Mathematics Report Card Companion
Fourth Grade

Mathematics

Operations and Algebraic Thinking

Domain: Operations and Algebraic Thinking Standard 4.OA.A.1 Use four operations with whole number to solve problems			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Interpret a multiplication equation as a comparison - Represent multiplicative comparisons as multiplication equations. - e.g 35 is 5 times as many as 7 and 7 times as many as 5	Student **attempts** to: - Interpret a multiplication equation as a comparison - Represent multiplicative comparisons as multiplication equations. - e.g 35 is 5 times as many as 7 and 7 times as many as 5	Student: - Interprets a multiplication equation as a comparison - Represents multiplicative comparisons as multiplication equations. - e.g 35 is 5 times as many as 7 and 7 times as many as 5	Student **consistently and independently:** - Interpret a multiplication equation as a comparison - Represent multiplicative comparisons as multiplication equations. - e.g 35 is 5 times as many as 7 and 7 times as many as 5

Domain: Operations and Algebraic Thinking

Standard 4.OA.A.2
Use four operations with whole number to solve problems

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Multiply or divide to solve word problems involving multiplicative comparisons, by using drawings and equations with a symbol for the unknown number. - Know the difference between multiplicative comparison and additive comparison.	Student **attempts** to: - Multiply or divide to solve word problems involving multiplicative comparisons, by using drawings and equations with a symbol for the unknown number. - Know the difference between multiplicative comparison and additive comparison.	Student: - Multiplies or divides to solve word problems involving multiplicative comparisons, by using drawings and equations with a symbol for the unknown number. - Knows the difference between multiplicative comparison and additive comparison.	Student **consistently and independently:** - Multiplies or divides to solve word problems involving multiplicative comparisons, by using drawings and equations with a symbol for the unknown number. - Knows the difference between multiplicative comparison and additive comparison.

Domain: Operations and Algebraic Thinking Standard 4.OA.A.3 Use four operations with whole number to solve problems			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Solve multi-step word problems using the four operations, including problems in which remainders must be interpreted - Represent these problems using equations with a letter standing for the unknown quantity. - Assess reasonableness using mental computation and estimation strategies including rounding	Student **attempts** to: - Solve multi-step word problems using the four operations, including problems in which remainders must be interpreted - Represent these problems using equations with a letter standing for the unknown quantity. - Assess reasonableness using mental computation and estimation strategies including rounding	Student: - Solves multi-step word problems using the four operations, including problems in which remainders must be interpreted - Represents these problems using equations with a letter standing for the unknown quantity. - Assesses reasonableness using mental computation and estimation strategies including rounding	Student **consistently and independently:** - Solves multi-step word problems using the four operations, including problems in which remainders must be interpreted - Represents these problems using equations with a letter standing for the unknown quantity. - Assesses reasonableness using mental computation and estimation strategies including rounding

Domain: Operations and Algebraic Thinking

Standard 4.OA.B.4
Gain familiarity with factors and multiples

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Find all factor pairs for a whole number between 1–100 - Recognize the relationship between multiples and their factors - Determine whether a number between 1–100 is a multiple of a one-digit number - Determine whether a number between 1–100 is prime or composite	Student **attempts** to: - Find all factor pairs for a whole number between 1–100 - Recognize the relationship between multiples and their factors - Determine whether a number between 1–100 is a multiple of a one-digit number - Determine whether a number between 1–100 is prime or composite	Student: - Finds all factor pairs for a whole number between 1–100 - Recognizes the relationship between multiples and their factors - Determines whether a number between 1–100 is a multiple of a one-digit number - Determines whether a number between 1–100 is prime or composite	Student **consistently and independently:** - Finds all factor pairs for a whole number between 1–100 - Recognizes the relationship between multiples and their factors - Determines whether a number between 1–100 is a multiple of a one-digit number - Determines whether a number between 1–100 is prime or composite

Domain: Operations and Algebraic Thinking Standard 4.OA.C.5 Generate and analyze patterns			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Generate a number or shape pattern that follows a given rule - Identify and explain other features of the pattern	Student **attempts** to: - Generate a number or shape pattern that follows a given rule - Identify and explain other features of the pattern	Student: - Generates a number or shape pattern that follows a given rule - Identifies and explains other features of the pattern	Student **consistently and independently:** - Generates a number or shape pattern that follows a given rule. - Identifies and explains other features of the pattern

