Grade 4 Montana Standards	Novice A student who performed at this level did not meet grade-level expectations in this subject and needs considerable support to develop the required knowledge, skills, and practices necessary for future coursework in this content area. A student at this level:	Partially Proficient A student who performed at this level partially met grade-level expectations in this subject and needs support to develop the required knowledge, skills, and practices necessary for future coursework in this content area. A student at this level:	Proficient A student who performed at this level met grade-level expectations in this subject. The student has demonstrated the required knowledge, skills, and practices necessary for future coursework in this content area. A student at this level:	Advanced A student who performed at this level exceeded grade-level expectations. The student has demonstrated mastery of the required knowledge, skills, and practices necessary for future coursework in this content area. A student at this level:
Operations and Algebraic Thinking (OA)				
4.OA.A Use the four operations with whole numbers to solve problems.				
4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	Identifies a multiplication expression or equation that represents a multiplicative comparison or situation (e.g., given Wyatt knows 9 Algonquin words and Emma knows 5 times as many Algonquin words as Wyatt, identifies the expression 9 × 5 as representing the number of Algonquin words Emma knows). Multiplication within 100 if calculating the product is required. Does not include solving word problems or using symbols or variable for unknowns. See 4.OA.A.2.	Identifies a multiplicative comparison or situation that can be represented by a given multiplication expression or equation (e.g., given 9 × 5, identifies Wyatt knows 9 Algonquin words and Emma knows 5 times as many Algonquin words as Wyatt as a situation that can be represented by 9 × 5). Multiplication within 100 if calculating the product is required.	Generates a multiplication expression or equation to represent a given multiplicative comparison statement or situation. Multiplication within 100 if calculating the product is required.	Creates a multiplicative comparison statement or situation to represent a given multiplication equation or expression. Multiplication within 100 if calculating the product is required.
4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Solves one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 100. Determines if comparisons are multiplicative or additive.	Represents one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 100 using equations with a symbol or letter for the unknown. Represents one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 100 using visual supports such as tape diagrams, arrays, and bar models.	Solves one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 101 to 1,000. Represents one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 101 to 1,000 using equations with a symbol or letter for the unknown. Represents one-step word problems involving multiplicative comparison that can be solved using multiplication or division within 101 to 1,000 using visual supports such as tape diagrams, arrays, and bar models.	Explains/analyzes solutions to and/or representations of one-step word problems involving multiplicative comparison using multiplication or division within 1,000.

4.OA.A.3 Solve multi-step word problems within cultural contexts, including those of Montana American Indians, with whole numbers and having whole-number answers 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 the reasonableness of answers using mental computation and estimation strategies including rounding.	None. See 3.OA.D.8 for solving two-step word problems using the four operations. See 4.MD.A.2 for contexts using distances, intervals of time, liquid volumes, masses of objects, and money.	Solves three-step word problems including those with Montana American Indian cultural context with whole numbers where interpreting a remainder is not required. Represents three-step word problems including those with Montana American Indian cultural context with whole numbers using equations with a symbol or letter for the unknown quantity. Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Solves three-step word problems including those with Montana American Indian cultural context with whole numbers where interpreting a remainder is required. Interpreting the remainder may replace one operational step. Solves four or more-step word problems including those with Montana American Indian cultural context with whole numbers where interpreting a remainder may or may not be required. Interpreting the remainder may replace one operational step. Represents four or more-step word problems including those with Montana American Indian cultural context with whole numbers using equations with a symbol or letter for the unknown quantity. Analyzes solutions to word problems with three or more steps including those with Montana American Indian cultural context with whole numbers where interpreting a remainder is not required and evaluates their reasonableness. Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Analyzes solutions to word problems with three or more steps within cultural contexts including those with Montana American Indian cultural context with whole numbers where interpreting a remainder is required and evaluates their reasonableness. Interpreting the remainder may replace one operational step. Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.
4.OA.B Gain familiarity with factors and multiples.				
