Using an Algorithm to Multiply Fractions

A Fraction Multiplication Algorithm

To multiply two fractions, multiply the numerators and multiply the denominators.

For example: $\frac{2}{3} * \frac{3}{8} = \frac{(2 * 3)}{(3 * 8)} = \frac{6}{24}$

For Problems 1–6, use the algorithm to multiply the fractions.

(1) $\frac{1}{3} * \frac{1}{2} = \underline{\frac{1}{6}}$

(2) $\frac{2}{4} * \frac{2}{3} = \underline{\frac{4}{12}}$

(3) $\frac{4}{5} * \frac{2}{5} = \underline{\frac{8}{25}}$

(4) $\frac{2}{10} * \frac{2}{3} = \underline{\frac{4}{30}}$

(5) $\frac{2}{8} * \frac{5}{6} = \underline{\frac{10}{48}}$

(6) $\frac{5}{12} * \frac{2}{7} = \underline{\frac{10}{84}}$

(7) If you multiply $\frac{2}{3} * \frac{6}{10}$, will the product be more than $\frac{2}{3}$ or less than $\frac{2}{3}$? How do you know?

It will be less than $\frac{2}{3}$. Sample explanation: When you multiply a number by $\frac{6}{10}$, it's like finding only 6 out of 10 parts of the number. So the answer will be only part of $\frac{2}{3}$, and it will be less.

(8) If you multiply $\frac{2}{3} * \frac{6}{10}$, will the product be more than $\frac{6}{10}$ or less than $\frac{6}{10}$? How do you know?

It will be less than $\frac{6}{10}$. Sample explanation: You are only finding part of $\frac{6}{10}$, not all of it, so the answer will be less.

In Problems 9–12, write true or false. Do not multiply.

(9) $\frac{3}{4} * \frac{7}{10}$ is less than $\frac{3}{4}$. **True**

(10) $\frac{7}{9} * \frac{11}{12}$ is greater than $\frac{11}{12}$. **False**

(11) $\frac{4}{5} * \frac{2}{8}$ is greater than $\frac{2}{8}$ but less than $\frac{4}{5}$. **False**

(12) $\frac{6}{7} * \frac{1}{4}$ is less than $\frac{6}{7}$ and less than $\frac{1}{4}$. **True**

Practice

(13) $\frac{2}{3} + \frac{1}{6} = \underline{\frac{5}{6}}$

(14) $\frac{3}{4} + \frac{3}{8} = \underline{\frac{9}{8}, \text{ or } 1\frac{1}{8}}$

(15) $\frac{2}{5} + \frac{1}{4} = \underline{\frac{13}{20}}$

5.NF.4, 5.NF.5, 5.NF.5a, 5.NF.5b, 5.NF.1

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