

Grade: 5th

Strand: Numbers and Operations Fractions

Standard/Topic: MAT-05.NF.07

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

- Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.
- Interpret division of a whole number by a unit fraction, and compute such quotients.
- Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions using visual fraction models and equations to represent the problem.



		Sample Activities
Score 4.0 Complex	In addition to Score 3.0, in-depth inferences and applications that go beyond the target content. The student will: Justify solutions to problems involving division of fractions using visual models.	Partner to write and solve problems Example: How wide is a rectangular strip of land with length $\frac{3}{4}$ mile and area $\frac{1}{2}$ square mile?
	3.5 In addition to target performance, in-depth inferences and applications with partial understanding	
Score 3.0 Target	The student will: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. Interpret division of a whole number by a unit fraction, and compute such quotients. Solve real word problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions using visual fraction models and equations to represent the problem. The student exhibits no major errors or omissions.	Example: Matt has 9 yards of rope. He needs $\frac{1}{3}$ yards for each knot he ties. How many knots will he be able to tie? When solving: - Discuss what they're trying to solve. - Discuss what each number represents. - Discuss which model would be most helpful. - Discuss the reasonableness of the solution. Note: Students need extensive repetition with the fraction manipulatives and drawings to attach meaning to this abstract concept.
	2.5 No major errors or omissions regarding the simple content and partial understanding of the target content	
Score 2.0 Simple	There are no major errors or omissions regarding the simpler details and processes as the student: - The student will recognize or recall specific terminology, such as: division, dividend, divisor, quotient, fraction, numerator, denominator, unit fraction, whole number - The student will perform basic processes, such as: Decompose a fraction into unit fractions Division facts Multiply fractions However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	Use fraction manipulatives and drawings to decompose a fraction into a unit fraction and justify your result. How can the fraction $\frac{5}{8}$ be represented as a sum of unit fractions? Which expression shows $\frac{2}{3}$ as a sum of unit fractions?

	1.5 Partial understanding of the simple, but major errors or omissions regarding the target content	
Score 1.0	With help, partial understanding of the simple and target content	
	0.5 With help, partial understanding of the simple content, but not the targeted content	