Blackwater Community School
Curriculum Map 2015-2016

Fifth Grade Quarter 2

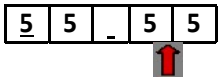
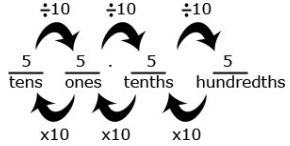
Module 2: Multi-Digit Whole Number and Decimal Fraction Operations - Part 2, Topics E-H

Approximately 10 Days - Begin around October 13th

In Module 2 students apply patterns of the base ten system to mental strategies and a sequential study of multiplication via area diagrams and the distributive property leading to fluency with the standard algorithm. Students move from whole numbers to multiplication with decimals, again using place value as a guide to reason and make estimations about products. Multiplication is explored as a method for expressing equivalent measures in both whole number and decimal forms. A similar sequence for division begins concretely with number disks as an introduction to division with multi-digit divisors and leads student to divide multi-digit whole number and decimal dividends by two-digit divisors using a vertical written method. In addition, students evaluate and write expressions, recording their calculations using the associative property and parentheses. Students apply the work of the Module to solve multi-step word problems using multi-digit multiplication and division with unknowns representing either the group size or number of groups. An emphasis on the reasonableness of both products and quotients, interpretation of remainders and reasoning about the placement of decimals draws on skills learned throughout the Module, including refining knowledge of place value, rounding, and estimation.

Major Clusters:	**5.NBT.A - Understand the place value system.** **5.NBT.B - Perform operations with multi-digit whole numbers and with decimals to hundredths.**
Supporting Clusters:	
Vocabulary	Decimal Fraction, Multiplier, Parentheses

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
5.NBT	**A**	**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. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.6.* Attend to precision. *5.MP.7.* Look for and make use of structure.	In fourth grade, students examined the relationships of the digits in numbers for whole numbers only. This standard extends this understanding to the relationship of decimal fractions. Students use base ten blocks, pictures of base ten blocks, and interactive images of base ten blocks to manipulate and investigate the place value relationships. They use their understanding of unit fractions to compare decimal places and fractional language to describe those comparisons. Before considering the relationship of decimal fractions, students express their understanding that in multi-digit whole numbers, a digit in one place	**Engage NY** M2 Lessons 16-18 **enVision** Topic 1

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
				represents 10 times what it represents in the place to its right and 1/10 of what it represents in the place to its left. A student thinks, "I know that in the number 5555, the 5 in the tens place (5555) represents 50 and the 5 in the hundreds place (5555) represents 500. So a 5 in the hundreds place is ten times as much as a 5 in the tens place or a 5 in the tens place is 1/10 of the value of a 5 in the hundreds place. To extend this understanding of place value to their work with decimals, students use a model of one unit; they cut it into 10 equal pieces, shade in, or describe 1/10 of that model using fractional language ("This is 1 out of 10 equal parts. So it is 1/10". I can write this using 1/10 or 0.1"). They repeat the process by finding 1/10 of a 1/10 (e.g., dividing 1/10 into 10 equal parts to arrive at 1/100 or 0.01) and can explain their reasoning, "0.01 is 1/10 of 1/10 thus is 1/100 of the whole unit." In the number 55.55, each digit is 5, but the value of the digits is different because of the placement.  The 5 that the arrow points to is 1/10 of the 5 to the left and 10 times the 5 to the right. The 5 in the ones place is 1/10 of 50 and 10 times five tenths.  The 5 that the arrow points to is 1/10 of the 5 to the left and 10 times the 5 to the right. The 5 in the tenths place is 10 times five hundredths.  	

