

How to multiply fractions:

1. Multiply across the fractions; numerator times numerator, denominator times denominator.

$$\frac{3}{5} * \frac{1}{2} = \frac{3}{10}$$

$$3 * 1 = 3$$

$$5 * 2 = 10$$

$$\frac{2}{7} * \frac{3}{8} = \frac{6}{56}$$

$$2 * 3 = 6$$

$$7 * 8 = 56$$

2. Simplify the fraction if the numerator is divisible by or equal to the denominator.

$$\frac{3}{10} \quad \text{Not divisible, so no simplification}$$

$$\frac{6}{56} = \frac{3}{28} \quad 6 \text{ and } 56 \text{ are divisible by } 2.$$

Guided Problems:

A) $\frac{2}{7} * \frac{1}{3} = ?$

B) $\frac{1}{5} * \frac{10}{12} = ?$

1. Multiply across the fractions. A) $\frac{2}{7} * \frac{1}{3} = -$

$$2 * 1 = \underline{\quad}$$

$$7 * 3 = \underline{\quad}$$

B) $\frac{1}{5} * \frac{10}{12} = -$

$$1 * 10 = \underline{\quad}$$

$$5 * 12 = \underline{\quad}$$

2. Simplify if possible.

A) $\frac{\quad}{\quad} = \frac{\quad}{\quad}$ or No simplification B) $\frac{\quad}{\quad} = \frac{\quad}{\quad}$ or No simplification

Practice Problems:

A) $\frac{2}{4} * \frac{1}{2} = ?$

B) $\frac{3}{7} * \frac{2}{9} = ?$

C) $\frac{1}{2} * \frac{4}{8} = ?$

How to divide fractions:

1. Reverse the second fraction (flip the numerator and denominator). This changes the problem from division to multiplication.

$$\frac{5}{3} \div \frac{1}{7} = \frac{5}{3} * \frac{7}{1}$$

$$\frac{1}{10} \div \frac{3}{2} = \frac{1}{10} * \frac{2}{3}$$

2. Multiply across the fractions, just as in multiplication.

$$\frac{5}{3} * \frac{7}{1} = \frac{35}{3}$$

$$5 * 7 = 35$$

$$3 * 1 = 3$$

$$\frac{1}{10} * \frac{2}{3} = \frac{2}{30}$$

$$1 * 2 = 2$$

$$10 * 3 = 30$$

3. Simplify the fraction if the numerator is divisible by or equal to the denominator.

$$\frac{35}{3} \quad \text{Not divisible, so no simplification}$$

$$\frac{2}{30} = \frac{1}{15} \quad 2 \text{ and } 30 \text{ are divisible by } 2.$$

Guided Problems:

$$A) \frac{1}{5} \div \frac{4}{7} = ?$$

$$B) \frac{2}{7} \div \frac{4}{3} = ?$$

1. Reverse the second fraction. $A) \frac{1}{5} \div \frac{4}{7} = - * -$

$$B) \frac{2}{7} \div \frac{4}{3} = - * -$$

2. Multiply across the fractions.

$$A) - * - = -$$

$$B) - * - = -$$

$$1 * 7 = \underline{\quad}$$

$$5 * 4 = \underline{\quad}$$

$$2 * 3 = \underline{\quad}$$

$$7 * 4 = \underline{\quad}$$

3. Simplify if possible.

$$A) - = - \quad \text{or No simplification} \quad B) - = - \quad \text{or No simplification}$$

Practice Problems:

$$A) \frac{1}{3} \div \frac{7}{2} = ?$$

$$B) \frac{3}{6} \div \frac{1}{4} = ?$$

$$C) \frac{1}{4} \div \frac{1}{10} = ?$$