Grade 3 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)				
3.OA.A Represent and solve problems involving multiplication and division.				
3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.	Interprets products of whole numbers given a visual representation (e.g., determines an array of 5 groups of 3 markers can be represented by 5 × 3). Interprets the products of whole numbers as the sum of equal addends without a visual representation (e.g., determines a description of 5 groups of 3 markers represented as 5 + 5 + 5 can also be represented by 5 × 3). Multiplication within 10 × 10. See 2.OA.C.4 for sum of equal addends represented by addition only. See 3.OA.A.3 for solving word problems.	Creates an array or model of equal groups to represent products of whole numbers. Multiplication within 10 × 10.	Interprets products of whole numbers without a visual representation (e.g., interprets a description of 5 groups of 3 markers as 5 × 3). Creates an array or model of equal groups to represent the product of whole numbers. Multiplication within 10 × 10.	Creates a real-world context that can be modeled by a given multiplication expression involving whole numbers. Multiplication within 10 × 10.

3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	Interprets quotients of whole numbers given a visual representation (e.g., interprets a picture of 15 markers divided into 3 groups as 15 ÷ 3). Division within 10 × 10. See 3.OA.A.3 for solving word problems.	Creates an array or model of equal groups to represent quotients of whole numbers. Division within 10 × 10.	Interprets quotients of whole numbers without a visual representation (e.g., interprets a description of dividing 15 markers into groups with 3 markers as 15 ÷ 3). Division within 10 × 10.	Creates a real-world context that can be modeled by a given division expression involving whole numbers. Division within 10 × 10.
3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Determines a visual representation for a one-step multiplication or division word problem involving equal groups, arrays, or measurement quantities. Multiplication and division within 10 × 10. See 3.MD.A.2 and 3.MD.D.8 for contexts using mass, volume, and perimeter.	Solves a one-step word problem involving equal groups, arrays, or measurement quantities given a visual representation of the problem. Solves a one-step word problem involving equal groups, arrays, or measurement quantities without a visual representation of the problem. At least one factor is less than or equal to 5. Represents a one-step multiplication or division word problem involving equal groups, arrays, or measurement quantities with an equation using a symbol to represent the unknown number. Multiplication and division within 10 × 10.	Solves a one-step word problem involving equal groups, arrays, or measurement quantities without a visual representation of the problem. Both factors are greater than 5. Multiplication and division within 10 × 10.	Analyzes representations and solutions of one-step word problems involving equal groups, arrays, or measurement quantities. Multiplication and division within 10 × 10.
3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = ? ÷ 3, 6 × 6 = ?.	Determines the unknown whole number in a multiplication or division equation when the unknown number is 1 (e.g., 6 × ? = 6). Multiplication and division within 10 × 10.	Determines the unknown whole number in a multiplication or division equation when the unknown number and the given numbers are single-digit whole numbers (e.g., 6 × ? = 2 or 6 ÷ ? = 2). Multiplication and division within 10 × 10.	Determines the unknown whole number in a multiplication equation when the unknown number and the given numbers include a two-digit whole numbers (e.g., 6 × ? = 48). Determines the unknown whole number in a division equation when the unknown is the dividend and a two-digit whole number (e.g., ? ÷ 8 = 6 or ? ÷ 6 = 8). Multiplication and division within 10 × 10.	Determines the unknown whole number in a division equation when the unknown number is the divisor and the dividend is a two-digit number (e.g., 48 ÷ ? = 6). Division within 10 × 10.
3.OA.B Understand properties of multiplication and the relationship between multiplication and division.				

3.OA.B.5 Apply properties of operations as strategies to multiply and divide. Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)	None.	Identifies multiplication expressions or equations with the same product based on the commutative property of multiplication (e.g., if 6 × 4 = 24 is known, then 4 × 6 = 24). Identifies multiplication expressions or equations with the same product based on the associative property of multiplication (e.g., 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. Products within 100. Students do not need to use the formal terms of the properties.	Identifies expressions with the same value based on the distributive property (e.g., (8 × 5) + (8 × 2) = 40 + 16 = 56) Creates an equivalent expression based on the commutative or associative property. Multiplication within 10 × 10 and products within 100. Students do not need to use the formal terms of the properties.	Creates an equivalent expression based on the distributive property. Products within 100. Students do not need to use the formal terms of the properties.