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
5.NBT	**A**	**2**	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. *5.MP.2*. Reason abstractly and quantitatively. *5.MP.6.* Attend to precision. *5.MP.7.* Look for and make use of structure.	• Students might write: $36 \times 10 = 36 \times 10^1 = 360$ $36 \times 10 \times 10 = 36 \times 10^2 = 3600$ $36 \times 10 \times 10 \times 10 = 36 \times 10^3 = 36{,}000$ $36 \times 10 \times 10 \times 10 \times 10 = 36 \times 10^4 = 360{,}000$ • Students might think and/or say: I noticed that every time, I multiplied by 10 I added a zero to the end of the number. That makes sense because each digit's value became 10 times larger. To make a digit 10 times larger, I have to move it one place value to the left. When I multiplied 36 by 10, the 30 became 300. The 6 became 60 or the 36 became 360. So I had to add a zero at the end to have the 3 represent 3 one-hundreds (instead of 3 tens) and the 6 represents 6 tens (instead of 6 ones). • Students should be able to use the same type of reasoning as above to explain why the following multiplication and division problem by powers of 10 make sense. $523 \times 10_3 = 523{,}000$ The place value of 523 is increased by 3 places. $5.223 \times 10^{\ 2} = 52$ The place value of 5.223 is increased by 2 places. $52.3 \div 10_1 = 5.23$ The place value of 52.3 is decreased by one place.	**Engage NY** M2 Lessons 16-18, 24-27 **enVision** Topic 3,6,7
5.NBT	**B**	**6**	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.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and	In fourth grade, students' experiences with division were limited to dividing by one-digit divisors. This standard extends students' prior experiences with strategies, illustrations, and explanations. When the two-digit divisor is a "familiar" number, a student might decompose the dividend using place value. **Example**: • Using expanded notation ~ 2682 ÷ 25 = (2000 + 600 + 80 + 2) ÷ 25 • Using his or her understanding of the relationship between 100 and 25, a student might think: o I know that 100 divided by 25 is 4 so 200 divided by 25 is 8 and 2000 divided by 25 is 80.	**Engage NY** M2 Lessons 16-23, 28-29 **enVision** Topic 3,4,5

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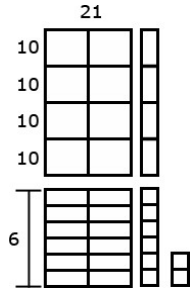
			critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.7.* Look for and make use of structure.	o 600 divided by 25 has to be 24. o Since 3 x 25 is 75, I know that 80 divided by 25 is 3 with a reminder of 5. (Note that a student might divide into 82 and not 80) o I can't divide 2 by 25 so 2 plus the 5 leaves a remainder of 7. o 80 + 24 + 3 = 107. So, the answer is 107 with a remainder of 7. • Using an equation that relates division to multiplication, 2682, a student might estimate the answer to be slightly larger than 100 because s/he recognizes that 25 x 100 = 2500. • Example: 968 ÷ 21 Using base ten models, a student can represent 962 and use the models to make an array with one dimension of 21. The student continues to make the array until no more groups of 21 can be made. Remainders are not part of the array.  **Example**: 9984 ÷ 64 • An area model for division is shown below. As the student uses the area model, s/he keeps track of how much of the 9984 is left to divide.	

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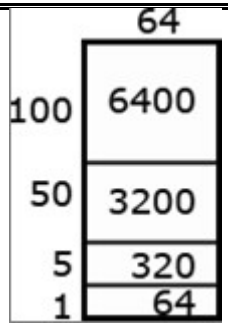
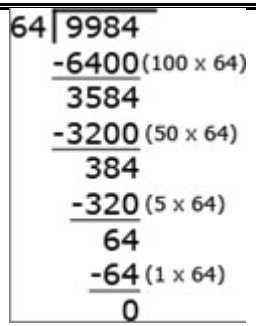
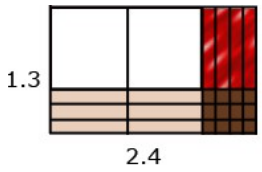
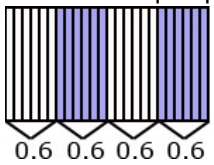
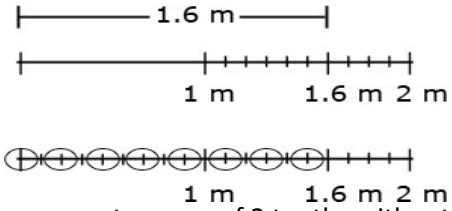
				 	
