

VIDYA BHAWAN BALIKA VIDYAPEETH LAKHISARI

CLASS : VII

SUB: MATHEMATICS

Properties of Multiplication of Fractional Numbers

The properties of multiplication of fractional numbers are discussed here.

Property 1: If two fractional numbers are multiplied in either order, the product remains the same.

For Example:

$$\begin{aligned} \text{(i) } & \frac{2}{3} \times \frac{7}{5} \\ & = \frac{2 \times 7}{3 \times 5} \\ & = \frac{14}{15} \end{aligned}$$

Property 2: If a fractional number is multiplied by one, the product is the fractional number itself.

For Example:

$$\begin{aligned} \text{(i) } & \frac{7}{9} \times 1 \\ & = \frac{7}{9} \times 1 \\ & = \frac{7 \times 1}{9 \times 1} \\ & = \frac{7}{9} \end{aligned}$$

So, we observe that a fraction multiplied by 1 is the fraction itself.

Property 3: If a fractional number is multiplied by zero, the product is zero.

For Example:

$$\begin{aligned} \text{(i) } & \frac{3}{11} \times 0 \\ & = \frac{3 \times 0}{11} \\ & = 0 \end{aligned}$$

1. Find:

- (a) $\frac{21}{15}$ of 75
- (b) $\frac{1}{3}$ of 93
- (c) $\frac{4}{7}$ of 63
- (d) $\frac{9}{16}$ of 120

2. Find the product:

- (a) $\frac{2}{17} \times \frac{7}{12}$
- (b) $\frac{6}{25} \times \frac{3}{14}$
- (c) $\frac{9}{15} \times \frac{20}{3}$
- (d) $\frac{4}{17} \times \frac{4}{3}$
- (e) $\frac{6}{38} \times \frac{1}{2}$

3. Simplify:

- (a) $\frac{15}{7} \times 5 \times 1$
- (b) $\frac{2}{12} \times \frac{2}{34} \times 1$
- (c) $\frac{1}{7} \times 0 \times \frac{11}{25}$