4.OA.B.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-1000 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.	Determines one or two factors for composite numbers up to 20. Determines all factors for composite numbers up to 10. Recognizes the meaning of multiples. Recognizes the meaning of prime and composite. Creates a model of a prime or composite number up to 100.	Determines one or two factors for composite numbers from 22 to 100. Determines all factors for composite numbers from 12 to 30. Determines whether a whole number up to 100 is a multiple a single number from 2 to 10 (e.g., determines which number is a multiple of 4). Determines prime numbers up to 19. Determines composite numbers up to 20.	Determines all factors for composite numbers from 32 to 100. Determines whether a whole number up to 100 is a multiple of more than one number from 2 to 10 (e.g., determines which number is a multiple of both 4 and 9). Determines prime numbers from 13 to 97. Determines composite numbers from 22 to 100.	Analyzes statements about factors of whole numbers up to 100 (e.g., explains or justifies why if 10 is a factor of a number 5 is also a factor of the number). Determines whether a whole number from 101 to 1,000 is a multiple of a single number from 2 to 10. Analyzes statements about multiples of numbers from 2 to 10. Analyzes/justifies the classification of prime and composite numbers up to 100 (e.g., explain why even numbers greater than 2 are composite numbers).
4.OA.C Generate a number or shape pattern that follows a given rule.				

4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	Extends a number or shape pattern that follows a given rule to the next one or two terms. Limited to whole numbers. Addition and subtraction within 1,000. Multiplication and division within 100. See 3.OA.D.9 for determining the rule of addition and subtraction patterns.	Extends a number or shape pattern that follows a given a rule to a future term (e.g., determines the tenth term given the pattern 20, 35, 50, 65, 80 and the rule "add 15"). Generates a number or shape pattern that follows a given rule that uses one operation. The rule may be given as a statement or expression/equation (e.g., determines which pattern follows the rule "subtract 2"). Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Identifies or generates a number pattern that follows a given rule that uses two operations. The rule may be given as a statement or expression/equation (e.g., determines which pattern follows the rule "multiply by 3, subtract 2"). Analyzes a given pattern for a given rule that uses one operation (e.g., explains why the pattern does not follow the rule). Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Analyzes a given pattern for a given rule that uses two operations (e.g., explains why the pattern does not follow the rule). Identifies features of a number or shape pattern that were not explicit in the given rule of the pattern. Limited to whole numbers. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.
Number and Operations in Base Ten (NBT)				
4.NBT.A Generalize place value understanding for multi-digit whole numbers.				
4.NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.	None.	Recognizes that in multi-digit whole numbers up to 10,000, a digit in one place represents 10 times as much as it represents in the place to its right.	Recognizes that in multi-digit whole numbers between 100,001 and 1,000,000, a digit in one place represents 10 times as much as it represents in the place to its right.	Generates a multi-digit number up to 1,000,000 where the digit in one place is ten times greater than the digit in the place to its right. Explains why in a multi-digit number up to 1,000,000 a digit in one place represents ten times what it represents in the place to its right.
4.NBT.A.2 Read and write multi-digit whole numbers using base ten numerals, number names, and expanded form and compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparison.	Determines another form of a number (number form, word form or expanded form) when given a number from 1,000 to 10,000 in number form, word form or expanded form). Determines the meaning of a digit in the thousands, ten thousands, or hundred thousands place (e.g., the 3 in 634,512 represents 30,000). Uses symbols to compare two multi-digit numbers up to 1,000,000 given a visual representation of the numbers. Limited to whole numbers. See K.NBT.A.1 for meaning of the ones place. See 1. NBT.B.2 for two-digit numbers. See 2.NBT.A.1, 2.NBT.A.3, and 2.NBT.A.4 for three-digit numbers.	Determines another form of a number (number form, word form or expanded form) when given a number from 10,001 to 100,000 in number form, word form or expanded form). Uses symbols to compare two multi-digit numbers up to 1,000,000 without a visual representation of the numbers. Orders three or more multi-digit numbers up to 100,000. Limited to whole numbers. Ordering numbers includes using "least" and "greatest" terminology and may or may not include symbols.	Determines another form of a number (number form, word form or expanded form) when given a number from 100,001 to 1,000,000 in number form, word form or expanded form). Orders three or more multi-digit numbers up to 1,000,000. At least one number is greater than 100,000. Limited to whole numbers. Ordering numbers includes using "least" and "greatest" terminology and may or may not include symbols.	Determines the expanded notation of a multi-digit number up to 1,000,000 given in number form or word form and vice versa (e.g., 5,342 = 5 × 1,000 + 3 × 100 + 4 × 10 + 2 × 1) . Limited to whole numbers.
