NMSD Grade 4 Report Card Rubric: Math

	Standard: Operations and Algebraic Thinking: Use four operations to solve problems 4.OA.A.3	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work • The student is able to assess the reasonableness of answers using mental computation and estimation strategies, including rounding.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to use the four operations (add, subtract, multiply, and divide) to solve one-step problems involving equal groups and arrays, including problems where the remainder must be interpreted. They should be able to find an unknown number and represent problems using equations with a symbol representing the unknown quantity.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to use the four operations to solve one-step problems involving an unknown number. They should be able to realize that it is appropriate to multiply or divide in order to solve familiar multiplicative comparison problems.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to use the four operations (add, subtract, multiply, and divide) to solve one-step problems involving equal groups and arrays.	
	Standard: Operations and Algebraic Thinking: Factors and multiples 4.OA.B.4	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work • The student is able to assess the reasonableness of answers using mental computation and estimation strategies, including rounding.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to find all factor pairs for whole numbers in the range of 1–100 and determine whether a given whole number in the range of 1–100 is prime or composite.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to find factor pairs for whole numbers in the range of 1–100 that are multiples of 2 or 5 and determine whether a given whole number in the range of 1–100 is a multiple of a given one-digit number.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to recognize that a whole number is a multiple of each of its factors.	

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	Standard: Operations and Algebraic Thinking: Analyze patterns 4.OA.C.5	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work • Student exceeds expectations by independently applying and utilizing concepts and skills in novel situations.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to analyze a pattern for apparent features that are not explicit in the rule itself.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to generate a number or shape pattern that follows a given rule.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to extend a number or shape pattern that follows a given rule.	
	Standard: Numbers and Operations in Base 10: Place value understanding whole numbers 4.NBT.A.1	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to read and write multi-digit whole numbers less than or equal to 1000 using base-ten numerals, number names, and expanded form; compare multi-digit numbers up to 1000 using <, >, and =; and round multi-digit whole numbers up to 1000 to any place.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	Students should look for and use repeated reasoning to generalize place value understanding to be able to read and write multi-digit whole numbers less than or equal to 100,000 using base-ten numerals, number names, and expanded form; compare multi-digit numbers up to 100,000 using <, >, and =; and round multi-digit whole numbers up to 100,000 to any place.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to read and write multi-digit whole numbers less than or equal to 1000 using base-ten numerals, number names, and expanded form; compare multi-digit numbers up to 1000 using <, >, and =; and round multi-digit whole numbers up to 1000 to any place.	

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	Standard: Numbers and Operations in Base 10: Place value Multi-digit addition and subtraction 4.NBT.B.4	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	Adds and subtracts multi-digit whole numbers using alternative strategies or supports.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0		
	Standard: Numbers and Operations in Base 10: Place value multiply/divide 4.NBT.B.5, 4.NBT.B.6	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to multiply whole numbers including two digits by two digits based on place value and properties of operations; find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors using strategies based on place value understanding, the properties of operations, and/or the relationship between multiplication and division; and explain multiplication and division using equations, arrays, and/or area models.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to multiply whole numbers up to and including four digits by one digit based on place value and properties of operations; find whole-number quotients and remainders with up to two-digit dividends and one-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division; and illustrate multiplication and division by using equations, arrays, and/or area models.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to multiply two one-digit whole numbers based on place value and properties of operations; and find whole-number quotients with no remainders with up to two-digit dividends and one-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.	

