



Montezuma Elementary Fifth Grade Math Descriptors of Learning

<i>Standard</i>	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>
Expressions/Equations	Uses one set of grouping symbols to model a real-world situation.	Uses parentheses, braces, and brackets when evaluating expressions.	Ongoing practice and application.	Ongoing practice and application.
Order of Operations	Write simple expressions to model situations with no more than two operations.	Write expressions using whole numbers to model mathematical and real-world situations with all 4 operations.	Write expressions using whole numbers to model situations with all 4 operations, and evaluate without calculating.	Ongoing practice and application.
Coordinate Plane	No expectations for mastery at this point.	Write ordered pairs given a set of data represented in a table; correctly use parentheses and commas; graph the ordered pair on a coordinate grid.	Form ordered pairs by interpreting data represented in a table and graphing the ordered pairs.	Generate two numerical patterns using two given rules. Identify relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns and graph the ordered pairs.
Application of Coordinate Plane Concepts	No expectations for mastery at this point.	Understands that information from real-world problems can be represented as ordered pairs and graphed on a coordinate grid.	Represent real-world problems by graphing points in the first quadrant.	Represent real world problems by graphing points in the first quadrant and interpreting the coordinate value.



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Place Value System	Write whole numbers in expanded form, identify and write values of digits in whole numbers, recognizes that a digit in one place represents 10 times what it represents in the place to its right.	Recognizes that in multi-digit whole numbers, a digit in one place represents 10 times what it represents in the place to its right and 1/10 of what it represents in the place to the left. Recognizes that place value patterns in whole numbers extend to decimals.	Recognizes that in multi-digit numbers (decimals included), a digit in one place represents 10 times what it represents in the place to its right and 1/10 of what it represents in the place to the left.	Ongoing practice and application.
Exponents and Powers of 10	Convert between powers of 10 in exponential notation and standard notation. Correctly multiply a whole number by a power of 10. Notice patterns in the number of zeros in a product when multiplying a whole number by a power of 10.	Uses whole-number exponents to denote powers of 10. Correctly multiply whole numbers by powers of 10. Describe patterns in the number of zeros in a product when multiplying a whole number by a power of 10.	Uses whole-number exponents to denote powers of 10. Correctly multiply whole numbers by powers of 10 and explain the number of zeros in the product. Multiply or divide a decimal by a power of 10 when no more than one placeholder zero is required.	Explain patterns in the number of zeros when multiplying and dividing by a power of 10. Explain patterns in the placement of the decimal when a decimal is multiplied or divided by a power of 10.
Read and write decimals to the 1000ths.	No expectations for mastery at this point.	Represent decimals through 1000ths by shading grids. Read and write decimals through 1000ths with no placeholder zero. Read and write decimals in expanded form as sums of decimals.	Read and write decimals to 1000ths using base-ten numerals, number names, and expanded form.	Ongoing practice and application.
Compare Decimals	No expectations for mastery at this point.	Use grids or place-value charts to compare and order decimals through 1000ths when the decimals have the same number of digits after the decimal point.	Compare two decimals to 1000ths based on meanings of the digits in each place, using $<$, $>$, $=$ symbols.	Ongoing practice and application.



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Rounding Decimals	No expectations for mastery at this point.	Uses grids, number lines, or a rounding shortcut to round decimals to the nearest tenth or hundredth in cases when rounding only affects one digit.	Uses place value understanding to round decimals to any place.	Ongoing practice and application.
Multiplication of multi-digit whole numbers.	Uses a strategy to multiply whole numbers. Understands the steps of the U.S. traditional multiplication algorithm and successfully applies it to 2 -digit by 2-digit problems.	Uses the traditional multiplication algorithm to solve multiplication problems when multiplying multi-digit numbers by 2-digit numbers.	Fluently multiply multi-digit whole numbers using the traditional multiplication algorithm.	Ongoing practice and application.
Division of whole numbers	Can divide 3-digit dividends by 1-digit or simple 2-digit divisors.	Can divide 3-digit dividends by 1 or 2-digit divisors. Can interpret the remainder and explain the reasoning.	Can divide 4-digit dividends by 2-digit divisors. Can interpret the remainder and explain the reasoning.	Ongoing practice and application.
Operations with Decimals	No expectations for mastery at this point.	Use grids to add and subtract decimals through tenths with regrouping and through hundredths without regrouping.	Add and subtract decimals to hundredths. Estimate and find products of decimals when both factors are greater than 1. Estimate and find quotients of decimals with dividends greater than 1 and whole number divisors.	Add, subtracts, multiplies, and divides with decimals to the hundredths using a variety of strategies and provide an explanation as to why you chose your answer.



