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Resource ID#: 131241

Primary Type: Tutorial

Direct Link: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-repeating-decimals/v/covering-repeating-decimals-to-fractions-1>

Converting repeating decimals to fractions

This tutorial shows students how to convert basic repeating decimals to fractions.

General Information

Subject(s): Mathematics

Grade Level(s): 7

Intended Audience: [Educators](#), [Students](#)

Instructional Time: 5 Minute(s)

Suggested Technology: Computers for Students, Internet Connection, Speakers/Headphones

Keywords: decimals, fractions, repeating decimal

Instructional Component Type(s): [Tutorial](#)

Instructional Design Framework(s): [Demonstration](#)

Resource Collection: Secondary Math specific existing tutorials

Source and Access Information

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District/Organization of Contributor(s): Leon

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Aligned Standards

Name	Description
	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. <ol style="list-style-type: none">Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.Apply properties of operations as strategies to multiply and divide rational numbers.

- d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

Clarifications:

Fluency Expectations or Examples of Culminating Standards

Adding, subtracting, multiplying, and dividing rational numbers is the culmination of numerical work with the four basic operations. The number system will continue to develop in grade 8, expanding to become the real numbers by the introduction of irrational numbers, and will develop further in high school, expanding to become the complex numbers with the introduction of imaginary numbers. Because there are no specific standards for rational number arithmetic in later grades and because so much other work in grade 7 depends on rational number arithmetic, fluency with rational number arithmetic should be the goal in grade 7.