or multiplication) for a given problem situation.
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Estimation

Substrand **Titles that Address the Substrand**

(Gr. 3) Applies estimation strategies beginning with front-end estimation and simple compatible numbers to predict appropriate results.
Quarter Mile Math Level 1

(Gr. 3) Develop and use strategies to estimate the results of whole number computation and to judge the reasonableness of such results.
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Number Sentences

Substrand **Titles that Address the Substrand**

(Gr. 3) Selects appropriate symbol (+, -, x, ÷, <, >, =) for use in a number sequence.
Quarter Mile Math Level 1

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Number Theory

Substrand **Titles that Address the Substrand**

(Gr. 3) Uses properties of addition and multiplication (including commutative, associative, and properties of zero and one).

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Multiplication

Substrand

Titles that Address the Substrand

(Gr. 3) Multiplies whole numbers up to two-digit by one-digit numbers using models and connecting them to computational strategies.

Quarter Mile Math Level 1

(Gr. 3) Recalls basic multiplication facts through 9×9 .

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Mental Computation

Substrand

Titles that Address the Substrand

(Gr. 3) Applies mental computation strategies (such as counting up, counting back, simple compatible numbers, doubles, making ten, multiples of ten) to addition and subtraction, and to simple multiplication and division.

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Addition and Subtraction

Substrand

Titles that Address the Substrand

(Gr. 3) Adds and subtracts whole numbers (one-, two- and three-digits, without or with regrouping), initially using manipulatives and then connecting the manipulations to symbolic procedures (problems presented vertically and horizontally with the horizontal problems rewritten vertically).

Quarter Mile Math Level 1

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Multiplication and Division

Substrand

Titles that Address the Substrand

(Gr. 3) Determines basic multiplication and division facts through 9×9 by using strategies such as skip-counting, multiplying by zero and one, dividing by one, splitting arrays, commutative property of multiplication, and using known facts to find unknown facts.

Quarter Mile Math Level 1

Subject: MATH

Standard: Geometry & Spatial Sense; Measurement

Strand: Money

Substrand

Titles that Address the Substrand

(Gr. 4) Determines and estimates amounts of money up to \$20, and adds and subtracts money using decimal notation without and with regrouping.

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Equivalent Fractions

Substrand

Titles that Address the Substrand

(Gr. 4) Recognize and generate equivalent forms of commonly-used fractions and decimals.

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Fractions

Substrand

Titles that Address the Substrand

(Gr. 4) Adds and subtracts fractions with like denominators using models to connect to computational strategies.

Quarter Mile Math Level 2

Subject: MATH

Standard: Problem Solving

Strand: Word Problems

Substrand

Titles that Address the Substrand

(Gr. 4) Solves simple problems (including those involving addition, subtraction, multiplication, and division of whole numbers and money).

Quarter Mile Math Level 2

Subject: MATH

Standard: Statistics & Probability

Strand: Measure of Central Tendency

Substrand

Titles that Address the Substrand

(Gr. 4) Explores the concepts of mean and median.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Estimation

Substrand

Titles that Address the Substrand

(Gr. 4) Uses estimation strategies such as compatible numbers to predict computation results and to predict measurements (including money).

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Number Sentences

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Multiplication and Division

Substrand **Titles that Address the Substrand**

(Gr. 4) Recalls basic multiplication and related division facts, and identifies the missing factor in a given number sentence.

Quarter Mile Math Level 2

(Gr. 4) Multiplies (up to three-digit by one-digit or two-digit numbers) and divides (up to three-digit by one-digit numbers) and multiplies two-digit numbers by multiples of 100 without regrouping.

Quarter Mile Math Level 2

(Gr. 4) Understand various meanings of multiplying and dividing whole numbers.

Quarter Mile Math Level 2

(Gr. 4) Understand the effects of multiplying and dividing whole numbers.

Quarter Mile Math Level 2

Subject: MATH
Standard: Geometry & Spatial Sense; Measurement
Strand: Money

Substrand **Titles that Address the Substrand**

(Gr. 5) Determines and estimates amounts of money.

Quarter Mile Math Level 2

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Computation

Substrand **Titles that Address the Substrand**

(Gr. 5) Adds, subtracts, and multiplies fractions and mixed numbers with like and unlike denominators (presented vertically and horizontally), using models to connect to computational strategies.

Quarter Mile Math Level 2

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Number Theory

Substrand **Titles that Address the Substrand**

(Gr. 5) Explores the concept of divisibility and develops rules for divisibility by 2, 3, 5, and 10.