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	Standard: Numbers and Operations-Fractions: Fraction equivalence and ordering 4. NF.A.2	
4.0	In addition to 3.0 performance, the student - Demonstrates in-depth understanding of concepts. - Applies knowledge into multiple contexts - Demonstrates model work - The student is able to extend understanding to compare two fractions with different numerators and different denominators using <, >, and = and justify the conclusions using a visual fraction model.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to extend understanding to compare two fractions with different numerators and different denominators using <, >, and = by creating common denominators or numerators and recognize and generate equivalent fractions using visual models.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to compare two fractions with different numerators and different denominators using <, >, and = by comparing to a benchmark fraction such as 1/2 and recognize equivalent fractions using visual models.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	The student is able to recognize that fraction comparisons are valid only when the two fractions are referring to the same whole.	
	Standard: Numbers and Operations-Fractions: Fractions add/subtract 4.NF.B.3.C, 4.NF.B.3.D	
4.0	In addition to 3.0 performance, the student - Demonstrates in-depth understanding of concepts. - Applies knowledge into multiple contexts - Demonstrates model work Solve word problems involving the addition and subtraction of fraction referring to the same whole, including cases of unlike denominators.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student will add and subtract mixed numbers with like denominator. Solve word problems involving addition and subtraction of fractions referring to the same whole and having the same denominator. Add two fractions with denominators 10 and 100 by making denominators equivalent.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	Solve one-step problems involving addition and subtraction of fractions referring to the same whole with like denominators; and use visual fraction models and/or equations to represent the problem.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	They should be able to identify fractions using visual models.	

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	Standard: Numbers and Operations-Fractions: Fractions add/subtract 4.NFC.5, 4.NF.C.6, 4.NF.C.7	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work • The student is able to compare two decimals to the hundredths using <, >, and = and justify the conclusions by using visual models.	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to add two fractions with respective denominators 10 and 100 by first converting to two fractions with like denominators; compare two decimals to the hundredths using >, <, =, or on a number line; and compare decimals by reasoning about their size.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to express a fraction with denominator 10 as an equivalent fraction with denominator 100 and express those fractions as decimals.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	With help, partial success at score 2.0 and score 3.0 content	
	Standard: Measurement and Data: Solves problems involving measurement and conversion of measurements from larger unit to smaller unit. 4.MD.A.1; 4.MD.A.2; 4.MD.A.3	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to use the four operations to solve problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving **simple** fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit; represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale; and apply the area formula to rectangles in mathematical problems.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to express measurements in a larger unit in terms of a smaller unit within a single system of measurement, record measurement equivalents in a two-column table, and apply the perimeter formula to rectangles in mathematical problems.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	With help, partial success at score 2.0 content and score 3.0 content.	

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	Standard: Measurement and Data: Represents and Interprets data. 4.MD.B.4	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to create a line plot to represent a data set using fractions 1/2, 1/4, and 1/8, and interpret data from a line plot to solve problems involving addition and subtraction of fractions with like denominators.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to use data from a given line plot using fractions 1/2, 1/4, and 1/8 to solve one-step problems.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	With help, partial success at score 2.0 content and score 3.0 content.	
	Standard: Measurement and Data: Understand concepts of angle and measure angles. 4.MD.C.5; 4.MD.C.6	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to construct angles in whole-number degrees using a protractor, use understanding of angle concepts to decompose a larger angle with two or more smaller angles that have the same sum as the original, and determine an unknown angle measure in a diagram.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to recognize whole number degrees on a protractor and measure angles in whole-number degrees using a protractor.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	With help, partial success at score 2.0 content and score 3.0 content.	

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	Standard: Geometry: Draw and identify lines and angles, and classify shapes by properties of their lines and angles. 4.G.A.1; 4.G.A.2; 4.G.A.3	
4.0	In addition to 3.0 performance, the student • Demonstrates in-depth understanding of concepts. • Applies knowledge into multiple contexts • Demonstrates model work	Exemplary performance Above and Beyond Articulates concept effectively and with sophistication
3.5	In addition to 3.0 performance, partial success at score 4.0 content.	
3.0	The student is able to draw lines of symmetry for two-dimensional figures, classify two-dimensional figures based on parallel or perpendicular lines or angles of specified lines, and recognize right triangles as a category.	
2.5	No major errors or omissions regarding 2.0 performance, partial success at score 3.0 concepts and skills	
2.0	The student is able to identify points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines in two-dimensional figures and recognize all lines of symmetry in unfamiliar two-dimensional figures.	Partial understanding of concepts and skills Inconsistent Needs help Making some progress Approaching standard
1.5	Partial success at score 2.0 concepts and skills.	
1.0	With help, partial success at score 2.0 content and score 3.0 content.	