

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

**Grades K - 3**

**Subject: MATH**

**Standard: Algebra, Patterns, And Functions**

**Strand: Algebra, Patterns, And Functions**

**Substrand Titles that Address the Substrand**

(Gr. K-3 ) 1.3.2 express numeric relationships using +, -, x (multiplication), / (division), <, >, or = select appropriate operational and relational symbols to express relationships select appropriate symbols and operations to solve simple problems

**Quarter Mile Math Level 1**

(Gr. K-3 ) 1.3.3 find the missing number in a number sentence using a variety of strategies

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Number Relationships And Computation**

**Strand: Number Relationships And Computation**

**Substrand Titles that Address the Substrand**

(Gr. K-3 ) 6.3.1 read, write, and represent whole numbers (cardinal and ordinal) and simple fractions using symbols, words, and models identify number values and relationships of whole numbers and simple fractions. Express numbers in expanded notation

**Quarter Mile Math Level 1**

(Gr. K-3 ) 6.3.2 compare, order, and describe whole numbers less than 1,000 using place value concepts and the symbols <, >, =

**Quarter Mile Math Level 1**

(Gr. K-3 ) 6.3.3 describe numbers as even or odd

**Quarter Mile Math Level 1**

(Gr. K-3 ) 6.3.4a demonstrate proficiency with addition and subtraction facts

**Quarter Mile Math Level 1**

**Grades 4 - 5**

**Subject: MATH**

**Standard: Algebra, Patterns, And Functions**

**Strand: Algebra, Patterns, And Functions**

**Substrand Titles that Address the Substrand**

(Gr. 4-5 ) 1.5.2a write numeric expressions in equivalent forms

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 1.5.2b use grouping symbols to evaluate expressions

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 1.5.3 solve for the unknown in an equation (one unknown, one operation) with whole number coefficients write simple algebraic expressions in one unknown and evaluate by substitution

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Number Relationships And Computation**

**Strand: Number Relationships And Computation**

**Substrand**

**Titles that Address the Substrand**

(Gr. 4-5 ) 6.5.1 read, write, and represent simple fractions, decimals, and percents using symbols, words, and models. Read and write standard form and expanded notation for numbers through millions

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.2a compare and order decimals to the nearest thousandth and describe them using place value concepts

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.2b compare and order fractions in equivalent forms including improper fractions and mixed numbers with like and unlike denominators

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.3 use number theory concepts of primes, factors, multiples, and rules of divisibility to show number relationships

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.4 demonstrate proficiency with multiplication and division facts

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.5a multiply and divide whole numbers and interpret remainders

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.5b add and subtract fractions, mixed numbers and decimals and express answers in simplest form

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.5c multiply and divide decimals by whole numbers

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.6 use mathematical properties to solve problems. Explain and apply number relationships using the mathematical properties of operations, including associative (addition and multiplication) and multiplicative inverse. Simplify numerical expressions involving addition, subtraction, multiplication, division and parentheses

**Quarter Mile Math Level 2**

(Gr. 4-5 ) 6.5.7a apply strategies to solve problems with fractions and decimals. Use estimation to solve problems with fractions and decimals. Identify and describe the relationship among fractions, decimals, and percents. Represent fractions, decimals, and percents in equivalent forms. Compute percentages of 10, 20, 25, 50 and 100 percent of a number

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Statistics**

**Strand: Statistics**

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

(Gr. 4-5 ) 4.5.4 find the mean, median, mode, and range of a data set and explain how these measures are different  
**Quarter Mile Math Level 2**

**Grades 6 - 8**

**Subject: MATH**

**Standard: Algebra, Patterns, And Functions**

**Strand: Algebra, Patterns, And Functions**

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

(Gr. 6-8 ) 1.8.2 simplify expressions by combining like terms and applying order of operations use mathematical properties to justify the steps in simplifying algebraic expressions

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 6-8 ) 1.8.3a evaluate algebraic expressions and apply formulas

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 6-8 ) 1.8.3b solve linear equations and inequalities in one variable using mathematical properties

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject: MATH**

**Standard: Number Relationships And Computation**

**Strand: Number Relationships And Computation**

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

(Gr. 6-8 ) 6.8.1 read, write, and represent rational numbers in a variety of forms, including exponents, scientific notation, and percents

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 6-8 ) 6.8.5 add, subtract, multiply, and divide rational numbers. Calculate powers and square roots of numbers. Use the rules of exponents to combine rational numbers multiply and divide by powers of ten

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 6-8 ) 6.8.7a select and apply strategies and mathematical properties to solve problems with rational numbers. Use estimation to solve problems with rational numbers estimate powers and square roots to solve problems. Estimate the value of radicals and numbers expressed with exponents to solve problems

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 6-8 ) 6.8.7b apply ratios, proportions, and percents to solve problems. Determine equivalent ratios, decimals, and percents determine ratios, rates, unit rates in the context of a problem. Apply the concepts of ratios, rates, and percents to real-world problems including rate of increase/decrease, discount, commission, sales tax, simple interest

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject: MATH**

**Standard: Probability**  
**Strand: Probability**

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

(Gr. 6-8 ) 5.8.2a find the probability of an event that does not have equally likely outcomes express the probability of an event as a ratio, decimal, or percent

**Quarter Mile Math Level 2**  
**Quarter Mile Math Level 3**

**Subject: MATH**  
**Standard: Statistics**  
**Strand: Statistics**

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

(Gr. 6-8 ) 4.8.4 select and justify mean, median, mode, or range of a data set as the best representation of data

**Quarter Mile Math Level 2**

**Subject: MATH**  
**Standard: Number Relationships And Computation**  
**Strand: Number Relationships And Computation**

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

(Gr. 9-12) 6.12.1 read, write, and represent real numbers in a variety of forms including exponential and radical. Write numbers with negative exponents for use in scientific notation

**Quarter Mile Math Level 3**

(Gr. 9-12) 6.12.2 compare, order, and describe real numbers in a variety of equivalent forms classify and give examples of real numbers such as natural numbers, whole numbers, integers, rational numbers and irrational numbers

**Quarter Mile Math Level 3**

(Gr. 9-12) 6.12.5 add, subtract, multiply, and divide real numbers. Calculate powers and roots of real numbers. Simplify expressions with radical and fractional exponents

**Quarter Mile Math Level 3**

(Gr. 9-12) 6.12.7 select and apply computational strategies, including estimation and mathematical properties, to solve problems involving real numbers

**Quarter Mile Math Level 2**