

Class: 7th

Unit - I

Chapter No. 1

INTEGERS

Division of Integers (Ex = 1C)

Q1: Divide :

i) 65 by -13

$$= 65 \div (-13)$$

$$= \frac{65}{-13} = -5$$

vi) -72 by -18

$$= (-72) \div (-18)$$

$$= \frac{-72}{-18} = 4$$

ix) 0 by -31

$$= 0 \div (-31)$$

$$= \frac{0}{-31} = 0$$

xii) -8 by 1

$$= (-8) \div 1$$

$$= \frac{-8}{1} = -8$$

Chapter NO. 21

Collection and organisation of data.

Ex = 21A

Q2:- A die was thrown 20 times and the following outcomes were recorded :

5, 2, 1, 3, 4, 4, 5, 6, 2, 2, 4, 5, 5, 6, 2, 2, 4, 5, 5, 1.

Arrange the above data in ascending order and prepare the frequency table.

Sol: Arranging the given data in ascending order, we get
1, 1, 2, 2, 2, 2, 2, 3, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 6, 6

NO. of outcomes	Tally marks	Frequency
1		2
2		5
3	I	1
4		4
5	I	6
6		2

Q6: Find the mean of first five natural numbers.

Sol: First five natural numbers are :
1, 2, 3, 4, 5

$$\begin{aligned}\therefore \text{Mean} &= \frac{\text{sum of observations}}{\text{NO. of observations}} \\ &= \frac{1+2+3+4+5}{5} \\ &= \frac{15}{5} = 3\end{aligned}$$

Q11: The following table shows the weights (in kg) of 15 workers in a factory: (2)

Weight (in kg)	60	63	66	72	75
Number of workers	4	5	3	1	2

Calculate the mean weight.

Sol: For calculating the mean, we prepare the table given below:

Weight (in kg) (x_i)	No. of workers (f_i)	($f_i \times x_i$)
60	4	240
63	5	315
66	3	198
72	1	72
75	2	150
	$\Sigma f_i = 15$	$\Sigma (f_i \times x_i) = 975$

$$\begin{aligned}\therefore \text{Mean weight} &= \frac{\Sigma (f_i \times x_i)}{\Sigma f_i} \\ &= \frac{975}{15} \\ &= 65 \text{ kg}\end{aligned}$$

$$\underline{\underline{Ex = 218}}$$

Q1: Find the median of:

i) 3, 11, 7, 2, 5, 9, 9, 2, 10

Arranging the given data in ascending order, we get

2, 2, 3, 5, 7, 9, 9, 10, 11

Here $n = 9$, which is odd.

$\therefore$ Median = value of $\frac{1}{2}(9+1)^{\text{th}}$ term

= value of $\frac{1}{2}(10)^{\text{th}}$ term

= value of 5^{th} term

= 7

Q2: Find the median of:

i) 10, 32, 17, 19, 21, 22, 9, 35

Arranging the given data in ascending order, we get

9, 10, 17, 19, 21, 22, 32, 35

Here $n = 8$, which is even.

$\therefore$ Median = $\frac{1}{2} \cdot \left\{ \left(\frac{n}{2} \right)^{\text{th}} \text{ term} + \left(\frac{n}{2} + 1 \right)^{\text{th}} \text{ term} \right\}$

= $\frac{1}{2} \left\{ \left(\frac{8}{2} \right)^{\text{th}} \text{ term} + \left(\frac{8}{2} + 1 \right)^{\text{th}} \text{ term} \right\}$

= $\frac{1}{2} \{ 4^{\text{th}} \text{ term} + 5^{\text{th}} \text{ term} \}$

= $\frac{1}{2} \{ 19 + 21 \}$

= $\frac{1}{2} (40)$

= 20

Q4: Find the median of first 10 even numbers.

Sol:- First 10 even numbers are :

2, 4, 6, 8, 10, 12, 14, 16, 18, 20 .

