

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

**Subject: MATH**  
**Standard: Number And Operation**  
**Strand: Number And Operation**

**Substrand Titles that Address the Substrand**

(Gr. K) counts by rote to 50;  
**Quarter Mile Math Level 1**

(Gr. K) identifies and orders numbers 1 35;  
**Quarter Mile Math Level 1**

(Gr. K) identifies ordinal positions to 10;  
**Quarter Mile Math Level 1**

(Gr. K) estimates quantities less than 12;  
**Quarter Mile Math Level 1**

(Gr. K) compares quantities using more, less or equal.  
**Quarter Mile Math Level 1**

**Subject: MATH**  
**Standard: Patterns, Functions And Algebra**  
**Strand: Patterns, Functions And Algebra**

**Substrand Titles that Address the Substrand**

(Gr. K) uses +, - and = symbols in simple number sentences;  
**Quarter Mile Math Level 1**

**Subject: MATH**  
**Standard: Number And Operation**  
**Strand: Number And Operation**

**Substrand Titles that Address the Substrand**

(Gr. 1) compares and orders numbers to 100;  
**Quarter Mile Math Level 1**

(Gr. 1) recognizes and models place value for two-digit numbers;  
**Quarter Mile Math Level 1**

(Gr. 1) represents equivalent forms of the same number using diagrams and number expressions;  
**Quarter Mile Math Level 1**

(Gr. 1) writes numbers in standard and expanded notation;

**Quarter Mile Math Level 1**

(Gr. 1) counts backwards by 1s from any number less than 100;

**Quarter Mile Math Level 1**

(Gr. 1) skips counts by 2s and 5s and 10s;

**Quarter Mile Math Level 1**

(Gr. 1) models odd and even numbers using concrete objects;

**Quarter Mile Math Level 1**

(Gr. 1) recalls addition and subtraction facts through 12;

**Quarter Mile Math Level 1**

(Gr. 1) adds and subtracts two-digit whole numbers without regrouping;

**Quarter Mile Math Level 1**

(Gr. 1) adds three one-digit numbers;

**Quarter Mile Math Level 1**

(Gr. 1) applies mental computation strategies and estimates sums and differences;

**Quarter Mile Math Level 1**

(Gr. 1) poses and solves one-step number problems

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Patterns, Functions And Algebra**

**Strand: Patterns, Functions And Algebra**

**Substrand**

**Titles that Address the Substrand**

(Gr. 1) understands and uses =, < and > symbols;

**Quarter Mile Math Level 1**

(Gr. 1) identifies patterns in related addition and subtraction sentences;

**Quarter Mile Math Level 1**

(Gr. 1) writes number sentences associated with addition and subtraction situations;

**Quarter Mile Math Level 1**

(Gr. 1) finds and uses replacement values for blanks and symbols in number sentences.

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Number And Operation**

**Strand: Number And Operation**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2) masters addition and corresponding subtraction facts from 0 through 18;

**Quarter Mile Math Level 1**

(Gr. 2) determines whether numbers are odd or even;

**Quarter Mile Math Level 1**

(Gr. 2) reads, compares and orders whole numbers to 1,000;

**Quarter Mile Math Level 1**

(Gr. 2) uses concrete objects to model and identify place value in three-digit numbers;

**Quarter Mile Math Level 1**

(Gr. 2) adds and subtracts two and three-digit whole numbers with and without regrouping;

**Quarter Mile Math Level 1**

(Gr. 2) skip counts forwards and backwards by 2s, 5s and 10s from a given number;

**Quarter Mile Math Level 1**

(Gr. 2) joins and separates equivalent sets of objects to describe multiplication and division;

**Quarter Mile Math Level 1**

(Gr. 2) rounds and estimates sums and differences of two-digit numbers;

**Quarter Mile Math Level 1**

(Gr. 2) solves problems using a variety of strategies.