4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.	Rounds whole numbers less than 1,000 to the nearest 10 or 100 with or without a visual representation. Visual representations may include number lines and place value models.	Rounds whole numbers between 1,001 and 1,000,000 to any place given a visual representation. Visual representations may include number lines and place value models.	Rounds whole numbers between 1,001 and 1,000,000 to any place without a visual representation.	Justifies the rounding of whole numbers between 1,000 and 1,000,000 to any place value.

4.NBT.B Use place value understanding and properties of operations to perform multi-digit arithmetic.				
4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Adds within 1,000 - 1,000,000 without regrouping. Subtracts within 1,000 - 1,000,000 without regrouping. Sums and minuends are less than 1,000,000. See 3.NBT.A.2 for fluently adding and subtracting within 1,000.	Adds within 1,000 - 1,000,000 with one regrouping step. Subtracts within 1,000 - 1,000,000 with one regrouping step. Sums and minuends are less than 1,000,000.	Adds within 1,000 - 1,000,000 with multiple regrouping steps. Subtracts within 1,000 - 1,000,000 with multiple regrouping steps. Explains/analyzes the use of the standard algorithm when adding or subtracting within 1,000 - 1,000,000. Sums and minuends are less than 1,000,000.	Explains/analyzes strategies used to add or subtract within 1,000 - 1,000,000. May not include the standard algorithm. Sums and minuends are less than 1,000,000.
4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Multiplies two-, three-, and four-digit whole numbers by a one-digit whole number with no regrouping. May include equations, rectangular arrays, or area models. See 3.OA.C.7 for multiplying within 10 × 10.	Multiplies two, two-digit whole numbers with or without regrouping. May include equations, rectangular arrays, or area models.	Multiplies two-, three-, and four-digit whole numbers by a one-digit whole number with regrouping. May include equations, rectangular arrays, or area models.	Explains/analyzes strategies used to multiply two- to four-digit whole numbers by a single-digit whole number or to multiply two, two-digit whole numbers. The standard algorithm is not required. May include equations, rectangular arrays, or area models.
4.NBT.B.6 Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models	Divides two-digit whole numbers by a single-digit whole number with no remainder. Does not include basic division facts. Divides two-digit whole numbers by a single-digit whole number with a remainder. May include equations, rectangular arrays, or area models. See 3.OA.C.7 for division within 10 × 10 without a remainder.	Divides a three-digit whole number by a one-digit whole number without a remainder. May include equations, rectangular arrays, or area models.	Divides a three-digit whole number by a one-digit whole number with a remainder. Divides a four-digit whole number by a one-digit whole number with or without a remainder. May include equations, rectangular arrays, or area models.	Explains/analyzes strategies used to divide two-, three-, and four-digit whole numbers by a single-digit whole number with or without remainders. The standard algorithm is not required. May include equations, rectangular arrays, or area models.
Number and Operations - Fractions (NF)				
4.NF.A Extend understanding of fraction equivalence and ordering.				
4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size and use this principle to recognize and generate equivalent fractions.	Identifies fraction models or number lines that represent equivalent fractions between 0 and 1. At least one fraction must have a denominator of 5, 10, 12, or 100. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100. See 3.NF.A.3 for fractions with denominators of only 2, 3, 4, 6, or 8.	Determines a fraction in the form a/b equivalent to a fraction between 0 and 1 given as a fraction model or number line. At least one fraction must have a denominator of 5, 10, 12, or 100. Creates fraction models or number lines that represent equivalent fractions between 0 and 1. At least one fraction must have a denominator of 5, 10, 12, or 100. May include answering questions about the creation of the model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines equivalent fractions with fraction models that represent $(n \times a)/(n \times b)$ for a given fraction where n is a whole number [e.g., identify a fraction model that represents (3 x 6)/(3 x 12)]. Determines equivalent fractions written as $(n \times a)/(n \times b)$ for a given fraction where n is a whole number (e.g., given 6/12 identify (3 x 6)/(3 x 12) as an equivalent fraction). Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines a fraction in the form a/b equivalent to a fraction between 0 and 1 without a model. At least one fraction must have a denominator of 5, 10, 12, or 100. Explains whether two fractions are equivalent using fraction models. At least one fraction must have a denominator of 5, 10, 12, or 100. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.