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Estimation

Substrand **Titles that Address the Substrand**

(Gr. 5) Uses estimation strategies (such as clustering, rounding, or reference point) to predict computational results of whole numbers, fractions, mixed numbers, and decimals.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Computation

Substrand **Titles that Address the Substrand**

(Gr. 5) Adds, subtracts, multiplies, and divides whole numbers up through four digits both vertically and horizontally with and without regrouping. Uses calculators for more laborious computations (e.g., four-digit addition and subtraction; multiplication and division of three-digit numbers).

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Number Sentences

Substrand **Titles that Address the Substrand**

(Gr. 5) Identifies the number or symbol (+, -, x, ÷, <, >, =) that makes a given number sentence true.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Number Theory

Substrand **Titles that Address the Substrand**

(Gr. 5) Uses the commutative, associative, and identity properties of addition and multiplication, and the distributive property of multiplication over addition.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Rounding

Substrand **Titles that Address the Substrand**

(Gr. 5) Rounds decimals to the nearest whole number.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Mental Computation

Substrand **Titles that Address the Substrand**

(Gr. 5) Uses mental computation strategies such as counting up, counting back, compensation, compatible numbers and multiples of ten, hundred, or thousand, with whole numbers, fractions, and decimals, including money).

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Communication

Quarter Mile Math Level 2

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Place Value

Substrand **Titles that Address the Substrand**

(Gr. 6) Identifies place value for whole numbers (trillions) and decimals (millionths).
Quarter Mile Math Level 2

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Place Value, Standard Notation

Substrand **Titles that Address the Substrand**

(Gr. 6) Reads and writes numbers through trillions, in both numerical and word forms.
Quarter Mile Math Level 2

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Rounding

Substrand **Titles that Address the Substrand**

(Gr. 6) Rounds fractions and decimals to the nearest whole number, and rounds whole numbers and decimals to nearest million(th).
Quarter Mile Math Level 2

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Order of Operations, Parentheses

Substrand **Titles that Address the Substrand**

(Gr. 6) Uses order of operations to simplify numeric expressions that involve addition and subtraction with and without parentheses.
Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Variable

Substrand **Titles that Address the Substrand**

(Gr. 6) Uses a variable to represent an unknown amount in a mathematical expression or equation (number sentence), and evaluates simple algebraic expressions (e.g., given $a + 4$. If $a = 2$, then $2 + 4 = 6$).
Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 6) Finds the value of or solves for the variable in a simple algebraic equation such as $a + 6 = 10$.
Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Problem Solving
Strand: Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 6) Solves problems using one or two operations.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Problem Solving
Strand: Appropriate Methods and Tools, Applications

Substrand **Titles that Address the Substrand**

(Gr. 6-8) Solves problems, reasons, and estimates throughout mathematics: Uses appropriate estimation strategies (such as breaking numbers apart, compatible numbers, guess and check, clustering, rounding, compensation) to check the reasonableness of results.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

(Gr. 6-8) Solves problems, reasons, and estimates throughout mathematics: Solves nonroutine problems for which the answer is not obvious.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Statistics & Probability
Strand: Currency

Substrand **Titles that Address the Substrand**

(Gr. 6) Uses currency in practical problem solving.

Quarter Mile Math Level 2

Subject: MATH
Standard: Statistics & Probability
Strand: Mean, Median, Mode, Range

Substrand **Titles that Address the Substrand**

(Gr. 6) Finds median, mean, mode, and range of a given set of data.

Quarter Mile Math Level 2

Subject: MATH
Standard: Whole Number Computation; Estimation; Whole Number Operations
Strand: Appropriate Methods

Substrand **Titles that Address the Substrand**

(Gr. 6) Uses addition, subtraction, multiplication, and division (interpreting remainders in context of problem) in computation and problem solving with whole numbers, decimals, fractions, and mixed numbers with like and unlike denominators.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Multiplies, Compensation, Compatible Numbers

Substrand **Titles that Address the Substrand**

(Gr. 6) Performs computations mentally using strategies such as multiples of ten, compatible numbers, compensation, or breaking apart numbers.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Ratio, Proportion

Substrand **Titles that Address the Substrand**

(Gr. 6) Computes percent of a number using ratio, proportions, and equations.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Computation, Mental Computation, Properties of Real Numbers

Substrand **Titles that Address the Substrand**

(Gr. 7) Applies properties of addition and multiplication to facilitate computation, particularly mental computation.

