

DIVIDING FRACTIONS

PURPOSE

This Mathsheets teaches how to divide fractions. It assumes that you have already done the non-advanced Mathsheets on adding, subtracting, and multiplying fractions.

PREPARATION

You need a pencil.

PROCEDURE

Teach or review with your child how to divide fractions. Once your child has solved the questions provided, create additional questions at the appropriate level of difficulty.

Type 1: The result is correct as is, for example $1/5 \div 1/2 = 1/5 \times 2/1 = 2/5$.

Type 2: The result must be reduced, for example $3/5 \div 3/4 = 3/5 \times 4/3 = 12/15 = 4/5$.

Type 3: The result must be converted to a mixed number, for example $3/5 \div 1/3 = 3/5 \times 3/1 = 9/5 = 1 \frac{4}{5}$.

Type 4: The result must be converted to a mixed number and then reduced, for example
 $3/4 \div 3/5 = 3/4 \times 5/3 = 15/12 = 1 \frac{3}{12} = 1 \frac{1}{4}$.

Fractions do not need to have the same denominator in order to be divided. First, turn the second fraction upside down. Then multiply the numerators together and the denominators together.

$$\frac{1}{5} \div \frac{1}{2} = \frac{1}{5} \times \frac{2}{1} = \boxed{\frac{2}{5}}$$

Sometimes when you divide fractions, the answer needs to be **reduced**.

$$\frac{3}{5} \div \frac{3}{4} = \frac{3}{5} \times \frac{4}{3} = \frac{12}{15} = \boxed{\frac{4}{5}}$$

Sometimes when you divide fractions, the answer is an improper fraction that needs to be **converted** to a mixed number. To convert improper fractions to mixed numbers, divide the numerator by the denominator. The answer becomes the whole number portion of the mixed number, the remainder becomes the numerator of the fraction portion of the mixed number, and the denominator stays the same.

$$\frac{3}{5} \div \frac{1}{3} = \frac{3}{5} \times \frac{3}{1} = \frac{9}{5} = \boxed{1 \frac{4}{5}}$$

Sometimes when you divide fractions, the answer is an improper fraction that needs to be **converted** and then **reduced**.

$$\frac{3}{4} \div \frac{3}{5} = \frac{3}{4} \times \frac{5}{3} = \frac{15}{12} = 1 \frac{3}{12} = \boxed{1 \frac{1}{4}}$$

Type 1

$$\frac{1}{5} \div \frac{1}{2} = \frac{1}{5} \times \frac{\square}{\square} = \frac{\square}{\square}$$

Type 1

$$\frac{2}{5} \div \frac{1}{2} = \frac{2}{5} \times \frac{\square}{\square} = \frac{\square}{\square}$$

Type 2

$$\frac{3}{5} \div \frac{3}{4} = \frac{3}{5} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 2

$$\frac{1}{2} \div \frac{3}{4} = \frac{1}{2} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 2

$$\frac{1}{4} \div \frac{1}{2} = \frac{1}{4} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 3

$$\frac{3}{5} \div \frac{1}{3} = \frac{3}{5} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 3

$$\frac{3}{4} \div \frac{2}{5} = \frac{3}{4} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 3

$$\frac{2}{3} \div \frac{1}{5} = \frac{2}{3} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 4

$$\frac{3}{4} \div \frac{3}{5} = \frac{3}{4} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 4

$$\frac{5}{6} \div \frac{1}{2} = \frac{5}{6} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$

Type 4

$$\frac{2}{3} \div \frac{2}{8} = \frac{2}{3} \times \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$