4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	Uses symbols to compare two fractions with the same numerator or the same denominator given a fraction model or number line. At least one fraction must have a denominator of 5, 10, 12, or 100. Orders three or more fractions with the same numerator or the same denominator given a fraction model or number line. At least one fraction must have a denominator of 5, 10, 12, or 100. Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100. See 3.NF.A.3d for comparing and ordering fractions with same numerator or same denominator with denominators of 2, 3, 4, 6, and 8.	Uses symbols to compare two fractions with the same numerator or the same denominator without a fraction model or number line. At least one fraction must have a denominator of 5, 10, 12, or 100. Uses symbols to compare two fractions with different numerators and different denominators given a fraction model or number line or when one fraction is a benchmark fraction (wholes and halves). Orders three or more fractions with the same numerator or the same denominator without a fraction model or number line. At least one fraction must have a denominator of 5, 10, 12, or 100. Orders three or more fractions with the with different numerators and different denominators given a fraction model or number line or when one fraction is a benchmark fraction (wholes and halves). Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Uses symbols to compare two fractions with different numerators and different denominators without a fraction model or number line and without benchmark fractions (wholes and halves). Orders three or more fractions with the with different numerators and different denominators without a fraction model or number line and without a benchmark fraction (wholes and halves). Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.	Explains whether a comparison involving two fractions with different numerators and different denominators is valid using fraction models, number lines, or other representations. Includes cases where the fractions may not refer to the same whole. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.
4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.				
4.NF.B.3 Understand a fraction *a* /*b* with *a* > 1 as a sum of fractions 1/*b* .	See 4.NF.B.3a - 4.NF.B.3d	See 4.NF.B.3a - 4.NF.B.3d	See 4.NF.B.3a - 4.NF.B.3d	See 4.NF.B.3a - 4.NF.B.3d
4.NF.B.3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	Identifies a fraction model that represents addition or subtraction of fractions within 1 with the same denominator. Adds and subtracts fractions within 1 with the same denominator without regrouping and with a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Adds and subtracts fractions within 1 with the same denominator without regrouping and without a fraction model. Adds and subtracts fractions within 1 with the same denominator with regrouping and with a fraction model.	Adds and subtracts fractions within 1 with the same denominator with regrouping and without a fraction model. Creates a fraction model that represents addition or subtraction of fractions within 1 with like denominators.	Analyzes statements about adding or subtracting two fractions within 1 with the same denominator (e.g., determines and explains errors in the addition of two fractions).
4.NF.B.3b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8; 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.	Decomposes a fraction a/*b* as a sum of unit fractions 1/*b* with the same denominator and identifies or records the decomposition as an expression or an equation. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Decomposes a fraction *a* /*b* as a sum of fractions with the same denominator and identifies or records the decomposition as expression or equation. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Decomposes a fraction *a* /*b* less than 1 as a sum of fractions with the same denominator in more than one way and identifies or records the decompositions as expressions or equations. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Explains whether a given decomposition of a fraction *a* /*b* into the sum of fractions with like denominators is accurate for the given fraction.

4.NF.B.3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	Determines equivalent improper fractions for mixed numbers and vice versa given a fraction model. Adds and subtracts mixed numbers with like denominators without regrouping given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines equivalent improper fractions for mixed numbers and vice versa without a fraction model. Adds and subtracts mixed numbers with like denominators with regrouping given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Adds and subtracts mixed numbers with like denominators with or without regrouping and without a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Analyzes statements about adding or subtracting two mixed numbers with the same denominator (e.g., determines and explains errors in the addition of two mixed numbers).
4.NF.B.3d Solve word problems within cultural contexts, including those of Montana American Indians, involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	Solves one- or two-step word problems including those with Montana American Indian cultural context involving addition and subtraction of fractions referring to the same whole and having like denominators without regrouping given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Solves one- or two-step word problems including those with Montana American Indian cultural context involving addition and subtraction of fractions referring to the same whole and having like denominators with regrouping given a fraction model. Solves one- or two-step word problems including those with Montana American Indian cultural context involving addition and subtraction of fractions referring to the same whole and having like denominators without regrouping and without a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Solves one- or two-step word problems including those with Montana American Indian cultural context involving addition and subtraction of fractions referring to the same whole and having like denominators with regrouping and without a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Analyzes solutions of one- or two- step word problems including those with Montana American Indian cultural context involving addition and subtraction of fractions referring to the same whole and like denominators. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.
