



1. (i) ਹੇਠ ਲਿਖੀਆਂ ਭਿੰਨਾਂ ਦਾ $\frac{1}{3}$ ਭਾਗ ਪਤਾ ਕਰੋ।
 (a) $\frac{1}{5}$ (b) $\frac{2}{7}$ (c) $\frac{3}{2}$
 (ii) ਹੇਠਾਂ ਲਿਖੀਆਂ ਭਿੰਨਾਂ ਦਾ $\frac{3}{4}$ ਭਾਗ ਪਤਾ ਕਰੋ।
 (a) $\frac{2}{9}$ (b) $\frac{4}{7}$ (c) $\frac{8}{3}$
2. ਭਿੰਨਾਂ ਨੂੰ ਗੁਣਾ ਕਰਕੇ ਨਿਊਨਤਮ ਰੂਪ ਵਿੱਚ ਲਿਖੋ (ਜੇਕਰ ਸੰਭਵ ਹੋਵੇ)।
 (i) $\frac{2}{7} \times \frac{7}{9}$ (ii) $\frac{1}{3} \times \frac{15}{8}$ (iii) $\frac{12}{27} \times \frac{3}{9}$
 (iv) $\frac{2}{5} \times \frac{6}{4}$ (v) $\frac{81}{100} \times \frac{6}{7}$ (vi) $\frac{3}{5} \times \frac{5}{27}$
3. ਹੇਠ ਲਿਖੀਆਂ ਭਿੰਨਾਂ ਨੂੰ ਗੁਣਾ ਕਰੋ।
 (i) $\frac{3}{2} \times 5\frac{1}{3}$ (ii) $\frac{1}{7} \times 5\frac{2}{3}$ (iii) $2\frac{5}{6} \times 4$
 (iv) $4\frac{1}{3} \times 9\frac{1}{4}$ (v) $2\frac{2}{3} \times 3\frac{5}{8}$ (vi) $3\frac{1}{5} \times 2\frac{1}{4}$

