

Curriculum Map - Mathematics - 5 Math

Unit	State Standards	Outcomes	Essential Questions	Essential Skills	Assessments	Faith Integration
Entire Year						
Unit 1 - Additions and Subtraction with Fractions <i>(updated 7/29/19)</i>	<p>5.NF.A.1(A) Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$.)</p> <p>5.NF.A.2(A) 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 assess the reasonableness of answers. For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$.</p> <p>5.MD.B.2(A) Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.</p>		<p>1.1 Can you see patterns in the MathBoard fraction bars and discuss how unit fractions are used to build other fractions?</p> <p>1.2 Can you generate equivalent fraction and discuss the multipliers? Can you use a number line to create and visualize equivalent fractions?</p> <p>1.3 Can you discuss how equivalent fractions relate to the multiplication table? Can you find equivalent fractions?</p> <p>1.4 Can you compare fractions using a variety of strategies?</p> <p>1.5 Can you represent fractions greater than one and mixed number numerically and with drawings? Can you convert between mixed numbers and fractions?</p> <p>1.6 Can you add like mixed numbers? Can you subtract like mixed numbers?</p> <p>1.7 Can you find a common denominator when adding unlike fractions? Can you rename fractions and solve problems that involve adding unlike fractions?</p> <p>1.8 Can you find common denominator when subtraction unlike fractions? Can you solve problems that involve comparing</p>	<p>1.1 Use MathBoard fractions bar.</p> <p>1.2 Generate and explain simple equivalent fractions.</p> <p>1.3 Understand the role of the multiplier in equivalent fractions.</p> <p>1.4 Compare fractions.</p> <p>1.5 Convert between fractions and mixed numbers.</p> <p>1.6 Add mixed numbers with like denominators.</p> <p>Subtract mixed numbers with like denominators.</p> <p>1.7 Add fractions with different denominators.</p> <p>1.8 Subtract fractions with different denominators.</p> <p>1.9 Add mixed numbers with unlike denominators.</p> <p>Subtract mixed numbers with unlike denominators.</p> <p>10.10 Add mixed numbers with unlike denominators.</p> <p>Subtract mixed numbers with unlike denominators.</p> <p>1.11 Estimate sums of fractions and mixed numbers.</p> <p>Estimate differences of fractions and mixed numbers.</p> <p>1.12 Estimate answers.</p> <p>1.13 Apply learned concepts to real world problems.</p>	<p>Informal Observation</p> <p>Target Questions</p> <p>Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2</p> <p>Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8</p> <p>The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16</p>

			<p>and subtracting unlike fractions.</p> <p>1.9 Can you rename and ungroup to add and subtract mixed numbers? Can you recognize common errors and solve word problems with mixed?</p> <p>1.10 Can you find common denominators? Can you add and subtract mixed numbers with unlike denominators?</p> <p>1.11 Can you round and estimate with fractions and mixed numbers?</p> <p>1.12 Can you solve word problems involving addition and subtraction of mixed numbers and check that the answer is reasonable?</p> <p>1.13 Can you solve real world problems?</p>			
<p>Unit 2 - Addition and Subtraction with Decimals</p> <p><i>(updated 7/29/19)</i></p>	<p>5.OA.A.1(A) Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5.NBT.A.1(A) 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.</p> <p>5.NBT.A.3(A) Read, write, and compare decimals to thousandths. •a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. •b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>5.NBT.A.4(A) Use place value understanding to round decimals to any place.</p> <p>5.NBT.B.7(A) Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p> <p>5.NF.A.1(A)</p>	<p>2.1 Can you read and write decimals and fractions? 2.2 Can you read numbers from thousands to thousandths? Can you write numbers from thousands to thousandths? 2.3 Can you recognize equivalent decimals using tenths, hundredths, and thousandths. 2.4 Can you add decimals to hundredths? Can you subtract to hundredths? 2.5 Can you add numbers and decimals? 2.6 Can you ungroup to subtract? 2.7 Can you identify Commutative Property? Can you identify Associative Property?</p>	<p>2.1 Understand decimals as equal divisions of a whole. 2.2 Read whole numbers. Read decimals. 2.3 Identify equivalent decimals. 2.4 Add decimals to hundredths. Subtract decimals to hundredths. 2.5 Add whole numbers and decimals to hundredths. 2.6 Subtract whole numbers and decimals to hundredths. 2.7 Use Commutative Property. Use Associative Property. Use Distributive Property. 2.8 Estimate</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>• And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16.</p>	