Numbers and Operations in Base Ten

Domain: Numbers and Operations in Base Ten Standard 4.NBT.A.1 Generalize place value understanding for multi-digit whole numbers			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Recognize that a digit in one place represents ten times what it represents in the place to its right	Student **attempts** to: - Recognize that a digit in one place represents ten times what it represents in the place to its right	Student: - Recognizes that a digit in one place represents ten times what it represents in the place to its right	Student **consistently and independently:** - Recognizes that a digit in one place represents ten times what it represents in the place to its right

Domain: Numbers and Operations in Base Ten Standard 4.NBT.A.2 Generalize place value understanding for multi-digit whole numbers			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form - Compare two multi-digit numbers using >, =, and <	Student **attempts** to: - Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form - Compare two multi-digit numbers using >, =, and <	Student: - Reads and writes multi-digit whole numbers using base-ten numerals, number names, and expanded form - Compares two multi-digit numbers using >, =, and <	Student **consistently and independently:** - Reads and writes multi-digit whole numbers using base-ten numerals, number names, and expanded form - Compares two multi-digit numbers using >, =, and <

Domain: Numbers and Operations in Base Ten Standard 4.NBT.A.3 Generalize place value understanding for multi-digit whole numbers			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Use place value understanding to round multi-digit whole numbers to any place	Student **attempts** to: - Use place value understanding to round multi-digit whole numbers to any place	Student: - Uses place value understanding to round multi-digit whole numbers to any place	Student **consistently and independently:** - Uses place value understanding to round multi-digit whole numbers to any place

Domain: Numbers and Operations in Base Ten Standard 4.NBT.B.4 Use place value understanding and properties of operations to perform multi-digit arithmetic			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm	Student **attempts** to: - With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm	Student: - With accuracy and efficiency, adds and subtracts multi-digit whole numbers using the standard algorithm	Student **consistently and independently:** - With accuracy and efficiency, adds and subtracts multi-digit whole numbers using the standard algorithm

Domain: Numbers and Operations in Base Ten Standard 4.NBT.B.5 Use place value understanding and properties of operations to perform multi-digit arithmetic			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Multiply four digit numbers by a one-digit number - Multiply two two-digit numbers, using strategies based on place value and the properties of operations - Illustrate and explain using equations, rectangular arrays, and/or area models.	Student **attempts** to: - Multiply four digit numbers by a one-digit number - Multiply two two-digit numbers, using strategies based on place value and the properties of operations - Illustrate and explain using equations, rectangular arrays, and/or area models.	Student: - Multiplies four digit numbers by a one-digit number - Multiplies two two-digit numbers, using strategies based on place value and the properties of operations - Illustrates and explains using equations, rectangular arrays, and/or area models.	Student **consistently and independently:** - Multiplies four digit numbers by a one-digit number - Multiplies two two-digit numbers, using strategies based on place value and the properties of operations - Illustrates and explains using equations, rectangular arrays, and/or area models.

Domain: Numbers and Operations in Base Ten Standard 4.NBT.B.6 Use place value understanding and properties of operations to perform multi-digit arithmetic			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards

Student **does not yet attempt** to:
- Find quotients and remainders with up to four-digit dividends and one-digit divisors, using:
  - place value
  - properties of operations
  - and/or the relationship between multiplication and division
- Illustrate and explain using equations,
	Student **attempts** to:
	
	- Find quotients and remainders with up to four-digit dividends and one-digit divisors, using:
	  - place value
	  - properties of operations
	  - and/or the relationship between multiplication and division
	- Illustrate and explain using equations,
		Student:
		
		- Finds quotients and remainders with up to four-digit dividends and one-digit divisors, using:
		  - place value
		  - properties of operations
		  - and/or the relationship between multiplication and division
		- Illustrate and explain using equations,
			Student **consistently and independently:**
			- Finds quotients and remainders with up to four-digit dividends & one-digit divisors, using:
			  - place value
			  - properties of operations and/or the relationship between multiplication and division
			- Illustrates and explains using equations,

rectangular arrays, and/or area model	rectangular arrays, and/or area model	rectangular arrays, and/or area model	rectangular arrays, and/or area model

Whole numbers are the focus for the Numbers and Operations and Operations & Algebraic Thinking domains.

