Teach4Mastery's Correlations for Peceptions Blue

Multiplication, Division, & Fractions

Unit 3

Alaska Content Standards

Grade: **K** - Adopted: **2012**

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AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.K.CC.	Counting and Cardinality							
	Compare numbers.							
K.CC.6.	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching, counting, or estimating strategies).	14						
K.CC.7.	Compare and order two numbers between 1 and 10 presented as written numerals.	14						
AK.K.MD.	Measurement and Data							
	Classify objects and count the number of objects in each category.							
K.MD.3.	Classify objects into given categories (attributes). Count the number of objects in each category (limit category counts to be less than or equal to 10).	14						
	Work with time and money.							
K.MD.6.	Identify coins by name.	14						
AK.K.G.	Geometry							
	Identify and describe shapes.							
K.G.1.	Describe objects in the environment using names of shapes and describe their relative positions (e.g., above, below, beside, in front of, behind, next to).	14						

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Unit 3

Alaska Content Standards

Grade: **1** - Adopted: **2012**

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AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.1.CC.	Counting and Cardinality							
	Know ordinal names and counting flexibility.							
1.CC.1.	Skip count by 2s and 5s.							20
1.CC.3.	Order numbers from 1-100. Demonstrate ability in counting forward and backward.	14						
	Compare numbers.							
1.CC.5.	Use the symbols for greater than, less than or equal to when comparing two numbers or groups of objects.	14						
AK.1.OA.	Operations and Algebraic Thinking							
	Work with addition and subtraction equations.							
1.OA.7.	Understand the meaning of the equal sign (e.g., read equal sign as “same as”) and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2).	14						
AK.1.NBT.	Number and Operations in Base Ten							
	Understand place value.							
1.NBT.2.	Model and identify place value positions of two digit numbers. Include:							
1.NBT.2.a.	10 can be thought of as a bundle of ten ones, called a "ten".	14						
1.NBT.2.b.	The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones.	14						
1.NBT.2.c.	The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90, refer to one, two, three, four, five, six, seven, eight or nine tens (and 0 ones).	14						

-Grade 1 Continued-

	Understand place value.							
1.NBT.3.	**Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, <.**	14						
AK.1.MD.	**Measurement and Data**							
	Work with time and money.							
1.MD.5.	**Recognize and read money symbols including $ and ¢.**	14						
1.MD.6.	**Identify values of coins (e.g., nickel = 5 cents, quarter = 25 cents). Identify equivalent values of coins up to $1 (e.g., 5 pennies = 1 nickel, 5 nickels = 1 quarter).**	14						
AK.1.G.	**Geometry**							
	Reason with shapes and their attributes.							
1.G.3.	**Partition circles and rectangles into two and four equal shares. Describe the shares using the words, halves, fourths, and quarters and phrases half of, fourth of and quarter of. Describe the whole as two of or four of the shares. Understand for these examples that decomposing (break apart) into more equal shares creates smaller shares.**		15	16	17	18	19	20

Teach4Mastery's Correlations for Peceptions Blue

Multiplication, Division, & Fractions

Unit 3

Alaska Content Standards

Grade: **2** - Adopted: **2012**

AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.2.NBT.	Number and Operations in Base Ten							
	Understand place value.							
2.NBT.1.	Model and identify place value positions of three digit numbers. Include:							
2.NBT.1.a.	100 can be thought of as a bundle of ten tens --called a "hundred".	14						
2.NBT.1.b.	The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	14						
	Understand place value.							
2.NBT.4.	Compare two three-digit numbers based on the meanings of the hundreds, tens and ones digits, using >, =, < symbols to record the results.	14						
AK.2.MD.	Measurement and Data							
	Measure and estimate lengths in standard units.							
2.MD.1.	Measure the length of an object by selecting and using standard tools such as rulers, yardsticks, meter sticks, and measuring tapes.	14	15	16	17	18	19	20
	Relate addition and subtraction to length.							
2.MD.6.	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1,2, …, and represent whole-number sums and differences within 100 on a number line diagram.	14						
	Work with time and money.							
2.MD.8.	Solve word problems involving dollar bills and coins using the $ and ¢ symbols appropriately.	14						

-Grade 2 Continued-

AK.2.G.	Geometry							

	Reason with shapes and their attributes.							
2.G.3.	**Partition circles and rectangles into shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.**		15	16	17	18	19	20

Teach4Mastery's Correlations for Peceptions Blue

Multiplication, Division, & Fractions

Unit 3

Alaska Content Standards

Grade: **3** - Adopted: **2012**

AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.3.OA.	Operations and Algebraic Thinking							
	Represent and solve problems involving multiplication and division.							
3.OA.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, deconstruct rectangular arrays or describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.			16				
	Solve problems involving the four operations, and identify and explain patterns in arithmetic.							
3.OA.9.	Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.							20
AK.3.NF.	Number and Operations –Fractions							
	Develop understanding of fractions as numbers.							
3.NF.1.	Understand a fraction 1/b (e.g., 1/4) as the quantity formed by 1 part when a whole is partitioned into b (e.g., 4) equal parts; understand a fraction a/b (e.g., 2/4) as the quantity formed by a (e.g., 2) parts of size 1/b. (e.g., 1/4)		15	16	17	18	19	20