Curriculum Map - Mathematics - 5 Math

	<p>Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)</p> <p>5.NF.A.2(A) 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 assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</p> <p>5.MD.A.1(A) Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.</p>		<p>Can you identify Distributive Property?</p> <p>2.8 Can you use number line to round decimals?</p> <p>Can you use rounding to estimate decimal sums?</p> <p>2.9 Can you use bar graph to read decimals?</p> <p>Can you round decimals to construct a bar graph?</p> <p>2.10 Can you use learned concepts to solve problems?</p>	<p>decimal sums. Estimate decimal differences.</p> <p>2.9 Read graphs with decimals. Construct graphs with decimals.</p> <p>2.10 Apply learned concepts to real world problems.</p>		
<p>Unit 3 - Multiplication and Division with Fractions <i>(updated 7/29/19)</i></p>	<p>5.NF.A.1(A) Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)</p> <p>5.NF.A.2(A) 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 assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</p> <p>5.NF.B.3(A) Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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?</p> <p>5.NF.B.4(A) Apply and extend previous understandings of multiplication to</p>		<p>3.1 Can you multiply a whole number by a unit fraction where the product is a whole number?</p> <p>3.2 Can you multiply a whole number by a non-unit fraction where the product is a whole number?</p> <p>3.3 Can you multiply a whole number by a unit fraction where the product is not a whole number?</p> <p>3.4 Can you use a fraction bar to model multiplying unit fractions?</p> <p>3.5 Can you simplify fractions?</p> <p>3.6 Can you multiply with mixed numbers?</p> <p>3.7 Can you use fractions in various situations?</p> <p>3.8 Can you use mixed operations to solve word problems?</p> <p>3.9 Can you predict the size of a product based on the factors?</p> <p>3.10 Can you divide a whole number by a whole number to produce a fraction? Can you divide a unit fraction whole number?</p>	<p>3.1 Multiply with unit fractions. 3.2 Multiply with non-unit fractions. 3.3 Multiply whole numbers by fractions. 3.4 Multiply fractions by fractions. 3.5 Use a fraction bar. 3.6 Simplify fractions before multiplying. 3.7 Use Commutative, Associative, and Distributive Properties. 3.8 Add fractions to solve word problems. Subtract fractions to solve word problems. Multiply fractions to solve word problems. 3.9 Predict size of products. 3.10 Divide whole numbers and fractions. 3.11 Solve division word problems. 3.12 Determine whether to use multiplication or</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16</p>

multiply a fraction or whole number by a fraction.

•a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q / b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)

•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.

5.NF.B.5(A)

Interpret multiplication as scaling (resizing), by:

•a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

•b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (nxa)/(nxb)$ to the effect of multiplying a/b by 1.

5.NF.B.6(A)

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.B.7(A)

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

•a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) / 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) / 4 = 1/12$ because $(1/12) \times 4 = 1/3$.

•b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 / (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 / (1/5) = 20$ because $20 \times (1/5) = 4$.

•c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally?

3.11 Can you solve division word problems?

3.12 Can you distinguish between division and multiplication situations?

3.13 Can you solve problems involving all four operations?

3.14 Can you use learned concepts to solve problems?

division to solve a word problem.