Here, $n = 10$, which is even .

$$\begin{aligned}\therefore \text{Median} &= \frac{1}{2} \cdot \left\{ \left(\frac{n}{2} \right)^{\text{th}} \text{ term} + \left(\frac{n}{2} + 1 \right)^{\text{th}} \text{ term} \right\} \\ &= \frac{1}{2} \left\{ \left(\frac{10}{2} \right)^{\text{th}} \text{ term} + \left(\frac{10}{2} + 1 \right)^{\text{th}} \text{ term} \right\} \\ &= \frac{1}{2} \left\{ 5^{\text{th}} \text{ term} + 6^{\text{th}} \text{ term} \right\} \\ &= \frac{1}{2} \{ 10 + 12 \} \\ &= \frac{1}{2} (22) \\ &= 11\end{aligned}$$

Q8: Find the median weight for the following data :

weight (in kg)	45	46	48	50	52	54	55
Number of boys	8	5	6	9	7	4	2

Sol: preparing the cumulative frequency table, we have :

weight (in kg) (x_i)	Number of boys (f_i)	Cumulative frequency
45	8	8
46	5	13
48	6	19
50	9	28
52	7	35
54	4	39
55	2	41

Number of terms, $N = 41$, which is odd

$$\therefore \text{Median weight} = \text{value of } \frac{1}{2}(N+1)^{\text{th}} \text{ term}$$

$$= \text{value of } \frac{1}{2}(41+1)^{\text{th}} \text{ term}$$

$$= \text{value of } \frac{1}{2}(42)^{\text{th}} \text{ term}$$

$$= \text{value of } 21^{\text{st}} \text{ term}$$

$$= 50$$

Q10: The heights (in cm) of 50 students of a class are given below:

Height (in cm)	156	154	155	151	157	152	153
No. of students	8	4	10	6	7	3	12

Find the median weight.

Sol: Arrange the terms in ascending order, we get

Height (in cm) (x_i)	151	152	153	154	155	156	157
No. of students (f_i)	6	3	12	4	10	8	7

Now, preparing the C. frequency table, we have

Height (in cm) (x_i)	No. of students (f_i)	Cumulative frequency
151	6	6
152	3	9
153	12	21
154	4	25
155	10	35
156	8	43
157	7	50

Number of terms, $N = 50$, which is even.

(4)

$$\begin{aligned}\therefore \text{Median height} &= \frac{1}{2} \left\{ \left(\text{value of } \frac{N}{2}^{\text{th}} \text{ term} \right) + \left[\text{value of } \left(\frac{N}{2} + 1 \right)^{\text{th}} \text{ term} \right] \right\} \\ &= \frac{1}{2} \left\{ \left(\text{value of } \frac{50}{2}^{\text{th}} \text{ term} \right) + \left[\text{value of } \left(\frac{50}{2} + 1 \right)^{\text{th}} \text{ term} \right] \right\} \\ &= \frac{1}{2} \left\{ \left(\text{value of } 25^{\text{th}} \text{ term} \right) + \left(\text{value of } 26^{\text{th}} \text{ term} \right) \right\} \\ &= \frac{1}{2} (154 + 155) \\ &= \frac{1}{2} (309) \\ &= 154.5 \text{ cm}\end{aligned}$$

Ex = 21C

Q1: Find the mode of the data:

i, 10, 8, 4, 7, 8, 11, 15, 8, 6, 8

Arranging the given data in ascending order, we get

4, 6, 7, 8, 8, 8, 8, 10, 11, 15

clearly, 8 occurs maximum number of times.

$\therefore \text{Mode} = 8$

Q3: Daily wages of 45 workers in a factory are given below:

Daily wages (in ₹)	100	125	150	175	200
Number of workers	6	8	9	12	10

Find the median and the mean.
using empirical formula, calculate its mode.

Daily wages (in ₹) (x_i)	Number of workers (f_i)	Cumulative frequency	($f_i \times x_i$)
100	6	6	600
125	8	14	1000
150	9	23	1350
175	12	35	2100
200	10	45	2000
	$N = \sum f_i = 45$		$\sum (f_i \times x_i) = 7050$

Here, $N = \sum f_i = 45$, which is odd.

$$\begin{aligned}
 \therefore \text{Median} &= \text{value of } \left(\frac{N+1}{2}\right)^{\text{th}} \text{ term} \\
 &= \text{value of } \left(\frac{45+1}{2}\right)^{\text{th}} \text{ term} \\
 &= \text{value of } \left(\frac{46}{2}\right)^{\text{th}} \text{ term} \\
 &= \text{value of } 23^{\text{rd}} \text{ term} \\
 &= ₹ 150
 \end{aligned}$$

$$\text{Also, mean} = \frac{\sum (f_i \times x_i)}{\sum f_i} = \frac{7050}{45} = ₹ 156.67$$

$$\begin{aligned}
 \therefore \text{Mode} &= 3(\text{median}) - 2(\text{mean}) \\
 &= 3(150) - 2(156.67) \\
 &= 450 - 313.34 \\
 &= ₹ 136.66
 \end{aligned}$$

Q5: The following table shows the weight of 12 players: (2)

Weight (in kg)	48	50	52	54	58
No. of players	4	3	2	2	1

Find the median and mean weights.
Using empirical formula, calculate its mode.