Numbers and Operations- Fractions

Domain: Numbers and Operations-Fractions ** Standard 4.NF.A.1 Extend understanding of fraction equivalence and ordering			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Explain why a fraction is equivalent to another fraction by using visual fraction models; referring to size. - Recognize and generate equivalent fractions.	Student **attempts** to: - Explain why a fraction is equivalent to another fraction by using visual fraction models; referring to size. - Recognize and generate equivalent fractions.	Student: - Explains why a fraction is equivalent to another fraction by using visual fraction models; referring to size. - Recognizes and generates equivalent fractions.	Student **consistently and independently:** - Explains why a fraction is equivalent to another fraction by using visual fraction models; referring to size. - Recognizes and generates equivalent fractions.

Domain: Numbers and Operations-Fractions ** Standard 4.NF.A.2 Extend understanding of fraction equivalence and ordering			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards

Student does not yet attempt to:
- Compare two fractions with different numerators and different denominators:,
  - *creating common denominators or numerators*
  - *comparing to a benchmark*
- Recognize comparisons are valid only when the
	Student attempts to:
	
	- Compare two fractions with different numerators and different denominators:,
	  - *creating common denominators or numerators*
	  - *comparing to a benchmark*
	- Recognize comparisons are valid only when the
		Student:
		
		- Compares two fractions with different numerators and different denominators:,
		  - *creating common denominators or numerators*
		  - *comparing to a benchmark*
		- Recognize comparisons are valid only when the
			Student consistently and independently:
			- Compares two fractions with different numerators and different denominators:,
			  - *creating common denominators or numerators*
			  - *comparing to a benchmark*
			- Recognize comparisons are valid only when the

two fractions refer to the same whole. - Record the results with symbols >, =, or <, and by using a visual fraction model.	two fractions refer to the same whole. - Record the results with symbols >, =, or <, and by using a visual fraction model.	two fractions refer to the same whole. - Records the results with symbols >, =, or <, and by using a visual fraction model.	two fractions refer to the same whole. - Records the results with symbols >, =, or <, and by using a visual fraction model.

Domain: Numbers and Operations-Fractions **

Standard 4.NF.B.3
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Understand a fraction as a sum of unit fractions: a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decompose a fraction into a sum of fractions with the same denominator - using an equation	Student **attempts** to: - Understand a fraction as a sum of unit fractions: a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decompose a fraction into a sum of fractions with the same denominator	Student: - Understands a fraction as a sum of unit fractions: a. Understands addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decomposes a fraction into a sum of fractions with the same denominator	Student **consistently and independently:** - Understands a fraction as a sum of unit fractions: a. Understands addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decomposes a fraction into a sum of fractions with the same denominator

- using a visual fraction model. c. Add and subtract mixed numbers with like denominators; using various strategies d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, by using: - visual fraction models <u>and</u> equations to represent the problem.	- using an equation - using a visual fraction model. c. Add and subtract mixed numbers with like denominators; using various strategies Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, by using: - visual fraction models <u>and</u> equations to represent the problem.	- using an equation - using a visual fraction model. c. Adds and subtracts mixed numbers with like denominators; using various strategies d. Solves word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, by using: - visual fraction models <u>and</u> equations to represent the problem.	- using an equation - using a visual fraction model. c. Adds and subtracts mixed numbers with like denominators; using various strategies d. Solves word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, by using: - visual fraction models <u>and</u> equations to represent the problem.

Domain: Numbers and Operations-Fractions **

Standard 4.NF.B.4
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: a. Understand a fraction as a multiple of a unit fraction - use a visual fraction model and equation to represent the product b. Understand a multiple of a fraction, as a multiple of a unit fraction:	Student **attempts** to: a. Understand a fraction as a multiple of a unit fraction - use a visual fraction model and equation to represent the product b. Understand a multiple of a fraction, from a unit fraction - use a visual fraction model and	Student: a. Understands a fraction as a multiple of a unit fraction -use a visual fraction model and equation to represent the product b. Understands a multiple of a fraction, from a unit fraction - use a visual fraction model and	Student **consistently and independently:** a. Understands a fraction as a multiple of a unit fraction -use a visual fraction model and equation to represent the product b. Understands a multiple of a fraction, from a unit fraction -use a visual fraction model and equation to find its product.

-use a visual fraction model and equation to find its product. c. Solve word problems involving multiplication of a fraction by a whole number by using: - visual fraction models - equations to represent the problem.	equation to find its product. c. Solve word problems involving multiplication of a fraction by a whole number by using: - visual fraction models - equations to represent the problem.	equation to find its product. c. Solves word problems involving multiplication of a fraction by a whole number by using: - visual fraction models - equations to represent the problem.	c. Solves word problems involving multiplication of a fraction by a whole number by using: - visual fraction models - equations to represent the problem.

Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100. Visual fraction models include tape diagrams, number lines, and area models . Set models, including those defined as the whole, are excluded at this grade.

Domain: Numbers and Operations-Fractions

Standard 4.NF.C.5
Understand decimal notation of fractions and compare decimal fractions

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Express a fraction with denominator 10 as an equivalent fraction with denominator 100, - Add two fractions with denominators of 10 and 100.	Student **attempts** to: - Express a fraction with denominator 10 as an equivalent fraction with denominator 100, - Add two fractions with denominators of 10 and 100.	Student: - Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100, - Adds two fractions with denominators of 10 and 100.	Student **consistently and independently:** - Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100, - Adds two fractions with denominators of 10 and 100.

Addition and subtraction with unlike denominators in general is not a requirement at this grade.

Domain: Numbers and Operations-Fractions ** Standard 4.NF.C.6 Understand decimal notation of fractions and compare decimal fractions			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Write fractions with denominators of 10 or 100 as decimals. - Locate decimals on a number line diagram.	Student **attempts** to: - Write fractions with denominators of 10 or 100 as decimals. - Locate decimals on a number line diagram.	Student: - Writes fractions with denominators of 10 or 100 as decimals. - Locates decimals on a number line diagram.	Student **consistently and independently:** - Writes fractions with denominators of 10 or 100 as decimals. - Locates decimals on a number line diagram.

Domain: Numbers and Operations-Fractions ** Standard 4.NF.C.7 Understand decimal notation of fractions and compare decimal fractions			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Compare two decimals to hundredths by reasoning about their size. - Recognize that comparisons are valid only when the two decimals refer to the same whole. - Record the results with the symbols >, =, or <, - use a visual model	Student **attempts** to: - Compare two decimals to hundredths by reasoning about their size. - Recognize that comparisons are valid only when the two decimals refer to the same whole. - Record the results with the symbols >, =, or <, - use a visual model	Student: - Compare two decimals to hundredths by reasoning about their size. - Recognizes that comparisons are valid only when the two decimals refer to the same whole. - Records the results with the symbols >, =, or <, - uses a visual model	Student **consistently and independently:** - Compare two decimals to hundredths by reasoning about their size. - Recognizes that comparisons are valid only when the two decimals refer to the same whole. - Records the results with the symbols >, =, or <, - uses a visual model

** Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100. Visual fraction models include tape diagrams, number lines, and area models. Set models, including those defined as the whole, are excluded at this grade.

Measurement

Domain: Measurement Standard 4.M.A.1 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Know sizes of measurement units within a system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. - Express measurements in a larger unit in terms of a smaller unit.	Student **attempts** to: - Know sizes of measurement units within a system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. - Express measurements in a larger unit in terms of a smaller unit.	Student: - Knows sizes of measurement units within a system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. - Expresses measurements in a larger unit in terms of a smaller unit.	Student **consistently and independently:** - Knows sizes of measurement units within a system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. - Expresses measurements in a larger unit in terms of a smaller unit.

- Record measurement equivalents in a two-column table	- Record measurement equivalents in a two-column table	- Records measurement equivalents in a two-column table	- Record measurement equivalents in a two-column table

Domain: Measurement Standard 4.M.A.2 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including simple fractions or decimals). - Represent measurement	Student **attempts** to: - Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including simple fractions or decimals). - Represent measurement	Student: - Uses the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including simple fractions or decimals). - Represents measurement quantities using	Student **consistently and independently:** - Uses the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including simple fractions or decimals). - Represents measurement

quantities using diagrams (e.g: number lines, measurement scale).	quantities using diagrams (e.g: number line, measurement scale).	diagrams (e.g: number line, measurement scale).	quantities using diagrams (e.g: number line, measurement scale).

