MULTIPLICATION AND DIVISION ON FRACTION

Multiplication and division are part of the major operation performed on numbers in mathematics.

Multiplication. To multiply fractions in mathematics, we usually multiply numerator to numerator and denominator to denominator. Mathematically:

$$\frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}$$

Examples;

1. Simplify $\frac{1}{2} \times \frac{3}{5}$

   Solving

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

2. Simplify $1\frac{2}{3} \times 2\frac{1}{2}$

   Solving

   $1\frac{2}{3} \times 2\frac{1}{2} = \frac{5}{3} \times \frac{5}{2} = \frac{5 \times 5}{3 \times 2} = \frac{25}{6} = 4\frac{1}{6}$

Division. Division of fraction is just as multiplication. However, one ought to turn the divisor upside down and the division sign into multiplication sign and then proceed.

Mathematically;

$$\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c} = \frac{ad}{bc}$$

Examples

1. Simplify $\frac{2}{3} \div \frac{5}{3}$

   Solving

   $\frac{2}{3} \div \frac{5}{3} = \frac{2}{3} \times \frac{5}{4} = \frac{2 \times 5}{3 \times 4} = \frac{10}{12} = \frac{5}{6}$