



CLASS NOTES

Division of a fraction by a whole number

- To divide a fraction by a whole number, we multiply the fraction with the reciprocal of the whole number.

$$\begin{aligned} \text{Example: } \frac{2}{3} \div 4 &= \frac{2}{3} \div \frac{4}{1} \\ &= \frac{2}{3} \times \frac{1}{4} \\ &= \frac{2}{12} \\ &= \frac{1}{6} \end{aligned}$$

- To divide a mixed fraction by a whole number, first convert the mixed fractions to improper fractions and then solve.

$$\begin{aligned} \text{Example: } 2\frac{2}{3} \div 5 &= \frac{8}{3} \div \frac{5}{1} \\ &= \frac{8}{3} \times \frac{1}{5} \\ &= \frac{8}{15} \end{aligned}$$

Division of a fraction by another fraction

- To divide a fraction by another fraction, we multiply the dividend with the reciprocal of the divisor.

$$\begin{aligned} \text{Example: } \frac{2}{3} \div \frac{4}{5} &= \frac{2}{3} \times \frac{5}{4} \\ &= \frac{10}{12} \\ &= \frac{5}{6} \end{aligned}$$

- To divide a mixed fraction by another mixed fraction, first convert mixed fractions to improper fractions and then solve.



Example: $2\frac{1}{3} \div 3\frac{2}{5} = \frac{7}{3} \div \frac{17}{5}$

$$= \frac{7}{3} \times \frac{5}{17}$$
$$= \frac{35}{51}$$