ਭਿੰਨਾਂ ਅਤੇ ਦਸ਼ਮਲਵ

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4. ਹੇਠਾਂ ਲਿਖੀਆਂ ਵਿੱਚੋਂ ਕਿਹੜੀ ਭਿੰਨ ਵੱਡੀ ਹੈ ?
 (i) $\frac{3}{2}$ ਦਾ $\frac{2}{7}$ ਜਾਂ $\frac{5}{2}$ ਦਾ $\frac{3}{8}$ (ii) $\frac{1}{2}$ ਦਾ $\frac{6}{5}$ ਜਾਂ $\frac{1}{3}$ ਦਾ $\frac{4}{5}$
5. ਜੇਕਰ ਇੱਕ ਕਾਰ $105\frac{1}{3}$ ਕਿਲੋਮੀਟਰ ਪ੍ਰਤੀ ਘੰਟੇ ਦੀ ਰਫਤਾਰ ਨਾਲ ਚਲਦੀ ਹੈ ਤਾਂ $3\frac{2}{3}$ ਘੰਟਿਆਂ ਵਿੱਚ ਕਾਰ ਦੁਆਰਾ ਤੈਅ ਕੀਤੀ ਦੂਰੀ ਪਤਾ ਕਰੋ।
6. ਇੱਕ ਆਇਤਾਕਾਰ ਪਲਾਟ ਦੀ ਲੰਬਾਈ $29\frac{3}{7}$ m ਹੈ। ਜੇਕਰ ਪਲਾਟ ਦੀ ਚੌੜਾਈ $12\frac{8}{11}$ m ਹੈ ਤਾਂ ਪਲਾਟ ਦਾ ਖੇਤਰਫਲ ਪਤਾ ਕਰੋ।
7. ਜੇਕਰ ਇੱਕ ਮੀਟਰ ਕਪੜੇ ਦੀ ਕੀਮਤ ₹ 120 $\frac{1}{4}$ ਪ੍ਰਤੀ ਮੀਟਰ ਹੈ ਤਾਂ $4\frac{1}{3}$ ਮੀਟਰ ਕੱਪੜੇ ਦੀ ਕੀਮਤ ਪਤਾ ਕਰੋ।
8. ਬਹੁਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ-
 (i) $\frac{8}{3}$ ਦਾ $\frac{1}{4}$ ਹੈ।
 (a) $\frac{9}{7}$ (b) $\frac{8}{4}$ (c) $\frac{2}{3}$ (d) 1
 (ii) $\frac{3}{2} \times \frac{2}{3} = ?$
 (a) 1 (b) $\frac{5}{6}$ (c) 3 (d) $\frac{6}{5}$
 (iii) ਦੋ ਉਚਿਤ ਭਿੰਨਾਂ ਦੇ ਗੁਣਨਫਲ ਦਾ ਮੁੱਲ
 (a) ਦੋਵਾਂ ਉਚਿਤ ਭਿੰਨਾਂ ਨਾਲੋਂ ਵੱਧ ਹੁੰਦਾ ਹੈ।
 (b) ਦੋਵਾਂ ਉਚਿਤ ਭਿੰਨਾਂ ਨਾਲੋਂ ਘੱਟ ਹੁੰਦਾ ਹੈ।
 (c) ਦੋਵਾਂ ਦਿੱਤੀਆਂ ਭਿੰਨਾਂ ਦੇ ਵਿਚਕਾਰ ਹੁੰਦਾ ਹੈ।
 (d) ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕੋਈ ਨਹੀਂ।
9. ਪੜਤਾਲ ਕਰੋ ਕਿ ਹੇਠਾਂ ਦਿੱਤੇ ਸਮੀਕਰਣ ਸਹੀ ਹਨ ਜਾਂ ਗਲਤ ?
 (i) $1\frac{2}{3} \times 4\frac{5}{7} = 4\frac{10}{21}$? (ਸਹੀ/ਗਲਤ)
 (ii) $\frac{3}{4} \times \frac{2}{3} = \frac{2}{3} \times \frac{3}{4}$? (ਸਹੀ/ਗਲਤ)