3.13 Solve problems using all four operations.

3.14 Apply learned concepts to real world problems.

Curriculum Map - Mathematics - 5 Math

	<p>How many 1/3-cup servings are in 2 cups of raisins?</p> <p>5.MD.B.2(A) Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.</p>					
<p>Unit 4 - Multiplication with Whole Numbers <i>(updated 7/29/19)</i></p>	<p>5.NBT.A.1(A) 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.</p> <p>5.NBT.A.2(A) Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p> <p>5.NBT.B.5(A) Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p>5.NBT.B.7(A) Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p> <p>5.NF.B.5(A) Interpret multiplication as scaling (resizing), by: <ul style="list-style-type: none"> •a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. •b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (nxa)/(nxb)$ to the effect of multiplying a/b by 1. </p>		<p>4.1 Can you solve multiplication problems with at least one factor a multiple of ten? Can you use exponents to represent powers of ten?</p> <p>4.2 Can you understand how five behaves in the zero pattern?</p> <p>4.3 Can you multiply two-digit numbers?</p> <p>4.4 Can you use different methods to multiply two-digit numbers?</p> <p>4.5 Can you use multiplication to solve real world problems?</p> <p>4.6 Can you multiply decimal numbers by whole numbers?</p> <p>4.7 Can you multiply decimal numbers by decimal numbers?</p> <p>4.8 Can you multiply with decimal numbers greater than one?</p> <p>4.9 Can you apply shift patterns when multiplying with multiples of ten?</p> <p>4.10 Can you round to estimate products of decimal numbers and whole numbers?</p> <p>4.11 Can you solve multiplication word problems?</p> <p>4.12 Can you use learned concepts to solve problems.</p>	<p>4.1 Understand shift patterns when multiplying by powers of ten.</p> <p>4.2 Understand the pattern when 5 is a factor.</p> <p>4.3 Multiply two-digit numbers.</p> <p>4.4 Solve two-digit multiplication problems.</p> <p>4.5 Multiply two digit numbers.</p> <p>4.6 Multiply whole numbers by decimals numbers.</p> <p>4.7 Multiply decimal numbers.</p> <p>4.8 Multiply with decimal numbers greater than one.</p> <p>4.9 Multiply with powers of ten.</p> <p>4.10 Round whole numbers and decimal numbers to estimate a product.</p> <p>4.11 Solve multiplication word problems.</p> <p>4.12 Apply learned concepts to real world problems.</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16</p>

Curriculum Map - Mathematics - 5 Math

<p>Unit 5 - Division with Whole Numbers and Decimals <i>(updated 7/29/19)</i></p>	<p>5.NBT.A.2(A) Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p> <p>5.NBT.A.3(A) Read, write, and compare decimals to thousandths. •a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. •b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>5.NBT.B.5(A) Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p>5.NBT.B.6(A) Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.</p> <p>5.NBT.B.7(A) Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p> <p>5.NF.B.5(A) Interpret multiplication as scaling (resizing), by: •a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. •b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (nxa)/(nxb)$ to the effect of multiplying a/b by 1.</p>		<p>5.1 Can you solve division problems with remainders? Can you estimate division answers? 5.2 Can you solve division problems with two-digit divisors? 5.3 Can you solve word problems in which the estimated answer is too big or too small? 5.4 Can you solve two-digit division problems with remainders? 5.5 Can you solve division problems using any method? Can you solve word problems involving division of whole numbers? 5.6 Can you divide decimals by whole numbers? Can you solve division problems in which decimal places must be extended or created? 5.7 Can you divide whole numbers by a decimal? 5.8 Can you solve division problems with decimal divisor and decimal dividend? 5.9 Can you solve real world problems requiring whole number and decimal division. 5.10 Can you decide whether to multiply or divide to solve word problems? 5.11 Can you use learned concepts to solve problems?</p>	<p>5.1 Divide multidigit numbers by single-digit divisors. 5.2 Solve division problems with two-digit divisors. 5.3 Understand and adjust the the estimated divisor when it is too small. 5.4 Express and interpret remainders in division problems. 5.5 Dividing whole numbers. 5.6 Divide decimals by whole numbers. Solve division problems in which decimal places must be extended. 5.7 Solve division problems that have a decimal divisor. 5.8 Solve division problems in which both numbers are decimals. 5.9 Solve division problems involving whole numbers and decimal numbers. 5.10 Decide whether to multiply or divide to solve word problems. 5.11 Apply learned concepts to solve real world problems.</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16</p>
<p>Unit 6 - Operations and Word Problems <i>(updated 7/29/19)</i></p>	<p>5.OA.A.1(A) Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5.NBT.A.3(A) Read, write, and compare decimals to thousandths. •a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,</p>		<p>6.1 Can you solve addition problems involving whole numbers, decimals, and fractions? Can you solve subtraction problems involving whole numbers, decimals,</p>	<p>6.1 Write situation and solution equations to solve addition and subtraction problems. 6.2 Write situation and solution equations</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he</p>