Quarter Mile Math Level 3

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Divisibility

Substrand **Titles that Address the Substrand**

(Gr. 7) Uses divisibility rules for 2, 3, 5, 6, 9, and 10.

Quarter Mile Math Level 2

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Fractions, Decimals, Percents

Substrand **Titles that Address the Substrand**

(Gr. 7) Uses fractions, decimals, and percents interchangeably (e.g., $\frac{1}{4}$, .25, 25%) and recognizes equivalent representations.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Number Sense & Numeration; Fractions & Decimals
Strand: Positive Integers

Substrand **Titles that Address the Substrand**

(Gr. 7) Identifies greatest common factor and least common multiple.
Quarter Mile Math Level 2

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Equations, Inequalities

Substrand **Titles that Address the Substrand**

(Gr. 7) Writes and solves one-step algebraic equations and inequalities using addition, subtraction, multiplication, and division (e.g., $a + 11 = 15$; $b - 2 = 21$; $m/2 = 15$; $5x = 40$).
Quarter Mile Math Level 3

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Expressions

Substrand **Titles that Address the Substrand**

(Gr. 7) Evaluates algebraic expressions (e.g., Given $3a + 4$. If $a = 2$, then $3(2) + 4 = 10$).
Quarter Mile Math Level 3

(Gr. 7) Uses order of operations to simplify numerical expressions that involve addition, subtraction, multiplication, and division, with and without parentheses.
Quarter Mile Math Level 3

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Expressions, Equations, Inequalities

Substrand **Titles that Address the Substrand**

(Gr. 7) Identifies the use of a variable as a placeholder in an algebraic expression or equation.
Quarter Mile Math Level 3

Subject: MATH
Standard: Patterns & Relationships; Algebra
Strand: Variables

Substrand **Titles that Address the Substrand**

(Gr. 7) Determines how changes in one variable can affect another variable (e.g., Given $b = 2a$. If $a = 2$, then $b = 4$. If $a = 3$, then $b = 6$).
Quarter Mile Math Level 3

Subject: MATH
Standard: Problem Solving
Strand: Problem Solving Strategies, Reasoning, Estimation Strategies, Mental Computation

(Gr. 8) Uses fractions, decimals, and percents interchangeably, and recognizes equivalent representations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Number Sense & Numeration; Fractions & Decimals

Strand: Factor, Prime, Multiple, GCF, LCM

Substrand **Titles that Address the Substrand**

(Gr. 8) Identifies and applies divisibility, factors, prime factors, greatest common factor, and least common multiple.

Quarter Mile Math Level 2

Subject: MATH

Standard: Patterns & Relationships; Algebra

Strand: Order of Operations

Substrand **Titles that Address the Substrand**

(Gr. 8) Uses order of operations to simplify numerical expressions.

Quarter Mile Math Level 3

Subject: MATH

Standard: Problem Solving

Strand: Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 8) Selects and uses appropriate problem-solving strategies to solve single- and multi-step problems.

Quarter Mile Math Level 3

Subject: MATH

Standard: Problem Solving

Strand: Appropriate Methods and Tools, Applications

Substrand **Titles that Address the Substrand**

(Gr. 8) Solves problems, reasons, and estimates throughout mathematics. Relates concepts and skills to practical applications.

Quarter Mile Math Level 3

Subject: MATH

Standard: Statistics & Probability

Strand: Mean, Median, Mode, Range

Substrand **Titles that Address the Substrand**

(Gr. 8) Uses mean, median, mode, and range to describe tendencies of a data set and make predictions.

Quarter Mile Math Level 2

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Rational Numbers

Substrand **Titles that Address the Substrand**

(Gr. 8) Adds, subtracts, multiplies, and divides integers and other rational numbers.

Quarter Mile Math Level 3

Subject: MATH

Standard: Whole Number Computation; Estimation; Whole Number Operations

Strand: Multiples, Powers, Compensation, Compatible Numbers

Substrand

Titles that Address the Substrand

(Gr. 8) Performs computations mentally using strategies such as multiples of ten, powers of ten, compensation, breaking apart numbers, or compatible numbers.

Quarter Mile Math Level 2

Quarter Mile Math Level 3

Subject: MATH

Standard: Advanced Algebra And Trigonometry

Strand: Problem Solving, Reasoning, Estimation

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves problems throughout this course that involve: selecting appropriate approaches and tools; using estimating strategies to predict computational results; and, judging reasonableness of results.

Quarter Mile Math Level 3

(Gr. 9-12) Solves problems that relate concepts to practical applications and to other concepts using appropriate tools.