3.OA.B.6 Understand division as an unknown factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	None.	Determines the corresponding unknown factor problem given a division problem (e.g., given 32 ÷ 8 = ?, determine ? × 8 = 32 is a corresponding multiplication problem). Multiplication and division within 10 × 10.	Determines the corresponding unknown fact given a division problem (e.g., given 32 ÷ 8 = ?, determine 4 × 8 is a corresponding multiplication fact). Multiplication and division within 10 × 10.	Creates a division problem with an unknown given a corresponding fact (e.g., given 4 × 8, creates 32 ÷ 8 = ? as a corresponding division problem). Multiplication and division within 10 × 10.
3.OA.C Multiply and divide within 100.				
3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	Multiplies two whole number when one factor is 0 or 1 and the other factor is between 0 and 10. Divides a one or two-digit number by 0 or 1 to find a quotient between 0 and 10. Multiplication and division within 10 × 10.	Multiplies two whole number when one factor is between 2 and 5 and the other factor is between 2 and 10. Divides a single-digit number between 2 and 9 by a single-digit number between 2 and 9. Divides 100 by 10. Multiplication and division within 10 × 10.	Multiplies two whole number when both factors are between 6 and 10. Divides a two-digit number by a single-digit number other than 0 or 1. Divides a two-digit multiple of 10 by 10. Multiplication and division within 10 × 10.	None.
3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.				

3.OA.D.8 Solve two-step word problems using the four operations within cultural contexts, including those of Montana American Indians. 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 2.OA.A.1 for solving and representing one- and two-step word problems with addition and subtraction within 100. See 3.MD.A.2 and 3.MD.D.8 for contexts using mass, volume, and perimeter. Does not include multiplicative comparison. See 4.OA.A.2.	Solves two-step word problems including those with Montana American Indian cultural context when one operation is multiplication and the other operation is addition or subtraction. Represents a two-step word problem including those with Montana American Indian cultural context when one operation is multiplication and the other operation is addition or subtraction. Uses a letter for the unknown quantity. Solves two-step word problems including those with Montana American Indian cultural context involving rounding when one operation is multiplication and the other operation is addition or subtraction. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Solves two-step word problems including those with Montana American Indian cultural context when one operation is division and the other operation is addition or subtraction. Represents a two-step word problem including those with Montana American Indian cultural context when one operation is division and the other operation is addition or subtraction. Uses a letter for the unknown quantity. Solves two-step word problems including those with Montana American Indian cultural context involving rounding when one operation is division and the other operation is addition or subtraction. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Analyzes solutions of two-step word problems including those with Montana American Indian cultural context when one operation is multiplication or division and the other operation is addition or subtraction. May include rounding. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.
3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that four times a number is always even, and explain why four times a number can be decomposed into two equal addends.	Determines the rule for an arithmetic pattern generated with addition. Determines a missing value in an arithmetic pattern generated with addition. Addition within 1,000. See 4.OA.B.5 for generating a pattern.	Determines the rule for an arithmetic pattern generated with multiplication. Determines a missing value in an arithmetic pattern generated with multiplication. Multiplication within 10 × 10.	Explain patterns in the multiplication table using properties of operations. Analyzes a rule for a given arithmetic pattern generated with addition (e.g., explains why a rule does or does not match the given pattern). Multiplication within 10 × 10. Addition within 1,000.	Analyzes a rule for a given arithmetic pattern generated with multiplication (e.g., explains why a rule does or does not match the given pattern). Multiplication and division within 10 × 10.
Number and Operations in Base Ten (NBT)				
3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.				
3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	3.NBT.A.1 is assessed as part of solving real-word problems in 3.OA.D.8. No items are aligned to 3.NBT.1 in isolation. See 3.OA.D.8.			

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Adds a two-digit number and a three-digit number without regrouping. Subtracts a two-digit number from a three-digit number without regrouping. Minuends must be greater than 100. See 2.NBT.B.5 for fluently adding and subtracting within 100. See 2.NBT.B.7 for adding and subtracting within 1,000 with supports.	Adds a two-digit number and a three-digit number with regrouping. Subtracts a two-digit number from a three-digit number with regrouping. Minuends must be greater than 100.	Adds within 101-1,000 with regrouping. Subtracts within 101-1,000 with regrouping. Minuends must be greater than 100.	Analyzes the strategy used to add or subtract within 101-1,000. The standard algorithm is not required.