Domain: Measurement

Standards 4.M.A.3
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Apply the area and perimeter formulas for rectangles in real world and mathematical problems	Student **attempts** to: - Apply the area and perimeter formulas for rectangles in real world and mathematical problems	Student: - Applies the area and perimeter formulas for rectangles in real world and mathematical problems	Student **consistently and independently:** - Applies the area and perimeter formulas for rectangles in real world and mathematical problems

Domain: Measurement Standards 4.M.B.4 Geometric measurement: understand concepts of angles and measure angles			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Recognize angles as geometric shapes - Understand concepts of angle measurement***	Student **attempts** to: - Recognize angles as geometric shapes - Understand concepts of angle measurement***	Student: - Recognizes angles as geometric shapes - Understands concepts of angle measurement***	Student **consistently and independently:** - Recognizes angles as geometric shapes - Understands concepts of angle measurement***

***Understand an angle that turns through $\frac{1}{360}$ th of a circle is called a "one-degree angle," and can be used to measure angles
An angle that turns through n one-degree angles is said to have an angle measure of n degrees

Domain: Measurement Standards 4.M.B.5 Geometric measurement: understand concepts of angles and measure angles			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Measure angles using a protractor - Sketch angles of specified measure	Student **attempts** to: - Measure angles using a protractor - Sketch angles of specified measure	Student: - Measures angles using a protractor - Sketches angles of specified measure	Student **consistently and independently:** - Measures angles using a protractor - Sketches angles of specified measure

Domain: Measurement

Standards 4.M.C.6
Geometric measurement: understand concepts of angles and measure angles

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Recognize angle measure as additive - Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure	Student **attempts** to: - Recognize angle measure as additive - Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure	Student: - Recognizes angle measure as additive - Solves addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure	Student **consistently and independently:** - Recognizes angle measure as additive - Solves addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Data Literacy

Domain: Data Literacy Standards 4.DL.A.1 Organize data and understand data visualizations			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Create data-based questions, generate ideas based on the questions, and then refine the questions	Student **attempts** to: - Create data-based questions, generate ideas based on the questions, and then refine the questions	Student: - Creates data-based questions, generate ideas based on the questions, and then refine the questions	Student **consistently and independently:** - Creates data-based questions, generate ideas based on the questions, and then refine the questions

Domain: Data Literacy Standards 4.DL.A.2 Organize data and understand data visualizations			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Develop strategies to collect various types of data and organize data digitally	Student **attempts** to: - Develop strategies to collect various types of data and organize data digitally	Student: - Develops strategies to collect various types of data and organize data digitally	Student **consistently and independently:** - Develops strategies to collect various types of data and organize data digitally

Domain: Data Literacy Standards 4.DL.B.3 Organize data and understand data visualizations			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Understand that subsets of data can be selected and analyzed for a particular purpose	Student **attempts** to: - Understand that subsets of data can be selected and analyzed for a particular purpose	Student: - Understands that subsets of data can be selected and analyzed for a particular purpose	Student **consistently and independently:** - Understands that subsets of data can be selected and analyzed for a particular purpose

Domain: Data Literacy Standards 4.DL.B.4 Organize data and understand data visualizations			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Analyze visualizations of a single data set - Share explanations and draw conclusions about data	Student **attempts** to: - Analyze visualizations of a single data set - Share explanations and draw conclusions about data	Student: - Analyzes visualizations of a single data set - Shares explanations and draw conclusions about data	Student **consistently and independently:** - Analyzes visualizations of a single data set - Shares explanations and draw conclusions about data

Domain: Data Literacy Standards 4.DL.B.5 Represent and interpret measurement data			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛) - Solve problems involving addition and subtraction of fractions by using information presented in line plots	Student **attempts** to: - Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛) - Solve problems involving addition and subtraction of fractions by using information presented in line plots	Student: - Makes a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛) - Solves problems involving addition and subtraction of fractions by using information presented in line plots	Student **consistently and independently:** - Makes a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛) - Solves problems involving addition and subtraction of fractions by using information presented in line plots

Geometry

Domain: Geometry Standards 4.G.A.1 Draw and identify lines and angles, and classify shapes by properties of their lines and angles			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. - Identify these in two-dimensional figures.	Student **attempts** to: - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. - Identify these in two-dimensional figures.	Student: - Draws points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. - Identifies these in two-dimensional figures.	Student **consistently and independently:** - Draws points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. - Identifies these in two-dimensional figures.

