

Exercise-2.3

1. Find:

(i) $\frac{1}{4}$ of (a) $\frac{1}{4}$ (b) $\frac{3}{5}$ (c) $\frac{4}{3}$

Solution:-

(a) $\frac{1}{4}$

$$= \frac{1}{4} \times \frac{1}{4}$$

$$= \frac{(1 \times 1)}{(4 \times 4)}$$

$$= \frac{1}{16}$$

(b) $\frac{3}{5}$

$$= \frac{1}{4} \times \left(\frac{3}{5}\right)$$

$$= \frac{1}{4} \times \left(\frac{3}{5}\right)$$

$$= \frac{(1 \times 3)}{(4 \times 5)}$$

$$= \frac{3}{20}$$

(c) $\left(\frac{4}{3}\right)$

$$= \frac{1}{4} \times \left(\frac{4}{3}\right)$$



← Input title



(c) $(4/3)$

$$= \frac{1}{4} \times (4/3)$$

$$= \frac{1}{4} \times (4/3)$$

$$= (1 \times 4) / (4 \times 3)$$

$$= (4/12)$$

$$= 1/3$$

(ii) $1/7$ of (a) $2/9$ (b) $6/5$ (c) $3/10$

Solution: =

(a) $2/9$

$$= (1/7) \times (2/9)$$

$$= (1/7) \times (2/9)$$

$$= (1 \times 2) / (7 \times 9)$$

$$= (2/63)$$

(b) $6/5$



← Input title



$$(b) \frac{6}{5}$$

$$= \left(\frac{1}{7}\right) \times \left(\frac{6}{5}\right)$$

$$= \left(\frac{1}{7}\right) \times \left(\frac{6}{5}\right)$$

$$= \frac{(1 \times 6)}{(7 \times 5)}$$

$$= \left(\frac{6}{35}\right)$$

$$(c) \frac{3}{10}$$

$$= \left(\frac{1}{7}\right) \times \left(\frac{3}{10}\right)$$

$$= \left(\frac{1}{7}\right) \times \left(\frac{3}{10}\right)$$

$$= \frac{(1 \times 3)}{(7 \times 10)}$$

$$= \left(\frac{3}{70}\right)$$

2. Multiply and reduce to lowest form (if possible):

$$(i) \left(\frac{2}{3}\right) \times \frac{2}{3}$$

Solution:-



Solution:-

$$= \frac{2}{3} \times \frac{8}{3}$$

$$= (2/3) \times (8/3)$$

$$= (2 \times 8) / (3 \times 3)$$

$$= (16/9)$$

$$= 1 \frac{7}{9}$$

(ii) $(2/7) \times (7/9)$

Solution-

$$= (2 \times 7) / (7 \times 9)$$

$$= (2 \times 1) / (1 \times 9)$$

$$= (2/9)$$

(iii) $(2/9) \times (6/1)$



$$(iii) \left(\frac{3}{8}\right) \times \left(\frac{6}{4}\right)$$

Solution:

$$= (3 \times 6) / (8 \times 4)$$

$$= (3 \times 3) / (4 \times 4)$$

$$= (9/16)$$

$$(iv) \left(\frac{9}{5}\right) \times \left(\frac{3}{5}\right)$$

Solution:-

$$= (9 \times 3) / (5 \times 5)$$

$$= (27/25)$$

$$= 1 \frac{2}{25}$$

$$(v) \left(\frac{1}{3}\right) \times \left(\frac{15}{8}\right)$$

Solution:





Input title



$$(v) (1/3) \times (15/8)$$

Solution:

$$= (1 \times 15) / (3 \times 8)$$

$$= (1 \times 5) / (1 \times 8)$$

$$= (5/8)$$

3. Multiply the following fractions:

$$(i) (2/5) \times 5 \frac{1}{4}$$

Solution:-

$$= 5 \frac{1}{4} = 21/4$$

$$= (2/5) \times (21/4)$$

$$= (2 \times 21) / (5 \times 4)$$

$$= (1 \times 21) / (5 \times 2)$$

$$= (21/10)$$

$$= \frac{1}{2} \frac{21}{10}$$



← Input title



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$$(ii) \quad 2 \times \left(\frac{7}{9}\right)$$

$$6\frac{\quad}{5}$$

Solution:-

$$2 = \frac{32}{5}$$

$$6\frac{\quad}{5}$$

$$= \left(\frac{32}{5}\right) \times \left(\frac{7}{9}\right)$$

$$= \frac{(32 \times 7)}{(5 \times 9)}$$

$$= \left(\frac{224}{45}\right)$$

$$= \frac{44}{45}$$

$$(iii) \quad \left(\frac{3}{2}\right) \times \frac{1}{5}$$

$$3$$

Solution:-

$$= \frac{1}{5} = \frac{16}{3}$$



← Input title



$$\text{(iii) } \left(\frac{3}{2}\right) \times \frac{1}{5\frac{1}{3}}$$

Solution:-

$$= \frac{1}{5\frac{1}{3}} = \frac{16}{3}$$

$$= \left(\frac{3}{2}\right) \times \left(\frac{16}{3}\right)$$

$$= \frac{(3 \times 16)}{(2 \times 3)}$$

$$= \frac{(1 \times 8)}{(1 \times 1)}$$

$$= 8$$

$$\text{(iv) } \left(\frac{5}{6}\right) \times \frac{3}{2\frac{1}{7}}$$

Solution:-

$$= \frac{3}{2\frac{1}{7}} = \frac{17}{7}$$

$$= \left(\frac{5}{6}\right) \times \left(\frac{17}{7}\right)$$



$$= (1 \times 8) / (1 \times 1)$$

$$= 8$$

$$(iv) \left(\frac{5}{6}\right) \times 2\frac{3}{7}$$

Solution:-

$$= 2\frac{3}{7} = \frac{17}{7}$$

$$= \left(\frac{5}{6}\right) \times \left(\frac{17}{7}\right)$$

$$= (5 \times 17) / (6 \times 7)$$

$$= (85/42)$$

$$= 2\frac{1}{42}$$