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Adding/Subtracting Fractions and Mixed Numbers	No expectations for mastery at this point.	Use tools or visual models to solve number stories involving addition and subtraction of fractions and mixed numbers with like denominators.	Use tools or visual models to solve number stories involving addition and subtraction of fractions and mixed numbers with like and unlike denominators.	Solving real world problems involving addition and subtraction of fractions and mixed numbers with unlike denominators. Is able to assess the reasonableness of the answer.
Fraction Concepts	No expectations for mastery at this point.	Recognizes a fraction is the numerator divided by the denominator. Can rename mixed numbers and fractions greater than one.	Solve real-world problems involving division of whole numbers, which produce answers in the form of fractions or mixed numbers.	Ongoing practice and application.
Fraction Multiplication	No expectations for mastery at this point.	Can solve “fraction of” problems with a fraction and whole number.	Understands the relationship between “fraction of” problems and fraction multiplication.	Can create a number story that is modeled by a fractional expression. Can assess the reasonableness of the answer.
Area	Find the area of a rectangle with one fractional side length by tiling and counting the full and partial squares.	Find the area of a rectangle with one fractional side length by using addition.	Find the area of a rectangle with one fractional side length by using multiplication.	Ongoing practice and application.
Understanding the Multiplication of Fraction Concepts	No expectations for mastery at this point.	No expectations for mastery at this point.	Can predict and explain that a product of a whole number and a fraction less than 1, will be less than the whole number. Also, predict that the product of a whole number or fraction and a fraction equal to 1 will be equal to the whole number or fraction.	Explains why multiplying a given number by a fraction greater than 1, results in a product greater than the given number. Explains why multiplying a given number by a fraction less than 1, results in a product smaller than the given number.



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Division of Fractions	No expectations for mastery at this point.	No expectations for mastery at this point.	Uses models to solve problems involving division of a whole number by a unit fraction. Use fraction multiplication to check the quotient of a division problem involving division of a unit fraction by a whole number.	Interpret division of a unit fraction by a number greater than zero and compute quotients. Interpret division of a whole number by a unit fraction and compute quotients. Solve real world problems and assess the reasonableness of answers.
Measurement	Perform one-step unit conversions within the same measurement system in real world problems.	Perform one-step and multi-step within the same measurement system in real world problems.	Ongoing practice and application.	Ongoing practice and application.
Line Plot	No expectations for mastery at this point.	No expectations for mastery at this point.	Place fractional data on a line plot and solve single-step problems using the data.	Using fractional data, make a line plot and solve multi-step problems using the data.
Understanding Volume Concepts	Recognizes volume as an attribute of open 3-D figures. Understands that cubes are a good unit to measure volume, uses the unit cubes to pack a solid figure, and finds the volume of rectangular prisms by counting unit cubes.	Recognizes volume as an attribute of open 3-D figures and understands the concept of volume measurement. Measures volume by counting unit cubes, using cubic cm, cubic in., and cubic ft. Relates computation of volume to multiplication and addition and solves real-world problems.	Ongoing practice and application.	Ongoing practice and application.



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Volume of Rectangular Prisms	Apply a volume formula to find the volume of a rectangular prism when given the formula and dimensions.	Applies the formula $V = L \times W \times H$ and $V = \text{Base} \times \text{Height}$ for rectangular prisms and solve real world problems.	Ongoing practice and application.	Ongoing practice and application.
Volume of Irregular Shapes	Find volume of figures made of right rectangular prisms when given the volume formula.	Find volumes of solid figures made of two non-overlapping right rectangular prisms by adding the volume of the non-overlapping parts in real world problems.	Ongoing practice and application.	Ongoing practice and application.
2-Dimensional Figures	No expectations for mastery at this point.	No expectations for mastery at this point.	No expectations for mastery at this point.	Understands That Attributes Belonging To A Category Of 2-D Figures, Also Belong To All Subcategories Of That Category. Classify 2-D Figures On A Hierarchy Based On Properties.