Domain: Geometry

Standards 4.G.A.2
Draw and identify lines and angles, and classify shapes by properties of their lines and angles

1 Does not meet grade level expectations of learning standards	2 Partially meeting grade level expectations of learning standards	3 Meeting grade level expectations of learning standards	4 Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines - Recognize right triangles as a category and identify right triangles	Student **attempts** to: - Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines - Recognize right triangles as a category and identify right triangles	Student: - Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines - Recognizes right triangles as a category and identify right triangles	Student **consistently and independently:** - Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines - Recognizes right triangles as a category and identify right triangles

Domain: Geometry Standards 4.G.A.3 Draw and identify lines and angles, and classify shapes by properties of their lines and angles			
1 Does not meet grade level expectations of learning standards	**2** Partially meeting grade level expectations of learning standards	**3** Meeting grade level expectations of learning standards	**4** Exceeding grade level expectations of learning standards
Student **does not yet attempt** to: - Recognize a line of symmetry for a two-dimensional - Identify line-symmetric figures and draw lines of symmetry	Student **attempts** to: - Recognize a line of symmetry for a two-dimensional - Identify line-symmetric figures and draw lines of symmetry	Student: - Recognizes a line of symmetry for a two-dimensional - Identifies line-symmetric figures and draw lines of symmetry	Student **consistently and independently:** - Recognizes a line of symmetry for a two-dimensional - Identifies line-symmetric figures and draw lines of symmetry

Companion Glossary

(courtesy of Graniteschools.org)

Accuracy: the ability to produce mathematically precise answers *(J. Bay-Williams & G. Kling, 2019, Math Fact Fluency)*

Acute angle: An angle with a measure less than 90°.

Additive Comparisons: Problems that ask how much more (or less) one amount is than another.

Algorithm: A step-by-step method for computing.

Angel: Two rays or line segments that share an endpoint.

Angel measure: The measure of the size of an angle. It tells how far one side is turned from the other side. A one degree angle turns through 1/360 of a full circle.

Array: An arrangement of objects in equal rows.

Area: The measure, in square units, of the inside of a plane figure.

Area Model: A model of multiplication that shows each place value product.

Bar graph: A model that uses bars to represent known and unknown quantities and the relationship between these quantities.

Bar model: A model that uses bars to represent known and unknown quantities and the relationship between these quantities.

Base ten numeral form: A common way of writing a number using digits. The value of a numeral depends on where it appears in the number. (also known as standard form)

Benchmark: A known size or amount that can be used as a reference to help understand a different size or amount. A benchmark can be used to estimate measurement.

Composite number: A number that has more than two factors.

Data: A collection of information gathered for a purpose. Data may be in the form of either words or numbers.

Decimal: A number with one or more digits to the right of a decimal point.

Decomposing/ Decomposition: To separate a number into 2 or more parts, using place value.

Dividend: A number that is divided by another number.

Divisor: The number by which another number is divided.

Endpoint: A point at either end of a line segment, or a point at one end of a ray

Efficiency: the ability to produce answers relatively quickly and easily *(J. Bay-Williams, G. Kling, 2019, Math Fact Fluency)*

Equation: A mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.

Estimate: A number close to an exact amount. An estimate tells about how much or about how many.

Factor: The whole numbers that are multiplied to get a product.

Factor pairs: A set of two whole numbers that when multiplied will result in a given product.

Fraction: A way to describe a part of a whole or a part of a group by using equal parts.

Line plot: A diagram showing frequency of data on a number line.

Line symmetry figure: A figure that can be folded in half and its two parts match exactly.

Line of symmetry: What a figure has if it can be folded in half and its two parts match exactly.

Mass: The amount of matter in an object. Usually measured by comparing with an object of known mass. While gravity influences weight, it does not affect mass.

Multiple: The product of a whole number and any other whole number

Multiplicative Comparisons: Compare by asking or telling how many times more one amount is

than another. e.g., 3 times as many as

Number line: A diagram that represents numbers as points on a line.

Obtuse angle: An angle that measures greater than 90°.

Order of Operations: A set of rules that tells the order in which to compute.

Partition: An action to divide shapes into smaller parts.

Perimeter: The distance around a figure.

Place Value: The value a digit has because of its place in a number.

Plane figure: A shape that is two dimensional and is formed by curves, line segments, or both.

Prime number:A whole number greater than 0 that has exactly two different factors, 1 and itself.

Product: The answer to a multiplication problem.

Parallel lines: Lines that are always the same distance apart.

Perpendicular lines: Two intersecting lines that form right angles.

Right angle: An angle that forms a square corner to measure exactly 90°.

Quotient: The answer to a division problem.

Two dimensional: A plane, flat shape that has length and width.

Unit fraction: A fraction that has 1 as its numerator. A unit fraction names 1 equal part of a whole.