

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

**Subject: MATH**  
**Standard: Computation/Estimation**  
**Strand: Students Will Demonstrate The Concepts Of Addition And Subtraction Up To 0.**

**Substrand Titles that Address the Substrand**

(Gr. K-1 ) Recognize the symbols + and - as representing the operations of addition and subtraction.

**Quarter Mile Math Level 1**

(Gr. K-1 ) Recognize the symbol = represents equal quantities.

**Quarter Mile Math Level 1**

(Gr. K-1 ) Solve problems involving one-step solutions, using addition and subtraction facts.

**Quarter Mile Math Level 1**

**Subject: MATH**  
**Standard: Computation/Estimation**  
**Strand: Students Will Determine The Reasonableness Of Proposed Solutions To Mathematical Problems.**

**Substrand Titles that Address the Substrand**

(Gr. K-1 ) Make estimations and comparisons to actual results.

**Quarter Mile Math Level 1**

**Subject: MATH**  
**Standard: Numeration/Number Sense**  
**Strand: Students Will Communicate The Mathematical Relations Of The Number System.**

**Substrand Titles that Address the Substrand**

(Gr. K-1 ) Count objects to demonstrate one-to-one correspondence.

**Quarter Mile Math Level 1**

**Subject: MATH**  
**Standard: Numeration/Number Sense**  
**Strand: Students Will Communicate The Sequential Nature Of The Number System.**

**Substrand Titles that Address the Substrand**

(Gr. K-1 ) Recognize and write numerals from 0-100.

**Quarter Mile Math Level 1**

(Gr. K-1 ) Count forward by 1s, 2s, 5s and 10s up to 100.

**Quarter Mile Math Level 1**

(Gr. K-1 ) Count backward from 10 to 0 by 1s.

**Quarter Mile Math Level 1**

**Subject: MATH**

**Standard: Algebraic Concepts**

**Strand: Students Will Use And Interpret Variables, Mathematical Symbols And Properties To Write And Simplify Expressions And Sentences.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Identify and use various indicators of multiplication (parentheses, x, \*) and division, ( /, ).

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Computation/Estimation**

**Strand: Students Will Estimate And Accurately Calculate Without And With Calculators And Solve Problems Involving Addition And Subtraction Of Decimals And Understand The Relationships Among These Two Operations.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Teach students how to estimate and accurately add and subtract decimals and solve problems and determine when a calculator is the appropriate tool to be used.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Computation/Estimation**

**Strand: Students Will Estimate And Accurately Calculate Without And With Calculators And Solve Problems Involving Addition And Subtraction Of Fractions And Understand The Relationships Among These Two Operations.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Add and subtract common fractions with like and unlike denominators.

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Solve problems involving fractions of halves, fourths, and eighths using the operations of addition and subtraction.

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Computation/Estimation**

**Strand: Students Will Estimate And Accurately Calculate Without And With Calculators And Solve Problems Involving Addition, Subtraction, Multiplication, And Division Of Whole Numbers And Understand The Relationships Among The Operations.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Demonstrate with accuracy and reasonable speed the basic facts of addition (1-20), subtraction (1-20), multiplication (1-144), and division (1-144).

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Add and subtract accurately five-digit numbers including columns of numbers.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Multiply up to a three-digit number by a two-digit number.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Divide up to a three-digit number by a one-digit divisor.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Numeration/Number Sense**

**Strand: Students Will Demonstrate An Understanding Of Place Value Through The Millions And Decimals To The Hundredths Place.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Read and write numerals (in digits and words) to the one millions place and decimals to the hundredths place.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Order and compare numbers to the one millions place and decimals to the hundredths place using the symbols  $<$ ,  $>$ , and  $=$ .

**Quarter Mile Math Level 1**

(Gr. 2-4 ) Round whole numbers to the nearest named place, such as rounding 1,234 to the nearest hundred would be 1,200.