5.NBT	**B**	**7**	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.7.* Look for and make use of structure.	This standard requires students to extend the models and strategies they developed for whole numbers in grades 1-4 to decimal values. Before students are asked to give exact answers, they should estimate answers based on their understanding of operations and the value of the numbers. **Example**: • 6 x 2.4 o A student might estimate an answer between 12 and 18 since 6 x 2 is 12 and 6 x 3 is 18. Another student might give an estimate of a little less than 15 because s/he figures the answer to be very close, but smaller than 6 x 2 ½ and think of 2 ½ groups of 6 as 12 (2 groups of 6) + 3 (½ of a group of 6). **Example**: An area model can be useful for illustrating products.  2.4 x 1.3 .12 .60 .40 + 2.00 3.12 Students should be able to describe the partial products displayed by the area model. For example, "3/10 times 4/10 is 12/100. 3/10 times 2 is 6/10 or 60/100. 1 group of 4/10 is 4/10 or 40/100.	**Engage NY** M2 Lessons 24-29 This standard is also addressed in Module 4. **enVision** Topic 1,2,4,6,7

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
				1 group of 2 is 2." **Example**: Finding the number in each group or share • Students should be encouraged to apply a fair sharing model separating decimal values into equal parts such as  **Example**: Find the number of groups • Joe has 1.6 meters of rope. He has to cut pieces of rope that are 0.2 meters long. How many can he cut? • To divide to find the number of groups, a student might: o draw a segment to represent 1.6 meters. In doing so, s/he would count in tenths to identify the 6 tenths, and be able identify the number of 2 tenths within the 6 tenths. The student can then extend the idea of counting by tenths to divide the one meter into tenths and determine that there are 5 more groups of 2 tenths.  o count groups of 2 tenths without the use of models or diagrams. Knowing that 1 can be thought of as 10/10, a student might think of 1.6 as 16 tenths. Counting 2 tenths, 4 tenths, 6 tenths, . . .16 tenths, a student can count 8 groups of 2 tenths. o Use their understanding of multiplication and think, "8 groups of 2 is 16, so 8 groups of 2/10 is 16/10 or 1 6/10."	

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources

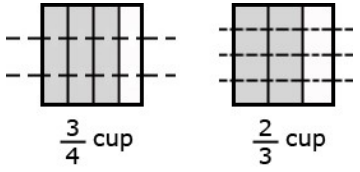
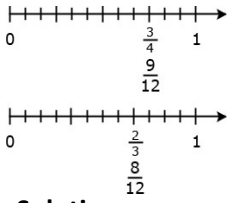
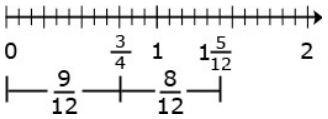
Module 3: Addition and Subtraction of Fractions

Approximately 22 days - Begin around October 26th

In Module 3, students' understanding of addition and subtraction of fractions extends from earlier work with fraction equivalence and decimals. This module marks a significant shift away from the elementary grades' centrality of base ten units to the study and use of the full set of fractional units from Grade 5 forward, especially as applied to algebra.

