

Math Lesson

Lesson Title: Patrick's Method

Grade: 4 to 8

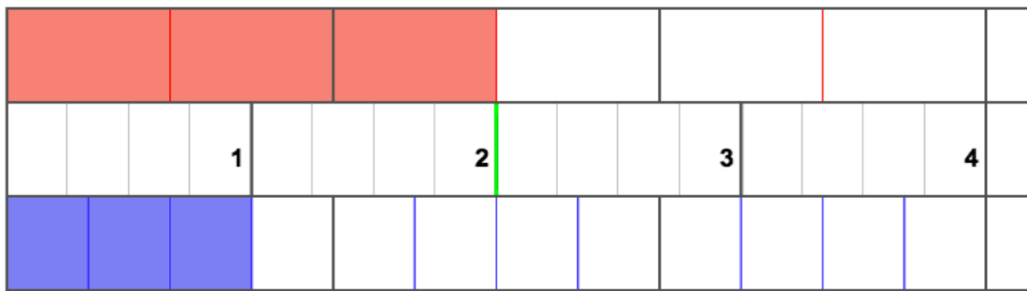
Content Standard: 5.NF.7^{abc} Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. 6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. 7.NS.2a Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

Materials: Chart paper and scrap paper.

Shared Experience and procedure details: This shared experience involves you trying to figure out if Patrick's method for dividing fractions ALWAYS work. If it doesn't you should find an example which illustrates why this method doesn't work. IF you believe it DOES always work you need to present a formal argument that will convince the whole group that you are correct.

Patrick, a 4th grader said that he has a easy way to divide fractions. You first get common denominators, then you divide the two top numbers and the two bottom numbers. Here is an example: $1\frac{1}{2} \div \frac{3}{4} = \frac{6}{4} \div \frac{3}{4} = \frac{6 \div 3}{4 \div 4} = \frac{2}{1} = 2$ Does Patrick's method always work?

Possible Picture:



Possible People Talk: Lots of examples to try to see if it works.

Feature Talk: Quotient; Divisor; Dividend; Division meaning of $A \div B$ is how many groups of size B are there in A?

Possible Symbolic Representation: $1\frac{1}{2} \div \frac{3}{4} = \frac{3}{2} \times \frac{4}{3} =$
 $A/B \div C/D =$

Written By: Michael Mikusa

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Patrick, a 4th grader said that he has a easy way to divide fractions. You first get common denominators, then you divide the two top numbers and the two bottom numbers. Here is an example: $1\frac{1}{2} \div \frac{3}{4} = \frac{6}{4} \div \frac{3}{4} = \frac{6 \div 3}{4 \div 4} = \frac{2}{1} = 2$ Does Patrick's method always work?

This shared experience involves you trying to figure out if Patrick's method for dividing fractions ALWAYS works.

If it doesn't you should find an example, which illustrates why this method doesn't always work.

IF you believe it DOES always work all the time you need to present a formal argument that will convince the whole group that you are correct.

Math Lesson

Write about the mathematics in today's lesson

Draw a picture of the mathematics in today's lesson.