3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	Multiplies 1 by a multiple of 10 in the range of 10 to 90 using strategies based on place value and properties of operations.	Multiplies a whole number in the range of 2 to 5 by a multiple of 10 in the range of 10 to 50 using strategies based on place value and properties of operations.	Multiplies a whole number in the range of 6 to 9 by a multiple of 10 in the range of 60 to 90 using strategies based on place value and properties of operations.	Analyzes/Explains the strategy used to multiply a one-digit whole number by a multiple of 10 in the range of 10 to 90.
Number and Operations - Fractions (NF)				
3.NF.A Develop understanding of fractions as numbers.				
3.NF.A.1 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a* /*b* as the quantity formed by *a* parts of size 1/*b* .	Identifies an area model that represents a unit fraction 1/*b* . Area terminology is not used. Denominators are limited to 2, 3, 4, 6 and 8. See 3.G.A.2 for relating area of shapes to unit fractions. See 3.NF.A.2 for using number lines.	Identifies an area model that represents a non-unit fraction *a* /*b* with parts the size of 1/*b* . Determines the unit fraction 1/*b* that is represented by area model. Area terminology is not used. Denominators are limited to 2, 3, 4, 6 and 8.	Determines the non-unit fraction *a* /*b* with parts the size of 1/*b* that is represented by an area model. Recognizes that the denominator of a fraction is the number of equal parts the whole is partitioned into. Recognizes that the numerator is the quantity of equal parts of size 1/*b* . Area terminology is not used. Denominators are limited to 2, 3, 4, 6 and 8.	Creates an area model to represent a unit fraction 1/b. Creates an area model to represent a non-fraction *a* /*b* with parts the size of 1/*b* . Explains whether an area model is appropriate for a given fraction (e.g., determines and explains an error in how an area model was created given a fraction and an area model that incorrectly represents the fraction). Area terminology is not used. Denominators are limited to 2, 3, 4, 6 and 8.
3.NF.A.2 Understand a fraction as a number on the number line and represent fractions on a number line diagram.	See 3.NF.A.2a - 3.NF.A.2b	See 3.NF.A.2a - 3.NF.A.2b	See 3.NF.A.2a - 3.NF.A.2b	See 3.NF.A.2a - 3.NF.A.2b

3.NF.A.2a Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b*, and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.	Determines a unit fraction 1/*b* plotted on a number line portioned into *b* equal parts from 0 to 1. Denominators are limited to 2, 3, 4, 6 and 8.	Plots a unit fraction 1/*b* on a number line portioned into *b* equal parts from 0 to 1. Recognizes that a unit fraction 1/*b* is 1/*b* units from 0 on the number line. Denominators are limited to 2, 3, 4, 6 and 8.	Plots the fraction 1/*b* by partitioning a number line into *b* equal parts from 0 to 1. Identifies the endpoint of part of a number line partitioned into *b* equal parts from 0 to 1 as having a size of 1/*b*. Denominators are limited to 2, 3, 4, 6 and 8.	Explains whether the representation of a unit fraction 1/*b* on a number line is appropriate for the given fraction (e.g., determines and explains an error in how a number line was created given a unit fraction and a number line that incorrectly represents the unit fraction). Denominators are limited to 2, 3, 4, 6 and 8.
3.NF.A.2b Represent a fraction *a*/*b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.	Determines a non-unit fraction less than *a*/*b* plotted on a number line partitioned into *b* equal parts from 0 to 1. Denominators are limited to 2, 3, 4, 6 and 8.	Plots a non-unit fraction less than or equal to 1 *a*/*b* on a number line portioned into *b* equal parts from 0 to 1. Determines a non-unit fraction equal to or greater than 1 *a*/*b* plotted on a number line partitioned into *b* equal parts from 0. Fractions equal to 1 are given as b/b. Denominators are limited to 2, 3, 4, 6 and 8.	Plots a non-unit fraction less than or equal to 1 *a*/*b* by partitioning a number line into *b* equal parts from 0 to 1. Plots a non-unit fraction greater than 1 *a*/*b* on a number line partitioned into *b* equal parts from 0. Recognizes the end point of the non-unit fraction *a*/*b* is a/b units from 0 on the number line. Denominators are limited to 2, 3, 4, 6 and 8.	Plots a non-unit fraction greater than 1 *a*/*b* by partitioning a number line into *b* equal parts from 0. Explains whether the representation of a non-unit fraction *a*/*b* on a number line is appropriate for the given fraction (e.g., determines and explains an error in how a number line was created given a non-unit fraction and a number line that incorrectly represents the unit fraction). Denominators are limited to 2, 3, 4, 6 and 8.