EXERCISE - 2.3

1. Solve the following :

(i) $\frac{1}{3}$ of

(a) $\frac{1}{5}$

(b) $\frac{2}{7}$

(c) $\frac{3}{2}$

(ii) $\frac{3}{4}$ of

(a) $\frac{2}{9}$

(b) $\frac{4}{7}$

(c) $\frac{8}{3}$

2. Multiply the fractions and reduce it to the lowest form (If possible) :

(i) $\frac{2}{7} \times \frac{7}{9}$

(ii) $\frac{1}{3} \times \frac{15}{8}$

(iii) $\frac{12}{27} \times \frac{3}{9}$

(iv) $\frac{2}{5} \times \frac{6}{4}$

(v) $\frac{81}{100} \times \frac{6}{7}$

(vi) $\frac{3}{5} \times \frac{5}{27}$

3. Multiply the following fractions :

(i) $\frac{3}{2} \times 5\frac{1}{3}$

(ii) $\frac{1}{7} \times 5\frac{2}{3}$

(iii) $2\frac{5}{6} \times 4$

(iv) $4\frac{1}{3} \times 9\frac{1}{4}$

(v) $2\frac{2}{3} \times 3\frac{5}{8}$

(vi) $3\frac{1}{5} \times 2\frac{1}{4}$

4. Which fraction is greater in the following fractions ?

(i) $\frac{3}{2}$ of $\frac{2}{7}$ or $\frac{5}{2}$ of $\frac{3}{8}$

(ii) $\frac{1}{2}$ of $\frac{6}{5}$ or $\frac{1}{3}$ of $\frac{4}{5}$

5. If the speed of a car is $105\frac{1}{3}$ km/hr, find the distance covered by it in $3\frac{2}{3}$ hours.

6. The length of a rectangular plot of land is $29\frac{3}{7}$ m. If its breadth is $12\frac{8}{11}$ m, find its area.

7. If a cloth costs ₹ 120 $\frac{1}{4}$ per metre, find the cost of $4\frac{1}{3}$ metre of this cloth.

8. Multiple choice questions :

(i) $\frac{1}{4}$ of $\frac{8}{3}$ is

(a) $\frac{9}{7}$

(b) $\frac{8}{4}$

(c) $\frac{2}{3}$

(d) 1

(ii) $\frac{3}{2} \times \frac{2}{3} = ?$

(a) 1

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

(c) 3

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

(iii) The value of the product of two proper fractions is :

(a) greater than both of the proper fractions.

(b) lesser than both of the proper fractions.

(c) lie between the given two fractions.

(d) none of these

9. Check if the following equations are 'True' or 'False' :-

(i) $1\frac{2}{3} \times 4\frac{5}{7} = 4\frac{10}{21}$? (True/ False)

(ii) $\frac{3}{4} \times \frac{2}{3} = \frac{2}{3} \times \frac{3}{4}$? (True/ False)

MATH
VIIਅਭਿਆਸ - 2.3
Exercise - 2.3

①. ① ਹੇਠ ਲਿਖੀਆਂ ਭਿੰਨਾਂ ਦਾ $\frac{1}{3}$ ਭਾਗ ਪਤਾ ਕਰੋ :-

Solve the following :- $\frac{1}{3}$ of

① $\frac{1}{5}$

$$\frac{1}{5} \text{ ਦਾ } \frac{1}{3} = \frac{1}{5} \times \frac{1}{3}$$

$$= \frac{1 \times 1}{5 \times 3} = \frac{1}{15}$$

$$\frac{1}{3} \text{ of } \frac{1}{5} = \frac{1}{3} \times \frac{1}{5}$$

$$= \frac{1 \times 1}{3 \times 5} = \frac{1}{15}$$

② $\frac{2}{7}$ ਦਾ $\frac{1}{3}$

$$= \frac{2}{7} \times \frac{1}{3} = \frac{2 \times 1}{7 \times 3} = \frac{2}{21}$$

$$\frac{1}{3} \text{ of } \frac{2}{7} = \frac{1}{3} \times \frac{2}{7}$$

$$= \frac{1 \times 2}{3 \times 7} = \frac{2}{21}$$

③ $\frac{3}{2}$ ਦਾ $\frac{1}{3} = \frac{3}{2} \times \frac{1}{3}$

$$= \frac{3 \times 1}{2 \times 3} = \frac{3}{6} = \frac{1}{2}$$

$$\frac{1}{3} \text{ of } \frac{3}{2} = \frac{1}{3} \times \frac{3}{2}$$

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

①. ② ਹੇਠ ਲਿਖੀਆਂ ਭਿੰਨਾਂ ਦਾ $\frac{3}{4}$ ਭਾਗ ਪਤਾ ਕਰੋ :-
Solve the following :- $\frac{3}{4}$ of

① $\frac{2}{9}$ ਦਾ $\frac{3}{4} = \frac{2}{9} \times \frac{3}{4}$

$$= \frac{2 \times 3}{9 \times 4} = \frac{1 \times 1}{3 \times 2} = \frac{1}{6}$$

$$\frac{3}{4} \text{ of } \frac{2}{9} = \frac{3}{4} \times \frac{2}{9}$$

$$= \frac{3 \times 2}{4 \times 9} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$$

② $\frac{4}{7}$ ਦਾ $\frac{3}{4} = \frac{4}{7} \times \frac{3}{4}$

$$= \frac{4 \times 3}{7 \times 4} = \frac{3}{7}$$

$$\frac{3}{4} \text{ of } \frac{4}{7} = \frac{3}{4} \times \frac{4}{7}$$

$$= \frac{3 \times 4}{4 \times 7} = \frac{3}{7}$$

③ $\frac{8}{3}$ ਦਾ $\frac{3}{4} = \frac{8}{3} \times \frac{3}{4}$

$$= \frac{8 \times 3}{3 \times 4} = \frac{2 \times 1}{1 \times 1} = 2$$

$$\frac{3}{4} \text{ of } \frac{8}{3} = \frac{3}{4} \times \frac{8}{3}$$

$$= \frac{3 \times 8}{4 \times 3} = \frac{2}{1} = 2$$

Multiply the fractions and reduce it to lowest form.

