Grade: 6 FCPS 2025-2026 Math Grade 6 Topic 1

6th Grade Topic 1 : Use Positive Rational Numbers	Estimate Time Frame: 25 days
Essential Standards: 6.NS.3, 6.NS.2, 6.NS.1 Assessment Resource: enVision Topic 1 and Formative Assessment Lesson (FAL): Interpreting Multiplication and Division	

FCPS Supporting Links	Additional Supporting Links
Pacing Guide 6th Grade Topic 1 Standards Resource with Sample Formative Assessments enVision 6th Grade Topic 1 Standards Crosswalk Resource FCPS P-12 Mathematics Guidance Document FCPS Achievement & Trauma-Informed Strategies in the Classroom	Kentucky Academic Standards KSA Blueprint Target of the Standards - conceptual, procedural & application Three-Reads Routine Notice and Wonder Routine **MILC Resources Topic 1: Use Positive Rational Numbers** ***enVision Teacher Guide: page 2A to 2D for specific Topic 1 Focus-Coherence-Rigor***

Big Ideas
Apply and extend previous understandings of multiplication and division to divide fractions by fractions. Compute fluently with multi-digit numbers and find common factors and multiples. Apply and extend previous understandings of numbers to the system of rational numbers.

Essential Questions	Common Preconceptions/Misconceptions
How can you fluently add, subtract, multiply, and divide decimals? How can you multiply and divide fractions? What are rational numbers?	Sixth graders may incorrectly model the division of fractions. Some students may think dividing “by” ½ is the same as dividing “in” half. Dividing “by” ½ means finding how many one-halves are in a quantity. Dividing “In” half means to take a quantity and divide it into two equal parts. To address the misconception, ask them to demonstrate two examples, one that shows dividing by ½ and another that shows dividing in half. For example, dividing 9 by ½ equals 18, and 9 divided in half equals 4 ½.

Standards for Mathematical Practices	Kentucky Interdisciplinary Literacy Practices (KILP)
MP.1. Make sense of problems and persevere in solving them. **MP.2. Reason abstractly and quantitatively.** **MP.3. Construct viable arguments and critique the reasoning of others.** MP.4. Model with mathematics. MP.5. Use appropriate tools strategically. **MP.6. Attend to precision.** **MP.7. Look for and make use of structure.** **MP.8. Look for and express regularity in repeated reasoning.** ***enVision Teacher Guide: page 2E for specific Topic 1 Math Practice suggestions***	1. Recognize that text is anything that communicates a message. 2. Employ, develop, and refine schema to understand and create text. 3. View literacy experiences as transactional, interdisciplinary and transformational. 4. Utilize receptive and expressive language arts to better understand self, others, and the world. **5. Apply strategic practices, with scaffolding and then independently, to approach new literacy tasks.** **6. Collaborate with others to create new meaning.** **7. Utilize digital resources to learn and share with others.** **8. Engage in specialized, discipline-specific literacy practices.** **9. Apply high-level cognitive processes to think deeply and critically about text.** 10. Develop a literacy identity that promotes lifelong learning. *Incorporating texts into math instruction fosters interdisciplinary learning for a more engaging educational experience.*

Essential Standards	Sample Learning Intentions & Success Criteria	HQIR/Resource Considerations
Cluster: Compute fluently with multi-digit numbers and find common factors and multiples.		
KY.6.NS.3 Fluently add, subtract, multiply and divide multi-digit decimals using an algorithm for each operation. ❑ Conceptual ❑ **Procedural** ❑ Application Clarifications: Emphasis is on the role of the decimal point in operations and how place value is critical to the overall fluency of the performed operations involving decimals. Coherence KY.5.NBT.7→KY.6.NS.3→KY.7.NS.3	We are learning to perform operations with decimals using an algorithm. • I can align decimals and accurately add or subtract numbers. • I can accurately multiply and insert the correct decimal location in the product. • I can divide the dividend and divisor by decimals.	• Topic 1 Lesson 1-1 • Topic 1: Let's Investigate! Play-ing with Decimals (replaces Lesson 1-1) • enVision Language Support Handbook