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Patterns, Functions And Algebra**

**Strand: Patterns, Functions And Algebra**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2) completes number sentences with missing values and operation symbols;

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Number And Operation**

**Strand: Number And Operation**

**Substrand**

**Titles that Address the Substrand**

(Gr. 3) uses place value to read, write and compare whole numbers to 100,000;

**Quarter Mile Math Level 1**

(Gr. 3) performs multi-digit addition and subtraction to 100,000;

**Quarter Mile Math Level 1**

(Gr. 3) skip counts by a given number less than 10;

**Quarter Mile Math Level 1**

(Gr. 3) demonstrates the meaning of multiplication and division using concrete objects and algorithms;

**Quarter Mile Math Level 1**

(Gr. 3) identifies the relationship between fractions and decimals through hundredths;

**Quarter Mile Math Level 1**

(Gr. 3) solves multiplication problems with whole numbers (two digits by one digit).

**Quarter Mile Math Level 1**

(Gr. 3) solves division problems with whole numbers (one-digit divisors, with and without remainders);

**Quarter Mile Math Level 1**

(Gr. 3) rounds two-digit numbers to the nearest ten and three-digit numbers to the nearest hundred;

**Quarter Mile Math Level 1**

(Gr. 3) estimates sums and differences beyond basic facts;

**Quarter Mile Math Level 1**

(Gr. 3) uses appropriate problem-solving strategies to solve one step problems involving addition, subtraction and simple multiplication or division

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Patterns, Functions And Algebra**

**Strand: Patterns, Functions And Algebra**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 3) creates, extends, and analyzes geometric and number patterns and states the rule;

**Quarter Mile Math Level 1**

(Gr. 3) solves simple equations (number sentences);

**Quarter Mile Math Level 1**

(Gr. 3) applies the commutative, identity and zero properties of addition and multiplication to solve problems;

**Quarter Mile Math Level 1**

(Gr. 3) identifies patterns in related multiplication and division sentences;

**Quarter Mile Math Level 1**

**Grades 4 - 4**

**Subject: MATH**

**Standard: Data Analysis, Statistics, And Probability**

**Strand: Data Analysis, Statistics, And Probability**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 4) identifies mean, median, mode and range of a set of data;

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Number And Operation**

**Strand: Number And Operation**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 4) recalls basic multiplication and related division facts through  $10 \times 10$ ;

**Quarter Mile Math Level 2**

(Gr. 4) uses place value and expanded notation to compare and order whole numbers to 1,000,000 and decimals through hundredths;

**Quarter Mile Math Level 2**

(Gr. 4) rounds whole numbers to the nearest hundred thousand;

**Quarter Mile Math Level 2**

(Gr. 4) adds and subtracts four--digit whole numbers;

**Quarter Mile Math Level 2**

(Gr. 4) multiplies by one and two-digit numbers; divides multi-digit numbers by one digit and multiples of 10;

**Quarter Mile Math Level 2**

(Gr. 4) compares and orders fractions with like and unlike denominators using concrete objects;

**Quarter Mile Math Level 2**

(Gr. 4) models and represents equivalent forms of whole numbers, proper and improper fractions, and decimals using concrete objects and pictures.

**Quarter Mile Math Level 2**

(Gr. 4) adds and subtracts like fractions and mixed numbers;

**Quarter Mile Math Level 2**

(Gr. 4) adds and subtracts decimals through hundredths;

**Quarter Mile Math Level 2**

(Gr. 4) applies mental math and estimation strategies;

**Quarter Mile Math Level 2**

(Gr. 4) solves one and two-step problems using addition, subtraction, multiplication and division of whole numbers;

**Quarter Mile Math Level 2**

(Gr. 4) solves problems using addition and subtraction of fractions and decimals

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Patterns, Functions And Algebra**

**Strand: Patterns, Functions And Algebra**

**Substrand**

**Titles that Address the Substrand**

(Gr. 4) identifies patterns in related multiplication and division fact number sentences;

**Quarter Mile Math Level 2**

(Gr. 4) applies properties of addition and multiplication to solve problems;

**Quarter Mile Math Level 2**

(Gr. 4) uses variables in expressions and number sentences;

**Quarter Mile Math Level 2**

(Gr. 4) solves simple equations and inequalities.