Major Clusters:	**5.NF.A - Extend understanding of fraction equivalence and ordering.**
Supporting Clusters:	
Vocabulary	Benchmark Fraction, Unlike Denominators, Like Denominators

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
5.NF	**A**	**1**	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.MP.2.* Reason abstractly and quantitatively. *5.MP.4.* Model with mathematics. *5.MP.7.* Look for and make use of structure.	Students should apply their understanding of equivalent fractions developed in fourth grade and their ability to rewrite fractions in an equivalent form to find common denominators. They should know that multiplying the denominators will always give a common denominator but may not result in the smallest denominator. **Examples**: $\frac{2}{5} + \frac{7}{8} = \frac{16}{40} + \frac{35}{40} = \frac{51}{40}$ • $3\frac{1}{4} - \frac{1}{6} = 3\frac{3}{12} - \frac{2}{12} = 3\frac{1}{12}$	**Engage NY** M3 Lessons 1-16 **enVision** Topic 9,10
5.NF	**A**	**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	• Jerry was making two different types of cookies. One recipe needed ¾ cup of sugar and the other needed ^{23} cup of sugar. How much sugar did he need to make both recipes? **Mental estimation:** A student may say that Jerry needs more than 1 cup of sugar but	**Engage NY** M3 Lessons 3-16 **enVision** Topic 9,10

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
			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.MP.1.* Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically.	less than 2 cups. An explanation may compare both fractions to ½ and state that both are larger than ½ so the total must be more than 1. In addition, both fractions are slightly less than 1 so the sum cannot be more than 2. **Area model**  $\frac{3}{4} = \frac{9}{12}$ $\frac{2}{3} = \frac{8}{12}$ $\frac{3}{4} + \frac{2}{3} = \frac{17}{12} = \frac{12}{12} + \frac{5}{12} = 1\frac{5}{12}$ **Linear model**  **Solution:**  **Using a bar diagram** • Sonia had 2 1/3 candy bars. She promised her brother that she would give him ½ of a candy bar. How much will she have left after she gives her brother the amount she promised? • If Mary ran 3 miles every week for 4 weeks, she would reach her goal for the month. The first day of the first week she ran 1 ¾ miles. How many miles does she still need to run the first week? o Using addition to find the answer:1 ¾ + n = 3 o A student might add 1 ¼ to 1 ¾ to get to 3 miles. Then he or she would add 1/6 more. Thus 1 ¼ miles + 1/6 of a mile is what Mary needs to run during that week.	

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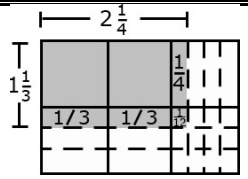
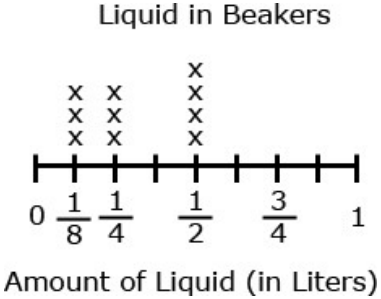
Module 4: Multiplication of Fractions and Decimal Fractions - Part 1, Topics A-D **Approximately 13 Days - Begin around November 23rd** Grade 5's Module 4 extends student understanding of fraction operations to multiplication and division of both fractions and decimal fractions. Work proceeds from interpretation of line plots which include fractional measurements to interpreting fractions as division and reasoning about finding fractions of sets through fraction by whole number multiplication. The Unit proceeds to fraction by fraction multiplication in both fraction and decimal forms. An understanding of multiplication as scaling and multiplication by n/n as multiplication by 1 allows students to reason about products and convert fractions to decimals and vice versa. Students are introduced to the work of division with fractions and decimal fractions. Division cases are limited to division of whole numbers by unit fractions and unit fractions by whole numbers. Decimal fraction divisors are introduced and equivalent fraction and place value thinking allow student to reason about the size of quotients, calculate quotients and sensibly place decimals in quotients. Throughout the Module students are asked to reason about these important concepts by interpreting numerical expressions which include fraction and decimal operations and by persevering in solving real-world, multistep problems which include all fraction operations supported by the use of tape diagrams.					
Major Clusters:			**5.NF.B - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.**		
Supporting Clusters:			5.OA.A - Write and interpret numerical expressions. 5.MD.B - Represent and interpret data.		
Vocabulary			Decimal divisor, simplify		
5.OA	A	1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. Connection: *5.OA.2* **Mathematical Practices:** *5.MP.1.* Make sense of problems and persevere in solving them. *5.MP.5,* Use appropriate tools strategically. *5.MP.8.* Look for and express regularity in repeated reasoning.	This standard builds on the expectations of third grade where students are expected to start learning the conventional order. Students need experiences with multiple expressions that use grouping symbols throughout the year to develop understanding of when and how to use parentheses, brackets, and braces. First, students use these symbols with whole numbers. Then the symbols can be used as students add, subtract, multiply and divide decimals and fractions. **Examples**: • (26 + 18) ÷ 4 Answer: 11 • {[2 x (3+5)] - 9} + [5 x (23-18)] Answer: 32 • 12 - (0.4 x 2) Answer: 11.2 • (2 + 3) x (1.5 - 0.5) Answer: 5 • $6-\left(\frac{1}{2}+1\frac{1}{3}\right)$ Answer: 5 1/6	**Engage NY** M4 Lessons 10-12 **enVision** Topic 8