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Numeration/Number Sense**

**Strand: Students Will Describe And Apply Relationships Between Numbers By Order, Comparison, And Across The Operation, Such As Subtraction As The Opposite Of Addition And Multiplication As Repeated Addition.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Order and compare common fractions and decimals using the symbols  $<$ ,  $>$ , and  $=$ .

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Numeration/Number Sense**

**Strand: Students Will Make Change And Count Out In Amounts Up To \$20.00.**

**Substrand**

**Titles that Address the Substrand**

(Gr. 2-4 ) Teach students how to make the correct change and properly count back the amount of change aloud from the purchase price up to twenty dollars.

**Quarter Mile Math Level 2**

**Subject: MATH**

**Standard: Numeration/Number Sense**

**Strand: Students Will Represent Numbers In Equivalent Forms.**

**Substrand Titles that Address the Substrand**

(Gr. 2-4 ) Write numbers in expanded form, such as  $432 = 4 \times 100 + 3 \times 10 + 2 \times 1$ .

**Quarter Mile Math Level 1**

**Quarter Mile Math Level 2**

(Gr. 2-4 ) Represent equivalent fractions and decimals for common fractions with denominators of 2, 4, 5, 8 and 10 using concrete objects.

**Quarter Mile Math Level 2**

**Grades 5 - 8**

**Subject: MATH**

**Standard: Algebraic Concepts**

**Strand: Students Will Apply Algebraic Concepts And Algebraic Operations To Solving Problems.**

**Substrand Titles that Address the Substrand**

(Gr. 5-8 ) Solve multi-step equations with one variable.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 5-8 ) Use order of operations to evaluate algebraic expressions for given replacement values of the variables.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject: MATH**

**Standard: Computation/Estimation**

**Strand: Students Will Apply Strategies Of Estimation To A Variety Of Problems Both With And Without The Use Of Technology.**

**Substrand Titles that Address the Substrand**

(Gr. 5-8 ) Properly round to an appropriate place value if context permits.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 5-8 ) Perform estimation prior to calculation.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 5-8 ) Without a calculator, estimate square roots of whole numbers of zero to one hundred to the nearest whole number.

**Quarter Mile Math Level 2**

(Gr. 5-8 ) Use compatible numbers to perform mental math.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject: MATH**

**Standard: Computation/Estimation**

**Strand: Students Will Apply The Order Of Operations To Solve Problems Both With And Without The Use Of Technology.**

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

(Gr. 5-8 ) Evaluate all types of numerical expressions, including grouping symbols and exponents.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject:** MATH

**Standard:** Computation/Estimation

**Strand:** Students Will Solve Problems Involving Whole Numbers, Integers, And Rational Numbers (fractions, Decimals, Ratios, Proportions, And Percents) Both With And Without The Use Of Technology. Problems Will Be Of Varying Complexities And Can Involve Real-life

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

(Gr. 5-8 ) Use proportions to solve scale-model problems with fractions and decimals.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject:** MATH

**Standard:** Numeration/Number Sense

**Strand:** Students Will Apply Relationships Between Fractions, Decimals, And Percents In A Variety Of Situations.

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

(Gr. 5-8 ) Find the equivalencies between fractions, decimals, and percents.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

(Gr. 5-8 ) Solve problems with appropriate equivalencies.

**Quarter Mile Math Level 2**

**Quarter Mile Math Level 3**

**Subject:** MATH

**Standard:** Numeration/Number Sense

**Strand:** Students Will Represent And Use Numbers In A Variety Of Different Forms.

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

(Gr. 5-8 ) Write numbers in expanded form using exponential notation.

**Quarter Mile Math Level 2**

(Gr. 5-8 ) Express small and large numbers using scientific notation.

**Quarter Mile Math Level 2**

**Subject:** MATH

**Standard:** Computation/Estimation

**Strand:** Students Will Justify The Reasonableness Of Solutions.

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

(Gr. 9-12) Using significant digits, determine the accuracy of a solution.

**Quarter Mile Math Level 3**