Weight (in kg) (x_i)	No. of players (f_i)	Cumulative freq.	($f_i \times x_i$)
48	4	4	192
50	3	7	150
52	2	9	104
54	2	11	108
58	1	12	58
	$N = \sum f_i = 12$		$\sum (f_i \times x_i) = 612$

Here, $N = \sum f_i = 12$, which is even.

$$\begin{aligned}
 \therefore \text{median} &= \frac{1}{2} \left\{ \text{value of } \left(\frac{N}{2} \right)^{\text{th}} \text{ term} + \left[\text{value of } \left(\frac{N}{2} + 1 \right)^{\text{th}} \text{ term} \right] \right\} \\
 &= \frac{1}{2} \left\{ \text{value of } \left(\frac{12}{2} \right)^{\text{th}} \text{ term} + \left[\text{value of } \left(\frac{12}{2} + 1 \right)^{\text{th}} \text{ term} \right] \right\} \\
 &= \frac{1}{2} \left\{ \text{value of } 6^{\text{th}} \text{ term} + \text{value of } 7^{\text{th}} \text{ term} \right\} \\
 &= \frac{1}{2} (50 + 50) \\
 &= \frac{1}{2} (100) \\
 &= 50 \text{ kg}
 \end{aligned}$$

$$\text{Also, mean} = \frac{\sum (f_i \times x_i)}{\sum f_i} = \frac{612}{12} = 51 \text{ kg}$$

$$\begin{aligned}
 \therefore \text{mode} &= 3(\text{median}) - 2(\text{mean}) \\
 &= 3(50) - 2(51) \\
 &= 150 - 102 = 48 \text{ kg}
 \end{aligned}$$