4.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	See 4.NF.4a - 4.NF.4c	See 4.NF.4a - 4.NF.4c	See 4.NF.4a - 4.NF.4c	See 4.NF.4a - 4.NF.4c
4.NF.B.4a Understand a fraction *a* /*b* as a multiple of 1/*b* . For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).	Determines the improper fraction that represents the product of a whole number and a unit fraction given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines the improper fraction that represents the product of a whole number and a unit fraction without a fraction model. Determines the mixed number that represents the product of a whole number and a unit fraction given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines the mixed number that represents the product of a whole number and a unit fraction without a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Analyzes the multiplication of a unit fraction and a whole number (e.g., explains why the product of 5 × 1/4 will be less than 5).
4.NF.B.4b Understand a multiple of *a* /*b* as a multiple of 1/*b* , and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, *n* × (*a* /*b*) = (*n* × *a*)/*b*).	None.	Determines the product of a whole number and a non unit fraction given a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Determines the product of a whole number and a non unit fraction without a fraction model. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Analyzes the multiplication of a non-unit fraction and a whole number (e.g., explains why the product of 3 × 2/5 will be less than 3).

4.NF.B.4c Solve word problems within cultural contexts, including those of Montana American Indians, involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef and there will be five people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie? As a contemporary American Indian example, for family/cultural gatherings, the Canadian and Montana Cree bake bannock made from flour, salt, grease, and baking soda, in addition to 3/4 cup water per pan. When making four pans, how much water will be needed?	Solves one-step word problems including those with Montana American Indian cultural context involving multiplication of a unit fraction by a whole number given a fraction model or an equation. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100. See 4.MD.A.2 for contexts using distances, intervals of time, liquid volumes, masses of objects, and money.	Solves one-step word problems including those with Montana American Indian cultural context involving multiplication of a non-unit fraction by a whole number given a fraction model or an equation. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Solves one-step word problems within cultural contexts, involving multiplication of a unit fraction or non-unit fraction by a whole number without a fraction model and without an equation. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.	Analyzes solutions of one-step word problems within cultural contexts, involving multiplication of a unit fraction or non-unit fraction and a whole number. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, or 100.
4.NF.C Understand decimal notation for fractions, and compare decimal fractions.				
4.NF.C.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.	Determines an equivalent fraction with a denominator of 10 when given a fraction with a denominator of 100 and vice versa with visual supports.	Determines an equivalent fraction with a denominator of 10 when given a fraction with a denominator of 100 and vice versa without visual supports. Adds two fractions with respective denominators of 10 and 100 with visual supports.	Adds two fractions with respective denominators of 10 and 100 without visual supports.	Adds three or more fractions with respective denominators of 10 and 100 without visual supports.
4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	Determines the decimal notation for fractions less than 1 with denominators of 10 or 100 given visual supports. Determines the fraction with a denominator of 10 or 100 that is equivalent to a given decimal number less than 1 given visual supports.	Determines the decimal notation for fractions greater than 1 with denominators of 10 or 100 given visual supports. Determines the fraction with a denominator of 10 or 100 that is equivalent to a given decimal number greater than 1 given visual supports.	Determines the decimal notation for fractions with denominators of 10 or 100 without visual supports. Determines the fraction with a denominator of 10 or 100 that is equivalent to a given decimal number without visual supports. May include improper fractions and mixed numbers.	Analyzes statements about converting between decimals and fractions with a denominator of 10 or 100 (e.g., determines and explains errors in the conversion of a fraction to a decimal).
4.NF.C.7 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 of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	Uses symbols to compare two decimals referring to the same whole with the same number of decimal places given a model or number line. Orders three or more decimals referring to the same whole with the same number of decimal places given a model or number line. Numbers must be between 0.01 and 999,999,.99.	Uses symbols to compare two decimals referring to the same whole with the same number of decimal places without visual supports. Uses symbols to compare two decimals referring to the same whole with a different number of decimal places given a model or number line. Orders three or more decimals referring to the same whole with the same number of decimal places without visual supports. Orders three or more decimals referring to the same whole with a different number of decimal places given a model or number line. Numbers must be between 0.01 and 999,999,.99.	Uses symbols to compare two decimals referring to the same whole with a different number of decimal places without visual supports. Orders three or more decimals referring to the same whole with a different number of decimal places without visual supports. Numbers must be between 0.01 and 999,999,.99.	Analyzes comparisons of two numbers where at least one value is a decimal to the tenths or hundredths (e.g., explain why 1.8 equals 1.80). Numbers must be between 0.01 and 999,999,.99.