Quarter Mile Math Level 3

Subject: MATH

Standard: Advanced Algebra And Trigonometry

Strand: Sequences and Series

Substrand

Titles that Address the Substrand

(Gr. 9-12) Uses the Binomial Theorem to expand and simplify binomial expressions.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Connections, Patterns, and Functions

Substrand

Titles that Address the Substrand

(Gr. 9-12) Connects patterns to the concept of function and uses patterns, relations, and functions to solve problems.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Language of Algebra: Numbers and Variables

Substrand

Titles that Address the Substrand

(Gr. 9-12) Reviews the following algebraic topics: simplifies numerical and algebraic expressions

Quarter Mile Math Level 3

(Gr. 9-12) Reviews the following algebraic topics: evaluates simple algebraic expressions and formulas

Quarter Mile Math Level 3

(Gr. 9-12) Reviews the following algebraic topics: adds, subtracts, multiplies, and divides rational numbers, and determines their absolute value

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Linear Inequalities

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves problems involving linear inequalities and graphs the solution on a coordinate plane.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Rational Expressions: Algebraic Fractions

Substrand

Titles that Address the Substrand

(Gr. 9-12) Simplifies simple algebraic fractions.

Quarter Mile Math Level 3

(Gr. 9-12) Solves simple rational equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra I

Strand: Solving Equations

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves problems involving linear equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra II

Strand: Linear Equations and Inequalities

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves formulas for one variable.

Quarter Mile Math Level 3

Subject: MATH

Standard: Algebra II

Strand: Rational Expressions

Substrand

Titles that Address the Substrand

(Gr. 9-12) Simplifies, multiplies, divides, adds, and subtracts rational expressions, including dividing polynomials.

Quarter Mile Math Level 3

(Gr. 9-12) Solves rational equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Analysis

Strand: Problem Solving, Reasoning, Estimation

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves problems throughout this course that involve: selecting appropriate approaches and tools; using estimating strategies to predict computational results; judging reasonableness of results.

Quarter Mile Math Level 3

Subject: MATH

Standard: Applied Algebra

Strand: Statistics

Substrand

Titles that Address the Substrand

(Gr. 9-12) Distinguishes between mean, mode, and median as measures of central tendency, and determines the mean, mode, and median for a set of data.

Quarter Mile Math Level 2

Subject: MATH

Standard: Applied Algebra

Strand: Algebraic Fractions

Substrand

Titles that Address the Substrand

(Gr. 9-12) Simplifies simple algebraic fractions.

Quarter Mile Math Level 3

(Gr. 9-12) Solves simple rational equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Applied Algebra

Strand: Linear Equations, Problem Solving

Substrand

Titles that Address the Substrand

(Gr. 9-12) Solves and checks linear equations.

Quarter Mile Math Level 3

(Gr. 9-12) Solves and checks problems involving linear equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Applied Problem Solving

Strand: Real Number System

Substrand

Titles that Address the Substrand

(Gr. 9-12) Identifies and applies properties of the real number system.

Quarter Mile Math Level 3

Subject: MATH
Standard: Applied Problem Solving
Strand: Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Uses specific problem-solving strategies such as guess and check; drawing a diagram or other representations of the problem; using tables, charts or graphs; working backwards; using problem reduction (converting to a related problem that is easier to solve); breaking the problem into manageable pieces and solving the separate parts individually; and uses estimation and approximation when appropriate.

Quarter Mile Math Level 2
Quarter Mile Math Level 3

Subject: MATH
Standard: Applied Problem Solving
Strand: Measurement and Geometry

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Applies techniques of rounding.

Quarter Mile Math Level 2

Subject: MATH
Standard: Concepts Of Algebra
Strand: Rational Expressions: Algebraic Fractions

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Recognizes and simplifies simple algebraic fractions.

Quarter Mile Math Level 3

(Gr. 9-12) Solves simple rational equations, including fractional equations and equations with fractional coefficients.

Quarter Mile Math Level 3

(Gr. 9-12) Solves problems involving ratios, proportions, and percents.

Quarter Mile Math Level 3

Subject: MATH
Standard: Concepts Of Algebra
Strand: Real Number System

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Reviews the following algebraic topics: Expresses rational numbers in equivalent forms; Identifies and applies the properties of real numbers; Simplifies numerical expressions; Simplifies and evaluates simple algebraic expressions and formulas; Translates words into algebraic expressions and equations; Represents problem situations by algebraic expressions and equations; Identifies subsets of the real numbers, such as whole numbers, integers, rational, and irrational numbers; Graphs real numbers on a number line; Adds, subtracts, multiplies, and divides integers and other rational numbers and determines their absolute value.