Chapter NO. 22

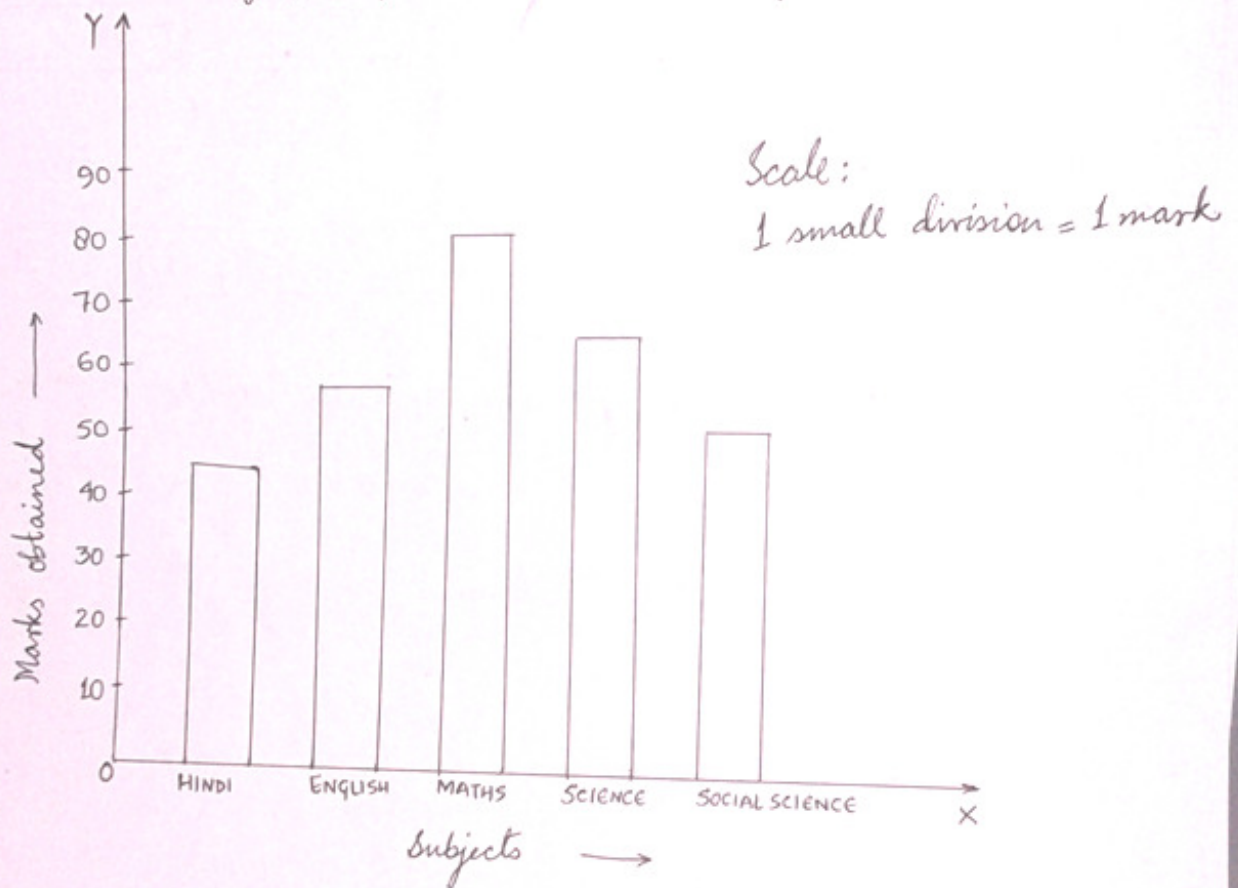
Bar graphs

Ex = 22

Q1: The marks of a student in different subjects are given below:

Subject	Hindi	English	Maths	Science	Social Science
Marks	43	56	80	65	50

Draw a bar graph from the above information.



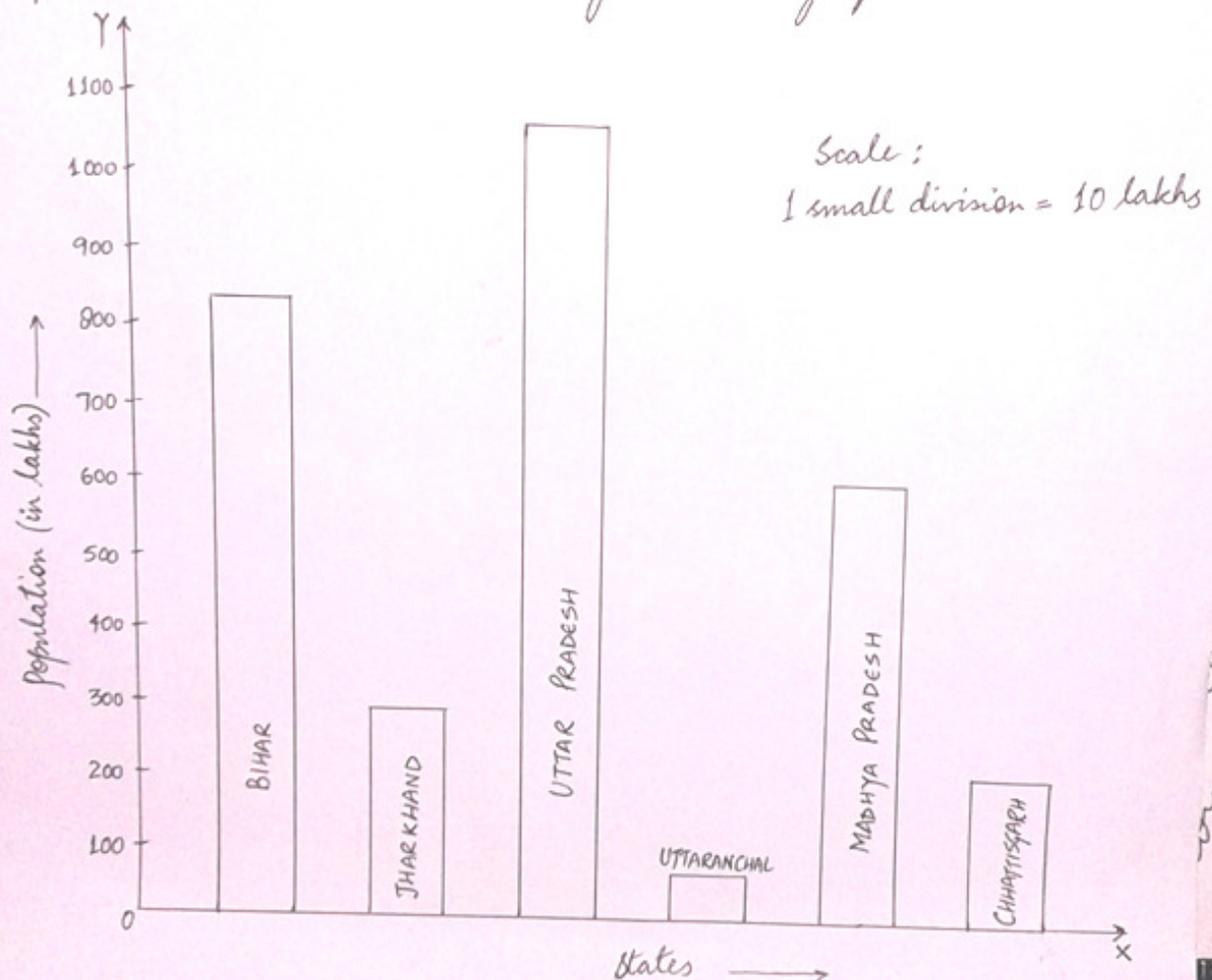
Bar graph showing marks obtained by a student in five subjects.