3.NF.A.3 Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.	See 3.NF.A.3a - 3.NF.A.3d	See 3.NF.A.3a - 3.NF.A.3d	See 3.NF.A.3a - 3.NF.A.3d	See 3.NF.A.3a - 3.NF.A.3d
3.NF.A.3a Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line.	Determines whether two given fractions with the same denominator of 2, 4, or 8 are equivalent based on a given fraction model or number line for both fractions. Does not include whole number equivalence. See 3.NF.A.3c. Does not include using the equal symbol to represent equivalence. See 3.NF.A.3d.	Determines whether two given fractions with the same denominator of 3 or 6 are equivalent based on a given fraction model or number line for both fractions. Determine whether two fractions with different denominators of 2, 4, or 8 are equivalent based on a given fraction model or number line for both fractions.	Determine whether two given fractions with different denominators are equivalent based on a given fraction model or number line for both fractions. At least one denominator must be 3 or 6.	Explains whether two fractions are equivalent when given a fraction model or number line for both fractions. Denominators are limited to 2, 3, 4, 6 and 8.

3.NF.A.3b Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.	Determines a fraction in the form *a* /*b* equivalent to a fraction between 0 and 1 given as a fraction model or number line. Denominators are limited to 2, 4, or 8. Identifies fraction models or number lines that represent equivalent fractions between 0 and 1. Denominators are limited to 2, 3, 4, 6, or 8. Does not include whole number equivalence. See 3.NF.A.3c.	Determines a fraction in the form *a* /*b* equivalent to a fraction between 0 and 1 given as a fraction model or number line. Denominators are limited to 3 or 6. Determines a fraction in the form *a* /*b* equivalent to a fraction between 0 and 1 without a model given. Denominators are limited to 2, 4, 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. Denominators for one fraction are 2, 4, or 8. Denominator for the other fraction is 6. Determines a fraction in the form *a* /*b* equivalent to a fraction between 0 and 1 without a model given. Denominators are limited to 3 or 6.	Determines a fraction in the form *a* /*b* equivalent to a fraction between 0 and 1 without a model given. Denominators for one fraction are 2, 4, or 8. Denominator for the other fraction is 6. Explains whether two fractions are equivalent using fraction models or number lines. Creates fraction models or number lines that represent equivalent fractions between 0 and 1. Denominators are limited to 2, 3, 4, 6, or 8. May include answering questions about the creation of the model.
3.NF.A.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: express 3 in the form 3 = 3/1; recognize that 6/1 = 6; and locate 4/4 and 1 at the same point of a number line diagram.	Determines whether two given fractions representing whole numbers are equivalent based on a given fraction model or number line for both fractions. Determines that a fraction in the form *b* /*b* is equivalent to 1 given a fraction model or number line. Denominators are limited to 2, 3, 4, 6 and 8.	Determines that a fraction in the form *b* /*b* is equivalent to 1 without a fraction model or number line. Determines the whole number equivalent to a fraction in the form *a* /*b* given a fraction model or number line for the fraction. Determines the fraction in the form *a* /*b* equivalent to whole numbers other than 1 given a fraction model or number line for the whole number. Denominators are limited to 2, 3, 4, 6 and 8.	Determines a whole number equivalent to a fraction or a fraction equivalent to a whole number without a model. Determines the fraction in the form *a* /*b* equivalent to a whole number represented as *c* /*d* given a fraction model or number line for *c* /*d* . Denominators are limited to 2, 3, 4, 6, and 8.	Determines the fraction in the form *a* /*b* equivalent to a whole number represented as *c* /*d* without a model. Denominators are limited to 2, 3, 4, 6, and 8.