-Grade 3 Continued-

	Develop understanding of fractions as numbers.							
3.NF.3.	**Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.**							
3.NF.3.a.	**Understand two fractions as equivalent if they are the same size (modeled) or the same point on a number line.**			16	17		19	20
3.NF.3.b.	**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).**			16	17		19	20
3.NF.3.c.	**Express and model whole numbers as fractions, and recognize and construct fractions that are equivalent to whole numbers. For Example: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.**		15	16	17	18	19	20
AK.3.G.	**Geometry**							
	Reason with shapes and their attributes.							
3.G.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 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.**		15	16	17	18	19	20

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Multiplication, Division, & Fractions

Unit 3

Alaska Content Standards

Grade: **4** - Adopted: **2012**

AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.4.OA.	Operations and Algebraic Thinking							
	Generate and analyze patterns.							
4.OA.6.	Extend patterns that use addition, subtraction, multiplication, division or symbols, up to 10 terms, represented by models (function machines), tables, sequences, or in problem situations. (L)							20
AK.4.NBT.	Number and Operations in Base Ten							
	Generalize place value understanding for multi-digit whole numbers.							
4.NBT.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.	14						
4.NBT.2.	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on the value of the digits in each place, using >, =, and < symbols to record the results of comparisons.	14						
AK.4.NF.	Number and Operations –Fractions							
	Extend understanding of fraction equivalence and ordering.							
4.NF.1.	Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × 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. Use this principle to recognize and generate equivalent fractions.			16	17		19	20

-Grade 4 Continued-

	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.							
4.NF.3.	**Understand a fraction a/b with a > 1 as a sum of fractions 1/b.**							
4.NF.3.a.	**Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.**				17	18		
4.NF.3.b.	**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). For example: 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.**					18		
4.NF.3.d.	**Solve word problems 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).**					18		
	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.							
4.NF.4.	**Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.**							
4.NF.4.a.	**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).**		15	16	17	18	19	20
4.NF.4.b.	**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.)**			16				
4.NF.4.c.	**Solve word problems involving multiplication of a fraction by a whole number (e.g., by using visual fraction models and equations to represent the problem). Check for the reasonableness of the answer. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?**			16				
AK.4.MD.	**Measurement and Data**							
	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit, and involving time.							
4.MD.2.	**Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.**	14						

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Multiplication, Division, & Fractions

Unit 3

Alaska Content Standards

Grade: **5** - Adopted: **2012**

AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.5.OA.	Operations and Algebraic Thinking							
	Understand the place value system.							
5.NBT.1.	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	14						
AK.5.NF.	Number and Operations –Fractions							
	Use equivalent fractions as a strategy to add and subtract fractions.							
5.NF.2.	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators (e.g., by using visual fraction models or equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and check the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.		15	16	17	18	19	20
	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.							
5.NF.3.	Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers (e.g., by using visual fraction models or equations to represent the problem). For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?		15	16	17	18	19	20

-Grade 5 Continued-

	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.							
5.NF.4.	**Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.**							
5.NF.4.a.	**Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)**			16				
5.NF.4.b.	**Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.**			16				
	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.							
5.NF.6.	**Solve real world problems involving multiplication of fractions and mixed numbers (e.g., by using visual fraction models or equations to represent the problem).**			16				

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Unit 3

Alaska Content Standards

Grade: **6** - Adopted: **2012**

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AK.MP.	Mathematical Practices	Unit 3						
MP.1.	Make sense of problems and persevere in solving them.	14	15	16	17	18	19	20
MP.2.	Reason abstractly and quantitatively.	14	15	16	17	18	19	20
MP.3.	Construct viable arguments and critique the reasoning of others.	14	15	16	17	18	19	20
MP.4.	Model with mathematics.	14	15	16	17	18	19	20
MP.5.	Use appropriate tools strategically.	14	15	16	17	18	19	20
MP.6.	Attend to precision.	14	15	16	17	18	19	20
MP.7.	Look for and make use of structure.	14	15	16	17	18	19	20
MP.8.	Look for and express regularity in repeated reasoning.	14	15	16	17	18	19	20
AK.6.RP.	Ratios and Proportional Relationships							
	Understand ratio concepts and use ratio reasoning to solve problems.							
6.RP.1.	two quantities using ratio language. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”		15					
AK.6.NS.	The Number System							
	Compute fluently with multi-digit numbers and find common factors and multiples.							
6.NS.4.	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).							20