Q6: The population (in lakhs) of six Indian states as estimated in 2001 is given below.

⑥

state	Population (in lakhs)
Bihar	820
Jharkhand	270
Uttar Pradesh	1060
Uttaranchal	80
Madhya Pradesh	600
Chhattisgarh	210

Represent the above data by a bar graph.



Bar graph showing population of six Indian states.

Q16:- Question on book.

- i) The bar graph shows the marks obtained by a student in various subjects in an examination.
- ii) The student is very good in Mathematics.
- iii) He is poor in Hindi.
- iv) Average = $\frac{\text{sum of observations}}{\text{no. of observations}}$

$$= \frac{60 + 35 + 75 + 50 + 60}{5}$$

$$= \frac{280}{5}$$

$$= 56$$

Class : 7th

①

UNIT - I

CHAPTER No : 2

FRACTIONS

Ex → 2A

Qno1) Compare the fractions :

i $\frac{5}{8}$ and $\frac{7}{12}$

Sol) By cross multiplication, we have :

$$5 \times 12 = 60 \quad \text{and} \quad 8 \times 7 = 56$$

$$\text{But, } 60 > 56$$

$$\therefore \frac{5}{8} > \frac{7}{12}$$

(Do remaining parts)

Qno2) Arrange the following fraction in ascending order :

i $\frac{3}{4}, \frac{5}{6}, \frac{7}{9}, \frac{11}{12}$

Sol) The given fractions are $\frac{3}{4}, \frac{5}{6}, \frac{7}{9}, \frac{11}{12}$

LCM of 4, 6, 9, 12

$$= (3 \times 2 \times 2 \times 3) = 36$$

3	4, 6, 9, 12
2	4, 2, 3, 4
2	2, 1, 3, 2
3	1, 1, 3, 1
	1, 1, 1, 1

Now, let us change each of the given fractions into an equivalent fraction having 36 as its denominator.

$$\text{Now, } \frac{3}{4} = \frac{3 \times 9}{4 \times 9} = \frac{27}{36}$$

$$\frac{5}{6} = \frac{5 \times 6}{6 \times 6} = \frac{30}{36}$$

$$\frac{7}{9} = \frac{7 \times 4}{9 \times 4} = \frac{28}{36}$$

$$\frac{11}{12} = \frac{11 \times 3}{12 \times 3} = \frac{33}{36}$$

$$\text{Clearly, } \frac{27}{36} < \frac{28}{36} < \frac{30}{36} < \frac{33}{36}$$

$$\text{Hence } \frac{3}{4} < \frac{7}{9} < \frac{5}{6} < \frac{11}{12} \quad (\text{Do remaining parts})$$