Measurement and Data (MD)				

4.MD.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.				
4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, mL; hr, min, and sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...	Determines the most appropriate unit to measure a given object or use in a given context. Compares or orders measurement units within one system based on their relative size. See 4.MD.A.2 for solving real-world problems where conversion is a step in solving the problem.	Determines equivalent measurements from a larger to smaller unit within a system of measurement using one step or one degree of change (e.g., feet to inches or hours to minutes). May include completing a two column table.	Determines equivalent measurements from a larger to smaller unit within a system of measurement using two or more steps or two or more degrees of change (e.g., yards to inches or hours to seconds). May include completing a two column table.	Uses one- or two-step conversions from a larger unit to a smaller unit within a system of measurement to compare measurements within the same system.
4.MD.A.2 Use the four operations to solve word problems within cultural contexts, including those of Montana American Indians, 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.	Solves one-step word problems including those with Montana American Indian cultural context with whole numbers involving distances, intervals of time, liquid volumes, masses of objects, and money. Addition and subtraction within 1,000 and 1,000,000. Multiplication and division within 101 and 1,000. See 2.MD.B.5 for solving one-step addition and subtraction word problems involving lengths within 100. See 2.MD.C.8 for solving word problems involving dollar bills and coins. See 3.MD.A.1 for solving one- and two-step word problems involving addition and subtraction of time intervals in minutes. See 3.MD.A.2 for solving one-step word problems involving mass and volume with addition/subtraction within 1,000 and multiplication/division within 10 × 10.	Solves two-step word problems including those with Montana American Indian cultural context with whole numbers involving distances, intervals of time, liquid volumes, masses of objects, and money. One-step may include expressing a larger unit in terms of a smaller unit with one degree of change (e.g., yards to feet or hours to minutes). Addition and subtraction within 1,000 and 1,000,000. Multiplication and division within 101 and 1,000.	Solves one- or two-step word problems including those with Montana American Indian cultural context with fractions with common denominators and/or decimals involving distances, intervals of time, liquid volumes, masses of objects, and money. One-step may include expressing a larger unit in terms of a smaller unit with one degree of change (e.g., yards to feet or hours to minutes). Models solutions to measurement word problems including those with Montana American Indian cultural context involving distances using diagrams and number lines. Addition and subtraction within 1,000,000. Multiplication and division within 1,000. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. Decimals are limited to tenths and hundredths. Does not include computing with decimals. May include expressing fractions in decimal form.	Solves three or more-step word problems including those with Montana American Indian cultural context with fractions with common denominators and/or decimals involving distances, intervals of time, liquid volumes, masses of objects, and money. Must include expressing a larger unit in terms of a smaller unit with one or two degrees of change (e.g., yards to inches or hours to seconds). Analyzes solutions of one- or multi-step word problems including those with Montana American Indian cultural context involving distances, intervals of time, liquid volumes, masses of objects, and money, using fractions and/or decimals. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. Decimals are limited to tenths and hundredths. Does not include computing with decimals. May include expressing fractions in decimal form. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.

4.MD.A.3 Apply the area and perimeter formulas for rectangles in real-world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	Determines the area of rectangles in real-world and mathematical problems when given the length and width with or without a diagram. Determines the perimeter of rectangles in real-world and mathematical problems when given the length and width with or without a diagram. Identifies expressions that represent perimeters or areas of rectangles given a diagram. Whole number side lengths. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Identifies expressions that represent perimeters or areas of rectangles given the areas or the perimeters without a diagram (e.g., given an area of 50 square cm, determines 5 × 10 could represent the area of the rectangle). Whole number side lengths. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	Determines the width or length of a rectangle in real-world and mathematical problems when given the area and the length or width of the rectangle with or without a diagram. Determines the width or length of a rectangle in real-world and mathematical problems when given the perimeter and the length or width of the rectangle with or without a diagram. Determines the area of a rectangle in real-world and mathematical problems when given the perimeter and the length or width of the rectangle with or without a diagram. Determines the perimeter of a rectangle in real-world and mathematical problems when given the area and the length or width of the rectangle with or without a diagram. Determines the area and/or perimeter of a square in real-world and mathematical problems when given the length of one side of the square.	Draws or creates a rectangle given criteria for either the area or perimeter and either the length or width. Analyzes how changing one or more dimensions affects the perimeter and/or area of a rectangle in real-world and mathematical problems (e.g., increasing the length by 5 inches increases the perimeter by 10 inches). Analyzes statements about finding area and/or perimeter of rectangles (e.g., determines and explains errors in finding the area of a rectangle). Whole number side lengths. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.