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
				• { 80 [2 x (3 ½ + 1 ½)] }+ 100 Answer: 108 To further develop students' understanding of grouping symbols and facility with operations, students place grouping symbols in equations to make the equations true or they compare expressions that are grouped differently. **Examples**: • 15 - 7 - 2 = 10 → 15 - (7 - 2) = 10 • 3 x 125 ÷ 25 + 7 = 22 → [3 x (125 ÷ 25)] + 7 = 22 • 24 ÷ 12 ÷ 6 ÷ 2 = 2 x 9 + 3 ÷ ½ → 24 ÷ [(12 ÷ 6) ÷ 2] = (2 x 9) + (3 ÷ ½) • Compare 3 x 2 + 5 and 3 x (2 + 5) • Compare 15 - 6 + 7 and 15 - (6 + 7)	
5.OA	A	2	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 × (8 + 7). Recognize that 3 × (18932 +921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.* *5.MP.1.* Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.7.* Look for and make use of structure. *5.MP.8.* Look for and express regularity in repeated reasoning.	Students use their understanding of operations and grouping symbols to write expressions and interpret the meaning of a numerical expression. **Examples**: • Students write an expression for calculations given in words such as "divide 144 by 12, and then subtract 7/8." They write (144 ÷ 12) - 7/8. • Students recognize that 0.5 x (300 ÷ 15) is ½ of (300 ÷ 15) without calculating the quotient. Students use tape diagrams to represent simple expressions. **Example:** • Show a tape diagram to represent 3 times the sum of 26 and 4.  26 + 4	**Engage NY** M4 Lessons 10-12 **enVision** Topic 8
5.NF	**B**	**3**	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	Students are expected to demonstrate their understanding using concrete materials, drawing models, and explaining their thinking when working with fractions in multiple contexts. They read 3/5 as "three fifths" and after many experiences with sharing problems, learn that 3/5 can also be interpreted as "3 divided by 5."	**Engage NY** M4 Lessons 2-5

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
			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?* *5.MP.1.* Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.7.* Look for and make use of structure.	**Examples**: • Ten team members are sharing 3 boxes of cookies. How much of a box will each student get? • When working this problem a student should recognize that the 3 boxes are being divided into 10 groups, so s/he is seeing the solution to the following equation, 10 x *n* = 3 (10 groups of some amount is 3 boxes) which can also be written as n = 3 ÷ 10. Using models or diagram, they divide each box into 10 groups, resulting in each team member getting 3/10 of a box. • Two afterschool clubs are having pizza parties. For the Math Club, the teacher will order 3 pizzas for every 5 students. For the student council, the teacher will order 5 pizzas for every 8 students. Since you are in both groups, you need to decide which party to attend. How much pizza would you get at each party? If you want to have the most pizza, which party should you attend? • The six fifth grade classrooms have a total of 27 boxes of pencils. How many boxes will each classroom receive? Students may recognize this as a whole number division problem but should also express this equal sharing problem as ^{276}. They explain that each classroom gets ^{276} boxes of pencils and can further determine that each classroom get 4 ^{36} or 4 ^{12} boxes of pencils.	**enVision** Topic 11
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*) × *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*	Students are expected to multiply fractions including proper fractions, improper fractions, and mixed numbers. They multiply fractions efficiently and accurately as well as solve problems in both contextual and non-contextual situations. • As they multiply fractions such as 3/5 x 6, they can think of the operation in more than one way. 3 x (6 ÷ 5) or (3 x 6/5) (3 x 6) ÷ 5 or 18 ÷ 5 (18/5)	**Engage NY** M4 Lessons 6-12 **enVision** Topic 11

