

The Product of Two Fractions Grade 5 Number and Operations - Fractions

Topic: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction..

Content Standards

- » *Number and Operations - Fractions*
 - » Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = (ac)/(bd)$.)

Practice Standards

- » *Model with mathematics*
Students create representations and number sentences associated with the problem.
- » *Use appropriate tools strategically*
Students use tools and/or hands-on manipulatives to show or create representations associated with the problem.
- » *Look for an make use of structure*
Students look closely to discern a pattern or structure

Materials

Students can use paper and writing tools, concrete and/or virtual manipulatives such as the Number Frames or Fractions apps (© The Math Learning Center); some of the possible results can be represented using the Multiplying Fractions - Area Model applet at: <https://www.geogebra.org/m/NZQ5dBrG>. Students could also use a screen-recording app.

The Product of 2 Fractions

You multiply two fractions and the product is $\frac{12}{20}$.

Neither fraction is equivalent to 1.

- a. What are two fractions that you could have multiplied?
- b. Write a story problem that can be answered by multiplying your two fractions.
- c. How many other pairs of fractions can you think of that have the product $\frac{12}{20}$?