3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	Uses symbols to compare two fractions with the same denominator given a fraction model or number line. Fractions are less than or equal to 1. Orders three or more fractions with the same denominator given a fraction model or number line. Fractions are less than or equal to 1. Fractions refer to the same whole. Fractions equal to 1 must be written as b/b. Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Denominators are limited to 2, 3, 4, 6 and 8.	Uses symbols to compare two fractions with the same denominator without a fraction model or number line. Fractions are less than or equal to 1. Uses symbols to compare two fractions with the same denominator given a fraction model or number line. One fraction is greater than 1. Uses symbols to compare two fractions with the same numerator but different denominators given a fraction model or number line. Fractions are less than or equal to 1. Orders three or more fractions with the same denominator without a fraction model or number line. Fractions are less than or equal to 1. Orders three or more fractions with the same denominator given a fraction model or number line. At least one fraction is greater than 1. Orders three or more fractions with the same numerator but different denominators given a fraction model or number line. Fractions are less than or equal to 1.	Uses symbols to compare two fractions with the same numerator but different denominators without a fraction model or number line. Fractions are less than or equal to 1. Uses symbols to compare two fractions with the same numerator but different denominators given a fraction model or number line. One fraction is greater than 1. Orders three or more fractions with the same numerator but different denominators without a fraction model or number line. Fractions are less than or equal to 1. Orders three or more fractions with the same numerator but different denominators given a fraction model or number line. At least one fractions is greater than 1. Orders three or more fractions with the same denominator without a fraction model or number line. At least one fraction is greater than 1.	Uses symbols to compare two fractions with the same numerator but different denominators without a fraction model or number line. One fraction is greater than 1. Orders three or more fractions with the same numerator but different denominators without a fraction model or number line. At least one fraction is greater than 1. Explains whether a fraction comparison involving two fractions with either the same numerator or denominator is valid using fraction models or number lines. Includes cases where the fractions may not refer to the same whole. Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Denominators are limited to 2, 3, 4, 6 and 8. Fractions refer to the same whole. Fractions equal to 1 must be written as *b/b* . Fractions greater than 1 are represented as *a/b* and not as a mixed number. Denominators are limited to 2, 3, 4, 6 and 8.
3.NF.A.3d Continued		Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Fractions refer to the same whole. Fractions equal to 1 must be written as b/b. Fractions greater than 1 are represented as a/b and not as a mixed number. Denominators are limited to 2, 3, 4, 6 and 8.	Ordering fractions includes using "least" and "greatest" terminology and may or may not include symbols. Fractions refer to the same whole. Fractions equal to 1 must be written as *b/b* . Fractions greater than 1 are represented as *a/b* and not as a mixed number. Denominators are limited to 2, 3, 4, 6 and 8.	
Measurement and Data (MD)				
3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.				

3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	Identifies and writes time to the nearest minute from analog clocks. Determines time intervals in minutes within an hour with visual supports provided such as a clock face or number line. See 2.MD.C.7 for time to the nearest 5 minutes.	Determines time intervals in minutes within an hour without visual supports provided. Solves one- and two-step word problems involving addition and subtraction of time intervals in minutes within an hour with visual supports provided, such as an analog clock face or number line. Includes determining start or end times from given information.	Solves one- and two-step word problems involving addition and subtraction of time intervals in minutes within an hour without visual supports provided. Includes determining start or end times from given information. Solves one- and two-step word problems involving addition and subtraction of time intervals in minutes that cross an hour with visual supports provided, such as an analog clock face or number line. Includes determining start or end times from given information.	Solves one- and two-step word problems involving addition and subtraction of time intervals in minutes that cross an hour without visual supports provided. Includes determining start or end times from given information.
3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	Measures liquid volumes and masses given a model such as a bucket with lines marking liquid volume or a dial measurement scale. Solves one-step addition or subtraction word problems without regrouping involving masses or volumes that are given in the same units with visual supports provided. Units are limited to grams, kilograms and liters.	Estimates liquid volumes and masses given a model such as a bucket with lines marking liquid volume or a dial measurement scale. Estimates liquid volumes and masses of everyday objects. Solves one-step addition or subtraction word problems with regrouping involving masses or volumes that are given in the same units with visual supports provided. Solves one-step multiplication or division word problems involving masses or volumes that are given in the same units with visual supports provided. Units are limited to grams, kilograms, and liters. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Solves one-step addition or subtraction word problems with and without regrouping involving masses or volumes given in the same unit without visual supports provided. Solves one-step multiplication or division word problems involving masses or volumes that are given in the same units without supports provided. Units are limited to grams, kilograms, and liters. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Creates a one-step addition or subtraction word problem with or without regrouping involving masses or volumes given in the same unit.