(2)

$$\text{(I)} \quad \frac{2}{7} \times \frac{7}{9} = \frac{2 \times 7}{7 \times 9} = \frac{2}{9}$$

$$\text{(II)} \quad \frac{1}{3} \times \frac{15}{8} = \frac{1 \times 15}{3 \times 8} = \frac{1 \times 5}{1 \times 8} = \frac{5}{8}$$

$$\text{(III)} \quad \frac{12}{27} \times \frac{3}{9} = \frac{12 \times 3}{27 \times 9} = \frac{4 \times 1}{27 \times 3} = \frac{4 \times 1}{27 \times 1} = \frac{4}{27}$$

$$\text{(IV)} \quad \frac{2}{5} \times \frac{6}{4} = \frac{2 \times 6}{5 \times 4} = \frac{1 \times 6}{5 \times 2} = \frac{1 \times 3}{5 \times 1} = \frac{3}{5}$$

$$\text{(V)} \quad \frac{81}{100} \times \frac{6}{7} = \frac{81 \times 6}{100 \times 7} = \frac{81 \times 3}{50 \times 7} = \frac{243}{350}$$

$$\text{(VI)} \quad \frac{3}{5} \times \frac{5}{27} = \frac{3 \times 5}{5 \times 27} = \frac{3}{27} = \frac{1}{9}$$

(3) Multiply the following:-

$$\text{(I)} \quad \frac{3}{2} \times 5\frac{1}{3} \quad 5\frac{1}{3} = \frac{3 \times 5 + 1}{3} = \frac{15 + 1}{3} = \frac{16}{3}$$

$$= \frac{3}{2} \times \frac{16}{3} = \frac{3 \times 16}{2 \times 3} = \frac{8}{1} = 8$$

$$\text{(II)} \quad \frac{1}{7} \times 5\frac{2}{3} \quad 5\frac{2}{3} = \frac{3 \times 5 + 2}{3} = \frac{15 + 2}{3} = \frac{17}{3}$$

$$= \frac{1}{7} \times \frac{17}{3} = \frac{1 \times 17}{7 \times 3} = \frac{17}{21}$$

III) $2\frac{5}{6} \times 4$

$2\frac{5}{6} = \frac{6 \times 2 + 5}{6} = \frac{12 + 5}{6} = \frac{17}{6}$

$= \frac{17}{6} \times \frac{4}{1} = \frac{17 \times 4}{6 \times 1} = \frac{17 \times 2}{3 \times 1} = \frac{34}{3} = 11\frac{1}{3}$

IV) $4\frac{1}{3} \times 9\frac{1}{4}$

$4\frac{1}{3} = \frac{3 \times 4 + 1}{3} = \frac{12 + 1}{3} = \frac{13}{3}$

$9\frac{1}{4} = \frac{4 \times 9 + 1}{4} = \frac{36 + 1}{4} = \frac{37}{4}$

$\begin{array}{r} 12 \overline{) 481} \quad (40) \\ -48 \\ \hline 1 \end{array}$

$= \frac{13}{3} \times \frac{37}{4} = \frac{13 \times 37}{3 \times 4} = \frac{481}{12} = 40\frac{1}{12}$

