



SUBJECT : MATHEMATICS
CHAPTER NUMBER: 03
CHAPTER NAME : FRACTIONS

CHANGING YOUR TOMORROW

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Learning outcomes

Students will be able to

- Add and subtract fractions with like/ unlike denominators
- Multiply a fraction with an integer , two or more fractions
- Divide one quantity by some other quantity



5.(viii) $2/3 \times 1 \frac{1}{4} \div 3/7$ of $2 \frac{5}{8}$

It can be written as

$$= 2/3 \times 5/4 \div 3/7 \text{ of } 21/8$$

So we get

$$= 2/3 \times 5/4 \div 9/8$$

Here

$$= 2/3 \times 5/4 \times 8/9$$

$$= 20/27$$

(xii) $4/5$ of $7/15 \div 8/9$

From BODMAS rule

$$= 28/75 \div 8/9$$

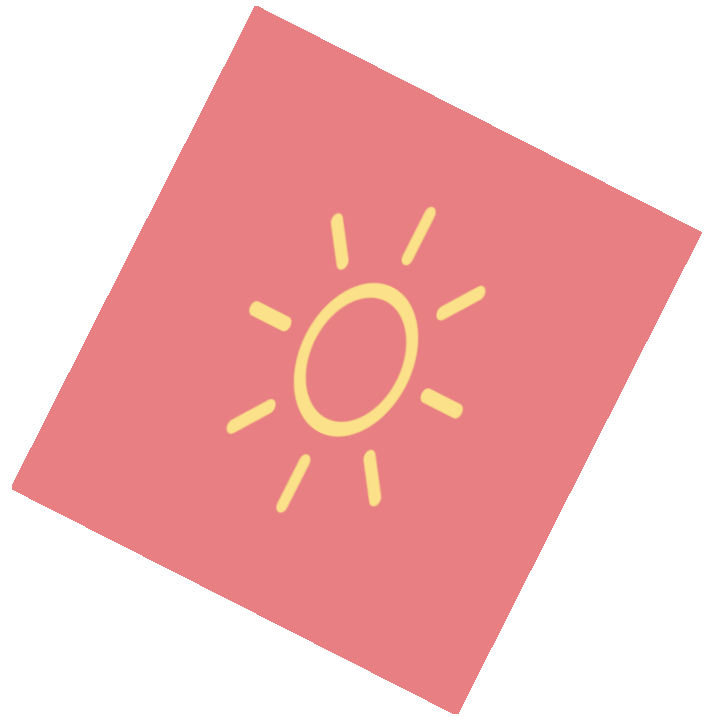
So we get

$$= 28/75 \times 9/8$$

By further calculation

$$= (7 \times 3) / (25 \times 2)$$

$$= 21/50$$



9. What should be subtracted from $8 \frac{3}{4}$ to get $2 \frac{2}{3}$?

Solution:

$$\text{Required number} = 8 \frac{3}{4} - 2 \frac{2}{3}$$

It can be written as

$$= \frac{35}{4} - \frac{8}{3}$$

LCM of 4 and 3 is 12

$$= \frac{(35 \times 3)}{(4 \times 3)} - \frac{(8 \times 4)}{(3 \times 4)}$$

By further calculation

$$= \frac{(105 - 32)}{12}$$

$$= \frac{73}{12}$$

$$= 6 \frac{1}{12}$$

12. A motor cycle runs $31\frac{1}{4}$ km consuming 1 litre of petrol. How much distance will it run consuming $1\frac{3}{5}$ litre of petrol?

Solution:

It is given that

Distance covered consuming 1 litre petrol =

$$31\frac{1}{4} \text{ km} = \frac{125}{4} \text{ km}$$

So the distance covered consuming $1\frac{3}{5}$

$$\text{litre petrol} = \frac{125}{4} \times \frac{8}{5}$$

$$= \frac{1000}{20}$$

$$= 50 \text{ km}$$

16. A rod of length $2 \frac{2}{5}$ metre is divided into five equal parts. Find the length of each part so obtained.

Solution:

Length of rod = $2 \frac{2}{5}$ m

It is given that the length of rod should be divided into 5 equal parts

So the length of each part of rod = $2 \frac{2}{5} \div 5$

It can be written as

$$= \frac{12}{5} \times \frac{1}{5}$$

$$= \frac{12}{25} \text{ m}$$

18. Cost of $3\frac{5}{7}$ litres of oil is Rs $83\frac{1}{2}$. Find the cost of one litre oil.

Solution:

It is given that

Cost of $3\frac{5}{7}$ litres of oil = \square $83\frac{1}{2}$

So the cost of one litre oil = \square $83\frac{1}{2} \div 3\frac{5}{7}$

It can be written as

$$= \square 167/2 \div 26/7$$

We get

$$= \square 167/2 \times 7/26$$

$$= \square 1169/52$$

$$= \square 22\frac{25}{52}$$

19. The product of two numbers is $20 \frac{5}{7}$. If one of these numbers is $6 \frac{2}{3}$, find the other.

Solution:

It is given that

$$\text{Product of two numbers} = 20 \frac{5}{7} = \frac{145}{7}$$

$$\text{One number} = 6 \frac{2}{3} = \frac{20}{3}$$

$$\text{So the other number} = \frac{145}{7} \div \frac{20}{3}$$

By further calculation

$$= \frac{145}{7} \times \frac{3}{20}$$

So we get

$$= \frac{87}{28}$$

$$= 3 \frac{3}{28}$$

20. By what number should $5\frac{5}{6}$ be multiplied to get $3\frac{1}{3}$?

Solution:

Here the required number = $3\frac{1}{3} \div 5\frac{5}{6}$

It can be written as

$$= \frac{10}{3} \div \frac{35}{6}$$

So we get

$$= \frac{10}{3} \times \frac{6}{35}$$

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

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H.W
Exercise 3C Q.No. 4 , 5

THANKING YOU
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