MP.2, MP.6, KILP.6, KILP.8		
KY.6.NS.2 Fluently divide multi-digit numbers using an algorithm. ❑Conceptual ❑ **Procedural** ❑ Application a. Convert a rational number to a decimal using long division. ❑Conceptual ❑ **Procedural** ❑ Application Clarifications: Divide a rational number a/b using long division, including rational numbers equivalent to terminating decimals and rational numbers equivalent to repeating decimals. b. Know that the decimal form of a rational number terminates in 0s or eventually repeats. ❑**Conceptual** ❑ Procedural ❑ Application Clarifications: Students understand and explain that when they have a 0 remainder in a long division problem, the quotient (answer) is a terminating decimal; students understand that when they notice a pattern in the process of dividing, they conclude they will never reach a 0 remainder, and they then notate the part of the quotient that is repeating by marking a bar over those values. Coherence KY.5.NBT.6→KY.6.NS.2 **MP.7, MP.8, KILP.6, KILP.8**	We are learning to write rational numbers in the form a/b as decimals. • I can use long division to convert a fraction to a decimal. • I can look for patterns when dividing to determine if a decimal is repeating or terminating. • I can explain what repeating and terminating decimals are. • I can use repeating notation to represent a repeating decimal.	• Topic 1 Lesson 1-2 (6th grade book) • ❗ Topic 1 Lesson 1-2 (7th grade book) • ❗ 7th grade book Topic 1: Let's Investigate! Can You Nail It? (do in place of 7th grade 1-2) • enVision Language Support Handbook
Attending to the Standards for Mathematical Practice		

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Students understand and use connections between divisibility and the greatest common factor to apply the distributive property (MP.2). Students consider units and labels for numbers in contextual problems and consistently refer to what the labels represent to make sense in the problem. Students use precise language and place value (MP.6) when adding, subtracting, multiplying, and dividing by multi-digit decimal numbers. Students read decimal numbers using place value. For example, 326.31 is read as three hundred twenty-six and thirty-one hundredths (MP.7). Students calculate sums, differences, products and quotients of decimal numbers with a degree of precision appropriate to the problem context.

Essential Standards	Sample Learning Intentions & Success Criteria	HQIR/Resource Considerations
Cluster: Compute fluently with multi-digit numbers and find common factors and multiples.		
KY.6.NS.1 Interpret and compute quotients of fractions and solve word problems involving the division of fractions by fractions. ☐ **Conceptual** ☐ **Procedural** ☐ **Application** Clarifications: For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient: How much chocolate will each person get if 3 people share 1/2 lb. of chocolate equally? How many 1/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with a length of 3/4 mi and an area of 1/2 square mile? Students use concrete representations to understand the meaning of division and apply it to the division of fractions. They also use pictorial representations such as area models, array models, number lines, and drawings to conceptualize and solve problems. Coherence KY.5.NF.7→KY.6.NS.1→KY.7.NS.2 **MP.1, MP.2, MP.3, KILP.1, KILP.2, KILP.6**	We are learning to compute the quotients of fractions to solve word problems. • I can use models to represent fraction division. • I can rewrite a fraction division equation as a multiplication problem using the reciprocal of the divisor. • I can interpret the quotients of fractions when solving real-world problems.	• ❗ Optional *Topic 1 Lesson 1-3 to review multiplying fractions • 3-Act Math Topic 1: Stocking Up! (do this after lesson 1-3) • Topic 1 Lesson 1-4 • Topic 1: Let's Investigate! Cuanto Queso? (do in place of 1-4) • Lesson 1-5 • Lesson 1-6 • Brainingcamp Task (Lesson 1-4) "How Can We Model Division of Unit Fractions?" • Brainingcamp Task (Lesson 1-5) "How can we Divide Fractions?" • Brainingcamp Task (Lesson 1-6) "How can we Divide Mixed Numbers?" • enVision Language Support Handbook

		• Formative Assessment Lesson (FAL): Interpreting Multiplication and Division

Attending to the Standards for Mathematical Practice

Students use concrete representations when understanding the meaning of division and apply it to the division of fractions. They ask themselves, "What is this problem asking me to find?" (MP.1). For instance, when determining the quotient of fractions, students ask themselves how many sets or groups of the divisor is in the dividend. That quantity is the quotient of the problem. They solve simpler problems to gain insight into the solution. Students confirm, for example, that 10 ÷ 2 can be found by determining how many groups of two are in ten. They apply that strategy to the division of fractions (MP.3). Students use pictorial representations such as area models, array models, number lines, and drawings to conceptualize and solve problems.

Supporting Standards

N/A

Vocabulary

equivalent - The same in amount, value or importance EX: 2/3 is equivalent to 4/6; 2+3 is equivalent to 5.
fraction - Made up of a numerator and denominator. The numerator is shown on top of the fraction bar and is the number of parts of the whole. The denominator is the number below the fraction bar and is the number of parts by which the whole has been divided.
rational number - Any number that can be written as the quotient of two integers.
reciprocal - Two numbers whose product is 1.
quantities - a property which exists as magnitude or multitude; a specified or indefinite number or amount.

*****Disclaimer: Success Criteria is the evidence students must produce to demonstrate learning. This example is not comprehensive.
** Mathematical Practices (A.MP. 1- 8) should be evidenced at some point throughout each unit, depending on the explored tasks. It is important to note that MP. 2 should support learning in every lesson.
******* Modeling Standards: Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★). The star symbol sometimes appears on the heading for a group of standards; in that case, it should be understood to apply to *all* standards in that group.