Curriculum Map - Mathematics - 5 Math

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•b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

5.NBT.A.4(A)

Use place value understanding to round decimals to any place.

5.NBT.B.5(A)

Fluently multiply multi-digit whole numbers using the standard algorithm.

5.NBT.B.6(A)

Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.

5.NBT.B.7(A)

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

5.NF.A.1(A)

Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)

5.NF.A.2(A)

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 assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.

5.NF.B.3(A)

Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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?

and fractions?

6.2 Can you represent and solve multiplication and division problems using rectangle models and equations?

Can you solve multiplication problems involving whole numbers, decimals, and fractions?

Can you solve division problems involving whole numbers, decimals, and fractions?

6.3 Can you write a word problem for a multiplication equation and model the product?

Can you write a word problem for a division equation and model the product?

6.4 Can you use rounding and mental math to determine reasonable answers?

6.5 Can you solve addition comparisons?

Can you solve subtraction comparisons?

Can you solve multiplication comparisons?

Can you solve division comparisons?

6.6 Can you model and write equations to represent and solve multiplicative comparison problems?

6.7 Can you compare and solve additive comparison problems?

Can you compare and solve multiplicative comparison problems?

6.8 Can you solve equations that involve two steps?

6.9 Can you solve

to solve multiplication and division problems.

6.3 Write word problems for equations using fractions, and decimals.

6.4 Use a variety of methods to determine reasonable answers.

6.5 Understand and apply comparison languages

6.6 Model and solve multiplicative comparison problems.

6.7 Solve comparison problems.

6.8 Solve two-step problems.

6.9 Solve multistep problems.

6.10 Solve multistep problems.

6.11 Apply learned concepts to real world problems.

measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16

5.NF.B.4(A)

Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

- a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q / b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)
- 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.

5.NF.B.5(A)

Interpret multiplication as scaling (resizing), by:

- a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
- b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (nxa)/(nxb)$ to the effect of multiplying a/b by 1.

5.NF.B.6(A)

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.B.7(A)

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

- a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) / 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) / 4 = 1/12$ because $(1/12) \times 4 = 1/3$.
- b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 / (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 / (1/5) = 20$ because $20 \times (1/5) = 4$.
- c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using

multistep problems by writing and solving equation?
6.10 Can you solve multistep problems?
6.11 Can you use applied concepts to solve problems?