**Quarter Mile Math Level 2**

**Grades 5 - 5**

**Subject: MATH**

**Standard: Data Analysis, Statistics, And Probability**

**Strand: Data Analysis, Statistics, And Probability**

**Substrand**

**Titles that Address the Substrand**

(Gr. 5) uses range, mean and median to interpret data sets;

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Number And Operation**

**Strand: Number And Operation**

**Substrand**

**Titles that Address the Substrand**

(Gr. 5) recalls multiplication and related division facts through  $12 \times 12$ ;

**Quarter Mile Math Level 2**

(Gr. 5) extends understanding of whole number place value of very large whole numbers and of decimals through thousandths;

**Quarter Mile Math Level 2**

(Gr. 5) uses powers of 10 and exponential and expanded notation as ways to name numbers;

**Quarter Mile Math Level 2**

(Gr. 5) represents numbers in bases other than 10;

**Quarter Mile Math Level 2**

(Gr. 5) rounds whole numbers to the nearest hundred thousand and decimals through thousandths;

**Quarter Mile Math Level 2**

(Gr. 5) computes using whole numbers;

**Quarter Mile Math Level 2**

(Gr. 5) applies divisibility rules for 2, 5, 10 and 3 and 9;

**Quarter Mile Math Level 2**

(Gr. 5) verifies the relationship between whole numbers, decimals and fractions;

**Quarter Mile Math Level 2**

(Gr. 5) models percent using concrete objects and pictures

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Patterns, Functions And Algebra**

**Strand: Patterns, Functions And Algebra**

**Substrand**

**Titles that Address the Substrand**

(Gr. 5) applies inverse operations for addition and subtraction; multiplication and division to solve problems;

**Quarter Mile Math Level 2**

(Gr. 5) solves simple linear equations and inequalities;

**Quarter Mile Math Level 2**

**Grades 6 - 6**

**Subject: MATH**

**Standard: Data Analysis, Statistics, And Probability**

**Strand: Data Analysis, Statistics, And Probability**



**Subject: MATH**  
**Standard: Patterns, Functions And Algebra**  
**Strand: Patterns, Functions And Algebra**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 6) uses order of operations to simplify arithmetic expressions;  
**Quarter Mile Math Level 2**  
**Quarter Mile Math Level 3**

(Gr. 6) uses properties of arithmetic to evaluate expressions;  
**Quarter Mile Math Level 3**

(Gr. 6) writes and solves one-step linear equations.  
**Quarter Mile Math Level 3**

**Subject: MATH**  
**Standard: Number And Operation**  
**Strand: Number And Operation**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 7) performs basic operations with whole numbers, decimals, fractions (common and mixed numbers) and recognizes rational numbers;  
**Quarter Mile Math Level 3**

(Gr. 7) simplifies and represents rational numbers in a variety of equivalent forms;  
**Quarter Mile Math Level 3**

(Gr. 7) applies the rules of order of operations and other properties when simplifying expressions;  
**Quarter Mile Math Level 3**

(Gr. 7) uses estimation when solving problems that involve, whole numbers, decimals and money, fractions, mixed numbers, and percents;  
**Quarter Mile Math Level 2**

(Gr. 7) solves a percent proportion, determine the percent of change, find discounts and sales tax, and calculate simple interest (with and without calculators);  
**Quarter Mile Math Level 2**

(Gr. 7) uses recall, mental computation, pencil and paper, and technology to achieve solutions and to determine the reasonableness of an answer.  
**Quarter Mile Math Level 3**

(Gr. 7-8 ) uses integer exponents to identify the place value of decimal numbers and to write numbers in scientific notation;  
**Quarter Mile Math Level 2**

(Gr. 7-8 ) compares, orders and identifies fractions, decimals and integers and identifies their location on a number line;  
**Quarter Mile Math Level 2**  
**Quarter Mile Math Level 3**

**Subject: MATH**  
**Standard: Patterns, Functions And Algebra**  
**Strand: Patterns, Functions And Algebra**





(Gr. 9-12) uses numbers in decimal and fractional form;  
**Quarter Mile Math Level 3**

**Subject: MATH**  
**Standard: Building Thinking Skills**  
**Strand: Number And Operation**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 9-12) uses numbers systems such as natural, integer, rational and real to calculate in a variety of situations;  
**Quarter Mile Math Level 3**

**Subject: MATH**  
**Standard: Geometry**  
**Strand: Number And Operation**

**Substrand**                      **Titles that Address the Substrand**

(Gr. 9-12) uses properties of operations in forming and working with algebraic expressions;  
**Quarter Mile Math Level 3**

(Gr. 9-12) uses numbers in decimal and fraction form;  
**Quarter Mile Math Level 3**