



CLASS NOTES

Division of Fractions

Reciprocal of a Fraction

Reciprocal of a fraction is obtained by interchanging the numerator and denominator or by inverting.

The non-zero numbers whose product with each other is 1, are called reciprocals of each other.

Example: Reciprocal of $\frac{2}{5} = \frac{5}{2}$

Product of $\frac{2}{5}$ and $\frac{5}{2}$ is 1

$$\text{i.e., } \frac{2}{5} \times \frac{5}{2} = 1$$

Division of Whole number by a Fraction

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

Example: $7 \div \frac{2}{5} = 7 \times \text{reciprocal of } \frac{2}{5}$

$$= 7 \times \frac{5}{2}$$

$$= \frac{35}{2}$$

$1 \div \frac{1}{2} = 1 \times \text{reciprocal of } \frac{1}{2}$

$$= 1 \times \frac{2}{1}$$

$$= 2$$

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



Example: $4 \div 2\frac{2}{5} = 4 \div \frac{12}{5}$

$$= 4 \times \text{reciprocal of } \frac{12}{5}$$
$$= 4 \times \frac{5}{12}$$
$$= \frac{20}{12}$$