V) $2\frac{2}{3} \times 3\frac{5}{8}$

$2\frac{2}{3} = \frac{3 \times 2 + 2}{3} = \frac{6 + 2}{3} = \frac{8}{3}$

$3\frac{5}{8} = \frac{8 \times 3 + 5}{8} = \frac{24 + 5}{8} = \frac{29}{8}$

$= \frac{8}{3} \times \frac{29}{8}$

$= \frac{8 \times 29}{3 \times 8} = \frac{1 \times 29}{3 \times 1} = \frac{29}{3} = 9\frac{2}{3}$

$\begin{array}{r} 3 \overline{) 29} \quad (9) \\ -27 \\ \hline 2 \end{array}$

VI) $3\frac{1}{5} \times 2\frac{1}{4}$

$3\frac{1}{5} = \frac{5 \times 3 + 1}{5} = \frac{15 + 1}{5} = \frac{16}{5}$

$2\frac{1}{4} = \frac{4 \times 2 + 1}{4} = \frac{8 + 1}{4} = \frac{9}{4}$

$\begin{array}{r} 5 \overline{) 36} \quad (7) \\ -35 \\ \hline 1 \end{array}$

$= \frac{16}{5} \times \frac{9}{4} = \frac{16 \times 9}{5 \times 4} = \frac{4 \times 9}{5 \times 1} = \frac{36}{5} = 7\frac{1}{5}$

4) Which fraction is greater in the following pair?
 4) कौन फ़्रैक्शन बिग़र बिस्की बिस्की होंगी?

I) $\frac{3}{2}$ or $\frac{2}{7}$ and $\frac{5}{2}$ or $\frac{3}{8}$

$\frac{3}{2}$ or $\frac{2}{7} = \frac{3}{2} \times \frac{2}{7} = \frac{3 \times 2}{2 \times 7} = \frac{3}{7}$

$\frac{5}{2}$ or $\frac{3}{8} = \frac{5}{2} \times \frac{3}{8} = \frac{15}{16}$

$\frac{3}{2}$ or $\frac{2}{7}$ or $\frac{5}{2}$ or $\frac{3}{8}$
 $\frac{3 \times 2}{2 \times 7} = \frac{3}{7}$ or $\frac{5 \times 3}{2 \times 8} = \frac{15}{16}$

$$\frac{3}{7} \times \frac{16}{16} = \frac{48}{112}$$

$$\frac{15}{16} \times \frac{7}{7} = \frac{105}{112}$$

make the
Equivalent Fractions
समान छिन्न छिन्न करने:-

Here $48 < 105$

$$\therefore \frac{48}{112} < \frac{105}{112}$$

$$\therefore \text{छोटी छिन्न} = \frac{5}{2} \text{ र } \frac{3}{8}$$

$$\text{Greater Fraction} = \frac{5}{2} \text{ व } \frac{3}{8}$$

(ii) $\frac{1}{2}$ र $\frac{6}{5}$ मा $\frac{1}{3}$ र $\frac{4}{5}$ $\frac{1}{2}$ व $\frac{6}{5}$ or $\frac{1}{3}$ व $\frac{4}{5}$

$$\frac{1}{2} \times \frac{6}{5} \text{ मा } \frac{1}{3} \times \frac{4}{5}$$

$$\frac{1 \times 6}{2 \times 5} \text{ मा } \frac{1 \times 4}{3 \times 5}$$

$$\frac{3}{5} \text{ मा } \frac{4}{15}$$

$$\frac{3}{5} \times \frac{15}{15} = \frac{45}{75}$$

$$\frac{4}{15} \times \frac{5}{5} = \frac{20}{75}$$

Here $45 > 20$

$$\therefore \frac{45}{75} > \frac{20}{75}$$

$$\therefore \text{छोटी छिन्न} = \frac{1}{2} \text{ र } \frac{6}{5}$$

$$\text{greater fraction} = \frac{1}{2} \text{ व } \frac{6}{5}$$

5. Ans. = $\text{Speed of car} = 105 \frac{1}{3} \text{ km} = \frac{105 \times 3 + 1}{3} = \frac{315 + 1}{3} = \frac{316}{3}$