4.MD.A.3 Continued			Determines equations with an unknown that represent perimeters and areas of rectangles with or without a diagram (e.g., writes and equation to represent the area of a rectangle given the area and a side length). Whole number side lengths. Addition and subtraction within 1,000,000. Multiplication and division within 1,000.	
4.MD.B Represent and interpret data.				
4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect or arrow/spearhead collection.	Completes a line plot for data measured to the nearest eighth-inch given a partially completed plot with a scale of 1/8. Must include at least one measurement to the 1/8, 3/8, 5/8, or 7/8 inch. Line plots may or may not be labeled with common denominators.	Identifies a line plot that represents a given data set measured to the nearest eighth-inch. Includes answering questions about steps in creating the line plot. Creates a line plot to represent a given data set measured to the nearest eighth inch. Line plots may or may not be labeled with common denominators.	Uses data from line plots to solve one-step problems involving addition or subtraction of fractions with like denominators (2, 4, or 8). Line plots must be labeled with common denominators.	Uses data from line plots to solve two-step problems involving addition or subtraction of fractions with like denominators (2, 4, or 8). Line plots must be labeled with common denominators.
4.MD.C Geometric measurement: understand concepts of angle and measure angles.				

4.MD.C.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement:	None. See 4.G.A.1 for identifying rays and angles.	Identifies or explains that there are 360 degrees in a circle. Recognizes how angles of a specific measure are formed (e.g., understand a 45 degree angle is 45 turns of a 1 degree angle). Identifies the circular arc, in a diagram, that an angle forms that represents a fraction of a circle (e.g., given the fraction 1/3, identifies a diagram of a circular arc that represents this fraction). Fractions are limited to denominators of 1, 2, 3, 4, 5, 6, 8 and 360.	Determines the fraction, written as n/360, of a circle an angle turns through with or without a diagram given (e.g., given an angle measuring 120 degrees is turned through a circle, determines that the angle turns through 120/360 of the circle). Determines the fraction, written as 1/n, of a circle an angle turns through with a diagram (e.g., given an angle measuring 120 degrees is turned through a circle, determines that the angle turns through 1/3 of the circle). Fractions are limited to denominators of 1, 2, 3, 4, 5, 6, and 8. Determines the measure of an angle given the fraction of a circle the angle turns through with a diagram (e.g., given an angle turns through 1/3 of a circle and a diagram, determine the angle measures 120 degrees). Fractions are limited to denominators of 1, 2, 3, 4, 5, 6, 8 and 360.	Determines the fraction, written as 1/n, of a circle an angle turns through without a diagram (e.g., given an angle measuring 120 degrees is turned through a circle, determines that the angle turns through 1/3 of the circle). Fractions are limited to denominators of 1, 2, 3, 4, 5, 6, and 8. Determines the measure of an angle given the fraction of a circle the angle turns through without a diagram (e.g., given an angle turns through 1/3 of a circle, determine the angle measures 120 degrees). Fractions are limited to denominators of 1, 2, 3, 4, 5, 6, 8 and 360. Analyzes statements about the degrees and/or fraction of a circle an angle turns through a circle.
4.MD.C.5a An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.	See 4.MD.C.5	See 4.MD.C.5	See 4.MD.C.5	See 4.MD.C.5
4.MD.C.5b An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	See 4.MD.C.5	See 4.MD.C.5	See 4.MD.C.5	See 4.MD.C.5
4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	Measures an angle to the nearest degree when the protractor is shown and aligned to the vertex.	Measures benchmark angles of 30, 45, 60, 90, and 180 degrees using a protractor not aligned to the vertex. Sketches benchmark angles of 30, 45, 60, 90 and 180 degrees.	Measures non-benchmark angles within 180 degrees using a protractor not aligned to the vertex. Sketches non-benchmark angles between 1 and 180 degrees. Estimates the measure of benchmark angles of 30, 45, 60, 90, and 180 degrees from a diagram.	Measures angles between 181 and 360 degrees to the nearest degree. Sketches angles between 180 and 360 degrees.