3.MD.B Represent and interpret data.				

3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories, within cultural contexts including those of Montana American Indians. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent five pets.	Completes a scaled picture graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts when given a partially completed graph with whole icons. Completes a scaled bar graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts given a partially completed graph with all bars stopping at a scale line. Scales are limited to 2, 3, 4, 5 and 10. See 1.MD.C.4 and 2.MD.D.10 for bar graphs or picture graphs with a scale of 1.	Completes a scaled picture graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts when given a partially completed graph using at least one half-icon. Completes a scaled bar graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts given a partially completed graph with at least one bar stopping halfway between scale lines. Solves one-step "how many more" and "how many less" problems using information in a scaled picture graph or scaled bar graph with three or more categories. Scales are limited to 2, 3, 4, 5 and 10. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Creates a scaled picture graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts using whole icons. Creates a scaled bar graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts with all bars stopping at a scale line. Identifies a scaled picture graph or scaled bar graph with three or more categories to represent a given data set including those with Montana American Indian cultural contexts. Includes answering questions about steps in creating the graphs. Solves two-step "how many more" and "how many less" problems using information in a scaled picture graph or scaled bar graph with three or more categories. Solves problems about missing information related to quantity differences in data given a scaled picture graph or scaled bar graph (e.g., given the total quantity and a bar graph with three of the four categories represented, determine the quantity of the fourth category). Scales are limited to 2, 3, 4, 5 and 10. Multiplication and division within 10 × 10.	Creates a scaled picture graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts using at least one half-icon. Creates a scaled bar graph to represent a data set with three or more categories including those with Montana American Indian cultural contexts with at least one bar stopping halfway between scale lines. Analyzes scaled picture graphs and scaled bar graphs with three or more categories including those with Montana American Indian cultural contexts in relation to their corresponding data (e.g., explains an error in how a bar graph was created given a data set and a bar graph that incorrectly represents the data). Analyzes statements about quantity differences based on data in a scaled picture graph or scaled bar graph with three or more categories including those with Montana American Indian cultural contexts. Scales are limited to 2, 3, 4, 5 and 10. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.
3.MD.B.3 Continued			Scales are limited to 2, 3, 4, 5 and 10. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	

3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot where the horizontal scale is marked off in appropriate units, i.e. whole numbers, halves, or quarters.	Measures the length of objects to the nearest half inch when the ruler is shown and the object is aligned with 0 on the ruler. Completes a line plot to represent a data set measured to the nearest half inch given a partially completed line plot with a scale of one half. See 2.MD.C.9 for measuring objects to the nearest whole inch and creating lines plots with a scale in whole inches.	Measures the length of objects to the nearest quarter inch when the ruler is shown and the object is aligned with 0 on the ruler. Measures the length of objects to the nearest half inch using a ruler not already aligned to the object. Identifies a line plot that represents a given data set measured to the nearest half or quarter inch. Includes answering questions about steps in creating the line plot. Completes a line plot for data measured to the nearest quarter inch given a partially completed plot with a scale of one fourth. Line plots may or may not be labeled with common denominators.	Measures the length of objects to the nearest quarter inch using a ruler not already aligned to the object. Creates a line plot to represent a given data set measured to the nearest half or quarter inch. Identifies a line plot that represents a data set obtained by measuring objects to the nearest half or quarter inch. Includes answering questions about steps in creating the line plot. Line plots may or may not be labeled with common denominators.	Measures the length of objects to the nearest half or quarter inch when the ruler is shown and the object is not aligned with 0 on the ruler. Measures the length of objects to the nearest half or quarter and creates a line plot to represent the data. Analyzes line plots with a scale of one half or one fourth inch in relation to their corresponding data (e.g., explains an error in how a line plot with a scale of one fourth was created given a data set and a line plot that incorrectly represents the data). Line plots may or may not be labeled with common denominators.
3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.				