$\text{Total Hours} = 3 \frac{2}{3} = \frac{3 \times 3 + 2}{3} = \frac{9 + 2}{3} = \frac{11}{3}$

$\text{Distance Covered} = 105 \frac{1}{3} \times 3 \frac{2}{3}$

$$= \frac{316}{3} \times \frac{11}{3} = \frac{3476}{9}$$

$= 386 \frac{2}{9} \text{ km.}$

$$\begin{array}{r} 9 \overline{) 3476} \quad 386 \\ \underline{-27} \\ 77 \\ \underline{-72} \\ 56 \\ \underline{-54} \\ 2 \end{array}$$

6. Ans. = $\text{Length} = 29 \frac{3}{7} \text{ m} = \frac{29 \times 7 + 3}{7} = \frac{203 + 3}{7} = \frac{206}{7} \text{ m}$

$\text{Breadth} = 12 \frac{8}{11} \text{ m} = \frac{12 \times 11 + 8}{11} = \frac{132 + 8}{11} = \frac{140}{11} \text{ m}$

$\text{Area of Rectangle} = L \times B.$

$= 29 \frac{3}{7} \text{ m} \times 12 \frac{8}{11} \text{ m}$

$= \frac{206}{7} \text{ m} \times \frac{140}{11} \text{ m}$

$= \frac{206 \times 140}{7 \times 11} \text{ m}^2$

$= \frac{206 \times 20}{11} \text{ m}^2$

$= \frac{4120}{11} \text{ m}^2$

$= 374 \frac{6}{11} \text{ m}^2$

$$\begin{array}{r} 206 \\ \times 20 \\ \hline 4120 \end{array}$$

$$\begin{array}{r} 374 \overline{) 4120} \quad 374 \\ \underline{-35} \\ 62 \\ \underline{-56} \\ 60 \\ \underline{-56} \\ 4 \end{array}$$

7. Ans. = 1 मीटर कपड़े की कीमत = $120 \frac{1}{4} = \frac{480+1}{4} = \frac{481}{4}$ Rs.
 Cost of 1 metre

Total cloth $\frac{13}{3}$ मीटर = $4 \frac{1}{3} \text{ m} = \frac{12+1}{3} = \frac{13}{3} \text{ m}$

$\therefore$ कीमत cost = $\frac{481}{4} \times \frac{13}{3} = \frac{6253}{12}$

$$\begin{array}{r} 481 \\ \times 13 \\ \hline 1443 \\ 4810 \\ \hline 6253 \end{array}$$

= $521 \frac{1}{12}$ Rs.

$$\begin{array}{r} 12 \overline{) 6253} \quad 521 \\ \underline{-60} \\ 25 \\ \underline{-24} \\ 13 \\ \underline{-12} \\ 1 \end{array}$$

8. Multiple choice Questions:-

(I) $\frac{1}{4}$ of $\frac{8}{3}$ is = $\frac{1}{4} \times \frac{8}{3} = \frac{1 \times 8}{4 \times 3} = \frac{2}{3} = \textcircled{C}$

(II) $\frac{3}{2} \times \frac{2}{3} = \frac{3 \times 2}{2 \times 3} = \frac{1}{1} = 1 = \textcircled{A}$

(III) Ans. = (b)

9. True or False:-

(I) $1 \frac{2}{3} \times 4 \frac{5}{7} = 4 \frac{10}{21}$ (T/F)

LHS = $1 \frac{2}{3} \times 4 \frac{5}{7} = \frac{5}{3} \times \frac{33}{7} = \frac{165}{21} = 7 \frac{18}{21} \neq \text{RHS.}$

पस गलत है। This is False

(II) $\frac{3}{4} \times \frac{2}{3} = \frac{2}{3} \times \frac{3}{4}$ (T/F)

LHS = $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

RHS = $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$

LHS = RHS = $\frac{6}{12} \therefore$ This is True.
 पस सही है।