4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measurers of the parts. 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.	Represents the measure of composite angles as the sum of its parts given a diagram without degree measures (e.g., given a diagram with angle ABD defined as made up of angle ABC and angle BCD, determines the measure of angle ABD is the sum of the measures of angles ABC and BCD). Represents the measure of composite angles as the difference of the larger angle and its adjacent angle(s) given a diagram without degree measures (e.g., given a diagram with angle ABD defined as made up of angle ABC and angle BCD, determines the measure of angle BCD is the difference of the measures of angles ABD and ABC).	Represents the measure of composite angles as the sum of its parts given a diagram with degree measures (e.g., given a diagram with angle ABD measuring 120 degrees and defined as made up of angle ABC and angle BCD each measuring 60 degrees, determines the measure of angle ABD can be represented as 60 + 60 = 120).	Solves mathematical and real-world problems involving composite angles that can be solved with addition and subtraction given a diagram. Represents angle measures in real-world and mathematical problems as an equation with a letter or symbol for an unknown angle measure.	Analyzes statements about solving a real-world or mathematical word problem involving finding unknown angle measurements (e.g., determines and explains an error when determining the measure of an unknown angle).

Geometry (G)				
4.GA.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles.				
4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two- dimensional figures.	Identifies visual representations of points, lines, line segments, rays, and angles. Identifies visual representations of perpendicular and parallel lines. Classifies visual representations of angles as acute, obtuse, or right without using a protractor.	Identifies points, line segments, rays, and angles in two-dimensional figures a given a visual representation. Draws points, lines, line segments, rays, and angles. Draws perpendicular and parallel lines. Classifies lines as perpendicular or parallel given a description without a visual representation. Classifies angles as acute, obtuse, or right when given a description in degree measures without a visual representation. Classifies angles in two-dimensional figures as acute, obtuse or right without using a protractor given a visual representation.	Identifies perpendicular and parallel sides in two-dimensional figures given a visual representation.	Draws points, lines, line segments, rays, angles, parallel lines, and perpendicular lines in two-dimensional figures. Describes similarities or differences between points, lines, line segments, rays, angles, and perpendicular and parallel lines.
4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	Classifies parallelograms within quadrilaterals given visual representations. Identifies right triangles given visual representations. Students may be required to use or know the terms perpendicular, parallel and parallelogram.	Classifies rectangles and squares within parallelograms or a mix of other parallelograms and quadrilaterals given visual representations. Students may be required to use or know the terms perpendicular, parallel, and parallelogram.	Classifies quadrilaterals as parallelograms, rectangles, rhombuses, and/or squares based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size, without a visual representation. Classifies triangles as acute, obtuse, or right given visual representations. Classifies triangles as acute, obtuse, or right based on the presence or absence of angles of a specified size, without a visual representation. Students may be required to use or know the terms perpendicular, parallel, and parallelogram.	Describes similarities or differences among two-dimensional figures based upon the presence or absence of parallel or perpendicular lines and/or the presence or absence of specific angles. Describes similarities or differences among acute, obtuse, or right triangles based upon the presence or absence of angles of a specified size. Students may be required to use or know the terms perpendicular, parallel, and parallelogram.
4.G.A.3 Recognize a line of symmetry for a two-dimensional figure, including those found in Montana American Indian designs, as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	Identifies one line of symmetry for given two-dimensional figures.	Identifies all lines of symmetry for given two-dimensional figures. Draws one line of symmetry for given two-dimensional figures with or without multiple lines of symmetry.	Draws all lines of symmetry for given two-dimensional figures with multiple lines of symmetry. Identifies two-dimensional figures that do or do not have lines of symmetry. No lines of symmetry are drawn.	Draws a two-dimensional figure given criteria for the number of lines of symmetry. Analyzes properties of lines of symmetry and symmetric two-dimensional figures (e.g., explains why a line is or is not a line of symmetry).