Curriculum Map - Mathematics - 5 Math

	<p>visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally? How many $\frac{1}{3}$-cup servings are in 2 cups of raisins?</p>					
<p>Unit 7 - Algebra, Patterns, and Coordinate Graphs <i>(updated 7/29/19)</i></p>	<p>5.OA.A.1(A) Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5.OA.A.2(A) Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</p> <p>5.OA.B.3(A) Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</p> <p>5.G.A.1(A) Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).</p> <p>5.G.A.2(A) Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.</p>		<p>7.1 Can you read and write expressions with one operation? Can you use the Order of Operations to read and write expressions with more than one operation? 7.2 Can you use the Order of Operations to simplify numerical expressions? Can you simplify numerical expressions with one or more pairs of grouping symbols? 7.3 Can you evaluate expressions for given values of the variables? 7.4 Can you generate and analyze numerical patterns? 7.5 Can you use ordered pairs to identify the locations of point in Quadrant 1? Can you plot points in Quadrant 1? 7.6 Can you generate and graph ordered pairs that represent real world numerical patterns? 7.7 Can you use learned concepts to solve problems.</p>	<p>7.1 Read and write expressions. 7.2 Simplify numerical expressions. 7.3 Write and evaluate expressions that contain variables. 7.4 Generate and extend numerical patters. 7.5 Locate points in the first quadrant of the coordinate plane. Plot points in the first quadrant of teh coordinate plane. 7.6 Graph ordered pairs and use them to represent and solve real world problems. 7.7 Apply learned concepts to real world problems.</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia. Its length and width and height are equal. Revelation 21:16</p>
<p>Unit 8 - Measurement and Geometry <i>(updated 7/29/19)</i></p>	<p>5.NF.B.4(A) Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. •a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q / b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this</p>		<p>8.1 Can you multiply to convert metric units of length? Can you divide to convert metric units of length? 8.2 Can ypu convert among metric units of liquid volume? 8.3 Can you convert</p>	<p>8.1 Convert among metric units of length. 8.2 Convert among metric units of liquid. 8.3 Convert among metric units of mass. 8.4 Convert</p>	<p>Informal Observation Target Questions Exit tickets</p>	<p>And I lifted my eyes and saw, and behold, a man with measuring line in his hand! Then I said, "Where are you going? And he said to me, "To measure Jerusalem, to see what is its width and what is its length." Zechariah 2:1-2 Whoever multiplies his wealth by interest and profit gathers it for him who is generous to the poor. Proverbs 28:8 The city lies four square, its length the same as its width. And he measured the city with his rod, 12,000 stadia.</p>

Curriculum Map - 5 Math

equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)

•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.

5.MD.A.1(A)

Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

5.MD.B.2(A)

Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

5.MD.C.3(A)

Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

•a. A cube with side length 1 unit, called a unit cube, is said to have one cubic unit of volume, and can be used to measure volume.

•b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.

5.MD.C.4(A)

Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.

5.MD.C.5(A)

Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

•a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

•b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

•c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

among metric units of mass?

8.4 Can you convert among units of customary length?

8.5 Can you convert among customary units of liquid volume?

8.6 Can you convert among customary measures of weight?

8.7 Can you represent and analyze whole number data using line plots?

Can you represent and analyze fractional number data using line plots?

8.8 Can you use a formula to find the perimeter of rectangles with whole number and fractional side lengths?

Can you use a formula to find the area of rectangles with whole number and fractional side lengths?

8.9 Can you find the volume of a rectangular prism?

8.10 Can you find the volume of a rectangular prism?

8.11 Can you develop a formula for the volume of rectangular prism?

8.12 Apply formulas to solve real world problems involving perimeter, area, and volume?

8.13 Can you find the volume of composite solid figure?

8.14 Can you describe attributes of quadrilaterals?

8.15 Can you describe attributes of triangles?

8.16 Can you describe attributes of two-dimensional shapes?

8.17 Can you use

among customary units of length.

8.5 Convert among customary units of liquid volume.

8.6 Convert among customary measures of weight.

8.7 Make and analyze line plots.

8.8 Use a formula to find the perimeter and area of a rectangle with fractional side lengths.

8.9 Use a formula to find the volume of a rectangular prism.

8.10 Compute the volume of a rectangular prism.

8.11 Use a formula to find the volume of a rectangular prism.

8.12 Identify whether a situation involves length, area, or volume.

8.13 Find the volume of a composite solid figure.

8.14 Understand attributes of different types of quadrilateral.

8.15 Understand attributes of different types of triangles.

8.16 Understand attributes of polygons and other two-dimensional shapes.

8.17 Apply learned concepts to real world problems.

Its length and width and height are equal.
Revelation 21:16

Curriculum Map - Mathematics - 5 Math

5.G.B.3(A)

Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

5.G.B.4(A)

Classify two-dimensional figures in a hierarchy based on properties.

learned concepts to solve problems?