

NY-6.NS

The Number System

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions.

Coherence: [NY-5.NF.7](#) → [NY-6.NS.1](#) → [NY-7.NS.2](#)

e.g., Create a story context for $(\frac{2}{3}) \div (\frac{3}{4})$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(\frac{2}{3}) \div (\frac{3}{4}) = \frac{8}{9}$ because $\frac{3}{4}$ of $\frac{8}{9}$ is $\frac{2}{3}$.

In general, $(\frac{a}{b}) \div (\frac{c}{d}) = \frac{ad}{bc}$.

e.g.,

- How much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally?
- How many $\frac{3}{4}$ cup servings are in $\frac{2}{3}$ of a cup of yogurt?
- How wide is a rectangular strip of land with length $\frac{3}{4}$ mi. and area $\frac{1}{2}$ square mi.?

Note: Strategies may include but are not limited to the following: using visual fraction models, a standard algorithm, and equations to represent the problem.