3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.	Identifies unit squares (e.g., recognizes unit squares are used to measure area and identifies them among other shapes). Indefinites the area of a unit square is one square unit.	Identifies figures divided into unit squares. Places unit squares on a non-tiled rectangle with whole-number side lengths without gaps or overlaps to model area (e.g., show the area of the rectangle by placing unit squares on the rectangle). No exponents. No calculations.	Identifies a real-world measurement that is an area measurement and can be measured in square units. Places unit squares on non-tiled plane figures other than rectangles without gaps or overlaps to model area (e.g., show the area of the figure by placing unit squares on the figure). Does not include fractional parts of a unit square. No exponents. No calculations.	Explains how to find the area of a plane figure by placing unit squares on the figure without gaps or overlaps (e.g., explains why the same size square is needed to cover the figure to determine the area; explains why area of the figure is 6 unit squares). Does not include fractional parts of a unit square. No exponents. No calculations.
3.MD.C.5a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area and can be used to measure area.	See 3.MD.C.5	See 3.MD.C.5	See 3.MD.C.5	See 3.MD.C.5

3.MD.C.5b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	See 3.MD.C.5	See 3.MD.C.5	See 3.MD.C.5	See 3.MD.C.5
3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	None.	Determines the area of a tiled rectangle with whole-number side lengths by counting unit squares. No exponents. No calculations. Does not include fractional parts of a unit square. Units are limited to square cm, square m, square in, square ft, and improvised units.	Determines the area of tiled plane figures other than rectangles with whole-number side lengths by counting unit squares. Determines the area of a partially tiled rectangle. No exponents. No calculations. Does not include fractional parts of a unit square. Units are limited to square cm, square m, square in, square ft, and improvised units.	Compares the areas of two different tiled plane figures with whole-number side lengths. Does not include fractional parts of a unit square. Determines the area of a partially tiled plane figures other than rectangles with whole-number side lengths. Does not include fractional parts of a unit square. Determines the whole-number area of a tiled rectangle with part of the rectangle covered with half-unit tiles. No exponents. No calculations. Units are limited to square cm, square m, square in, square ft, and improvised units.
3.MD.C.7 Relate area to the operations of multiplication and addition.	See 3.MD.C.7a - 3.MD.C.7d	See 3.MD.C.7a - 3.MD.C.7d	See 3.MD.C.7a - 3.MD.C.7d	See 3.MD.C.7a - 3.MD.C.7d
3.MD.C.7a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	Determines a repeated addition expression or equation that represent the area of a tiled rectangle. Determines or creates a tiled rectangle with whole-number side lengths given the area represented as a repeated addition expression or equation. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Determines a multiplication expression or equation that represent the area of a tiled rectangle. Determines or creates a tiled rectangle with whole-number side lengths given the area represented as a multiplication expression or equation. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Shows or explains that the area of a rectangle with whole-number side lengths is the same as would be found by multiplying the side lengths. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Analyzes statements about finding the area of rectangles with unit squares (e.g., determines and explains an error when finding the area). Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.

3.MD.C.7b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.	None.	Determines the area of a non-tiled rectangle with whole number side lengths in real-world and mathematical problems with a visual. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Determines the area of a non-tiled rectangle with whole number side lengths in real-world and mathematical problems without a visual. Determines or creates a non-tiled rectangle with whole-number side lengths that results in a given area in a real-world or mathematical problem. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Solves two- or three-step real-world or mathematical problems involving the area of a rectangle with or without a visual. Multiplication and division within 10 × 10. Addition and subtraction within 1,000. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.
3.MD.C.7c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning.	None.	Given a tiled rectangle with whole-number side lengths, determines the area of the new rectangle after one side length is lengthened by a whole-number unit. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Given a tiled rectangle with whole-number side lengths, represents the area of the new rectangle as a numerical expression after one side length is lengthened by a whole-number unit. Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Determines an area model to represent a numerical expression that can be evaluated using the distributive property (e.g., given 4 x (3 + 2), create an area model to represent the value of the expression). Multiplication within 10 × 10. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.