Quarter Mile Math Level 3

Subject: MATH
Standard: Concepts Of Algebra

Strand: Solving Equations

Substrand Titles that Address the Substrand

(Gr. 9-12) Solves problems involving linear equations.

Quarter Mile Math Level 3

Subject: MATH

Standard: Concepts Of Problem Solving

Strand: Computation and Estimation

Substrand Titles that Address the Substrand

(Gr. 9-12) Selects and uses appropriate and efficient methods of computing exact and approximate numbers, including mental computation, calculator, computer, and pencil and paper techniques.

Quarter Mile Math Level 3

Subject: MATH

Standard: Concepts Of Problem Solving

Strand: Number and Computation

Substrand Titles that Address the Substrand

(Gr. 9-12) Expresses numbers in equivalent and approximate forms and orders these forms using appropriate tools such as calculators and computers (includes fractions, decimals, percent; scientific notation; square and cube roots and second and third powers of whole numbers; and approximations of fractions, decimals, and percents).

Quarter Mile Math Level 3

(Gr. 9-12) Identifies and applies order of operations and absolute value.

Quarter Mile Math Level 3

Subject: MATH

Standard: Concepts Of Problem Solving

Strand: Problem Solving, Linear Equations

Substrand Titles that Address the Substrand

(Gr. 9-12) Solves problems involving linear equations using a variety of methods including physical models (i.e., algebraic tiles, balance scales, and two-color counters) as well as calculators and/or computers.

Quarter Mile Math Level 3

Subject: MATH

Standard: Concepts Of Problem Solving

Strand: Real Numbers

Substrand Titles that Address the Substrand

(Gr. 9-12) Identifies and applies properties of real numbers.

Quarter Mile Math Level 3

Subject: MATH

Standard: Discrete Mathematics

Strand: Problem Solving, Reasoning, Estimation

Subject: MATH
Standard: Prealgebra
Strand: Algebra, Computation, Number Systems and Number Theory

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Uses order of operations (with and without grouping symbols) to find the value of a numerical expression, selecting and using appropriate tools such as mental computation and calculators.

Quarter Mile Math Level 3

Subject: MATH
Standard: Prealgebra
Strand: Algebra, Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Solves equations and applied problems using the form $x + a = b$, $x - a = b$, and $a - x = b$.

Quarter Mile Math Level 3

(Gr. 9-12) Solves equations and applied problems of the form $ax = b$, $ax + b = c$, $ax + b = cx + d$, $x/a = b$ and $x/a + b = c$.

Quarter Mile Math Level 3

Subject: MATH
Standard: Prealgebra
Strand: Commission, Discount, Sales Tax, Sales Price, Percent

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Solves practical problems using percents (e.g., sales tax, sales price and commission, discounts).

Quarter Mile Math Level 2

Quarter Mile Math Level 3

Subject: MATH
Standard: Prealgebra
Strand: Introduction to Variables, Algebra

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Evaluates expressions involving variables.

Quarter Mile Math Level 3

Subject: MATH
Standard: Prealgebra
Strand: Mental Computation

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Selects and uses appropriate mental computational strategies such as multiples of ten, multiples of one tenth, and powers of ten.

Quarter Mile Math Level 2

Subject: MATH
Standard: Prealgebra
Strand: Mental Computation and Estimation

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Selects and uses appropriate estimation strategies, such as rounding, truncating, front-end, adjusting, compensation, compatible numbers, clustering, and reference point, and recognizes situations in which estimates are more appropriate than exact numbers.

Quarter Mile Math Level 2

Subject: MATH
Standard: Prealgebra
Strand: Number and Number Relationships

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Recalls from memory decimal and percent equivalents of common fractions (halves, thirds, fourths, fifths, sixths, eighths, and tenths).

Quarter Mile Math Level 2

Subject: MATH
Standard: Prealgebra
Strand: Special Uses of Rational Numbers, Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Uses the appropriate equivalent forms of rational numbers to solve problems involving fractions, decimals, or percent.

Quarter Mile Math Level 2

Subject: MATH
Standard: Prealgebra
Strand: Statistics, Problem Solving

Substrand **Titles that Address the Substrand**

(Gr. 9-12) Summarizes data in various ways, including mean, median, mode, and range.

Quarter Mile Math Level 2