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Notes & Resources
			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.) *5.MP.1.* Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.6.* Attend to precision. *5.MP.7.* Look for and make use of structure. *5.MP.8.* Look for and express regularity in repeated reasoning.	• Students create a story problem for 3/5 x 6 such as: Isabel had 6 feet of wrapping paper. She used 3/5 of the paper to wrap some presents. How much does she have left? Every day Tim ran 3/5 of mile. How far did he run after 6 days? (Interpreting this as 6 x 3/5) Technology Connections: • Create story problems for peers to solve using digital tools. Use a tool such as Jing to digitally communicate story problems.	
5.NF	**B** •	**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. *5.MP.1*. Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.3.* Construct viable arguments and critique the reasoning of others. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.6.* Attend to precision. *5.MP.7.* Look for and make use of structure. *5.MP.8.* Look for and express regularity in repeated reasoning.	Evan bought 6 roses for his mother. $\frac{2}{3}$ of them were red. How many red roses were there? o Using a visual, a student divides the 6 roses into 3 groups and counts how many are in 2 of the 3 groups.  o A student can use an equation to solve. $\frac{2}{3} \times 6 = \frac{12}{3} = 4$ red roses Mary and Joe determined that the dimensions of their school flag needed to be $1\frac{1}{3}$ ft. by $2\frac{1}{4}$ ft. What will be the area of the school flag? o A student can draw an array to find this product and can also use his or her understanding of decomposing numbers to explain the multiplication. Thinking ahead a student may decide to multiply by $1\frac{1}{3}$ instead of **2** $\frac{1}{4}$	**Engage NY** M4 Lessons 10-12 This standard is also addressed in Module 5. **enVision** Topic 11

Domain	Cluster	Standard	Arizona's College and Career Ready Standards	Explanations & Examples	Resources
				 The explanation may include the following: o First, I am going to multiply $2\frac{1}{4}$ by 1 and then by $\frac{1}{3}$ o When I multiply $2\frac{1}{4}$ by 1, it equals $2\frac{1}{4}$ o Now I have to multiply $2\frac{1}{4}$ by $\frac{1}{3}$ o $\frac{1}{3}$ times 2 is $\frac{2}{3}$ o $\frac{1}{3}$ times $\frac{1}{4}$ is $\frac{1}{12}$ o So the answer is $2\frac{1}{3}+\frac{2}{3}+\frac{1}{12}$ or $2\frac{8}{12}+\frac{1}{12}=2\frac{12}{12}=3$	
5.MD	B	2	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.MP.1.* Make sense of problems and persevere in solving them. *5.MP.2.* Reason abstractly and quantitatively. *5.MP.4.* Model with mathematics. *5.MP.5.* Use appropriate tools strategically. *5.MP.6.* Attend to precision. *5.MP.7.* Look for and make use of structure.	• Ten beakers, measured in liters, are filled with a liquid.  The line plot above shows the amount of liquid in liters in 10 beakers. If the liquid is redistributed equally, how much liquid would each beaker have? (This amount is the mean.) Students apply their understanding of operations with fractions. They use either addition and/or multiplication to determine the total number of liters in the beakers. Then the sum of the liters is shared evenly among the ten beakers.	**Engage NY** M4 Lesson 1 **enVision** Topic 14