3.MD.C.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems, including those of Montana American Indians.	Represents the area of composite rectilinear figures as the sum of the areas of its non-overlapping rectangles without using specific measurements (e.g., given the area of one rectangle is 25 square units and the area of another non-overlapping rectangle is 30 square units, determine that the composite area is 25 + 30 square units). Addition and subtraction within 1,000. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Represents the area of a non-overlapping rectangle as the difference of the area of the composite rectilinear figure and the area of other non-overlapping rectangles without using specific measurements. Addition and subtraction within 1,000. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Solves real-world problems including those with Montana American Indian cultural context involving composite rectilinear figures that can be solved with multiplication, addition, and subtraction given a diagram. Explains how to find the area of composite rectilinear figures. Multiplication and division within 10 × 10. Addition and subtraction within 1,000. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.	Creates a composite rectilinear figure with a given area. Analyzes statements about finding the area of composite rectilinear figures (e.g., determines and explains an error when finding the area). Multiplication and division within 10 × 10. Addition and subtraction within 1,000. No exponents. Units are limited to square cm, square m, square in, square ft, and improvised units.

3.MD.D Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.				
3.MD.D.8 Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	Determines the perimeter of polygons in real-world and mathematical problems when given a diagram with all sides labeled. Units are limited to cm, m, in, ft, units. All measures are whole numbers. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Determines the perimeter of polygons in real-world and mathematical problems given all sides lengths without a diagram. Determines the length of an unknown side of a polygon in real-world and mathematical problems given the perimeter and a diagram with all remaining sides labeled. Determines the perimeter of rectangles in real-world and mathematical problems given a diagram with only the length and width labeled. Compares the perimeters of polygons in real-world and mathematical problems given all side lengths. Units are limited to cm, m, in, ft, units. All measures are whole numbers. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Determines the length of an unknown side of a polygon in real-world and mathematical problems given the perimeter and all remaining sides without a diagram. Determines the perimeter of rectangles in real-world and mathematical problems given the length and width without a diagram. Identifies rectangles that have the same perimeter but different areas in real-world and mathematical problems. Identifies rectangles that have the same area but different perimeters in real-world and mathematical problems. Units are limited to cm, m, in, ft, units. All measures are whole numbers. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.	Determines the lengths of unknown sides of a rectangle in real-world and mathematical problems given the perimeter and one side length with or without a diagram. Draws or creates a rectangle that has the same perimeter and a different area or the same area and a different perimeter than a given rectangle in real-world and mathematical problems. Units are limited to cm, m, in, ft, units. All measures are whole numbers. Multiplication and division within 10 × 10. Addition and subtraction within 1,000.
Geometry (G)				
3.GA.A Reason with shapes and their attributes.				

3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides) and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	None. See 2.G.A.1 for identifying quadrilaterals.	Determines rhombuses, rectangles, and squares out of other quadrilaterals. Determines shared attributes among rhombuses, rectangles, and squares. Students are not required to use or know the terms perpendicular, parallel, parallelogram, or trapezoid.	Sorts rhombuses, rectangles, and squares out of other quadrilaterals based on shared attributes. May include justifying the sorting. Draws or creates examples of rhombuses, rectangles, and squares based on a given description. Draws or creates examples of quadrilaterals that are not rhombuses, rectangles, and squares based on a given description. Students are not required to use or know the terms perpendicular, parallel, parallelogram, or trapezoid.	Explains the relationship among rhombuses, rectangles, and squares. Students are not required to use or know the terms perpendicular, parallel, parallelogram, or trapezoid.
3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into four parts with equal area, and describe the area of each part as 1/4 of the area of the shape.	Partitions circles and rectangles into six or eight equal parts and describes the parts using the words such as sixths, eighths, a sixth of and an eighth of. See 2.G.A.3 for two, three and four equal parts.	Determines the unit fraction that represents the area of each part of an equally partitioned shape. Area terminology is used. Shapes are divided but not shaded. Denominators are limited to 2, 3, 4, 6 and 8.	Partitions a shape to represent a given unit fraction. (e.g., partition a figure so that each part has an area of 1/8 the area of the shape). Area terminology is used. Shapes are divided but not shaded. Denominators are limited to 2, 3, 4, 6 and 8.	Explains how to create an area model to represent a given unit fraction. (e.g., describe how a rectangle can be partitioned so that each part has an area of 1/8 the area of the rectangle.) Identify true statements about how a shape is partitioned without a visual. Denominators are limited to 2, 3, 4, 6 and 8.