Q. NO. 3) Arrange the following fractions in descending order:

$$i) \frac{3}{4}, \frac{7}{8}, \frac{7}{12}, \frac{17}{24}$$

Sol) The given fractions are $\frac{3}{4}, \frac{7}{8}, \frac{7}{12}, \frac{17}{24}$

$$\begin{aligned} \text{LCM of } 4, 8, 12, 24 \\ = (2 \times 2 \times 2 \times 3) = 24 \end{aligned}$$

2	4, 8, 12, 24
2	2, 4, 6, 12
2	1, 2, 3, 6
3	1, 1, 3, 3
	1, 1, 1, 1

Now, let us change each of the given fractions into an equivalent fraction having 36 as its denominator.

$$\text{Now, } \frac{3}{4} = \frac{3 \times 9}{4 \times 9} = \frac{27}{36}$$

$$\frac{5}{6} = \frac{5 \times 6}{6 \times 6} = \frac{30}{36}$$

$$\frac{7}{9} = \frac{7 \times 4}{9 \times 4} = \frac{28}{36}$$

$$\frac{11}{12} = \frac{11 \times 3}{12 \times 3} = \frac{33}{36}$$

$$\text{Clearly, } \frac{27}{36} < \frac{28}{36} < \frac{30}{36} < \frac{33}{36}$$

$$\text{Hence } \frac{3}{4} < \frac{7}{9} < \frac{5}{6} < \frac{11}{12} \quad (\text{Do remaining parts})$$

Q. NO. 3) Arrange the following fractions in descending order:

$$i) \frac{3}{4}, \frac{7}{8}, \frac{7}{12}, \frac{17}{24}$$

Sol) The given fractions are $\frac{3}{4}, \frac{7}{8}, \frac{7}{12}, \frac{17}{24}$

$$\begin{aligned} \text{LCM of } 4, 8, 12, 24 \\ = (2 \times 2 \times 2 \times 3) = 24 \end{aligned}$$

2	4, 8, 12, 24
2	2, 4, 6, 12
2	1, 2, 3, 6
3	1, 1, 3, 3
	1, 1, 1, 1

(2)

Now, let us change each of the given fractions into an equivalent fraction having 24 as its denominator.

$$\text{Now, } \frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$$

$$\frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}$$

$$\frac{7}{12} = \frac{7 \times 2}{12 \times 2} = \frac{14}{24}$$

$$\frac{17}{24} = \frac{17 \times 1}{24 \times 1} = \frac{17}{24}$$

$$\text{Clearly, } \frac{21}{24} > \frac{18}{24} > \frac{17}{24} > \frac{14}{24}$$

$$\text{Hence } \underline{\underline{\frac{7}{8} > \frac{3}{4} > \frac{17}{24} > \frac{7}{12}}} \quad (\text{Do remaining parts})$$

Qno4) Reenu got $\frac{2}{7}$ part of an apple while Sonal got $\frac{4}{5}$ part of it. Who got the larger part and by how much?

Sol) Fraction of apple recieved by Reenu = $\frac{2}{7}$

Fraction of apple recieved by Sonal = $\frac{4}{5}$

Now comparing fractions $\frac{2}{7}$ and $\frac{4}{5}$

By cross multiplication, we have

$$2 \times 5 = 10 \quad \text{and} \quad 7 \times 4 = 28$$

$$\text{But, } 10 < 28$$

$$\therefore \frac{2}{7} < \frac{4}{5}$$

$$\text{Also } \frac{4}{5} - \frac{2}{7}$$

$$= \frac{28 - 10}{35} = \frac{18}{35}$$

∴ Sonal recieved more than Reenu by $\frac{18}{35}$.

Qnos) Find the sum of :

$$i) \frac{5}{9} + \frac{3}{9}$$

$$Sol) \frac{5+3}{9} = \frac{8}{9}$$

$$ii) 3\frac{4}{5} + 2\frac{3}{10} + 1\frac{1}{15}$$

$$\frac{5 \times 3 + 4}{5} + \frac{10 \times 2 + 3}{10} + \frac{15 \times 1 + 1}{15}$$

$$\frac{19}{5} + \frac{23}{10} + \frac{16}{15}$$

$$\begin{aligned} \text{LCM of } 5, 10 \times 15 \\ &= (5 \times 2 \times 3) \\ &= 30 \end{aligned}$$

$$\begin{array}{r|l} 5 & 5, 10, 15 \\ 2 & 1, 2, 3 \\ 3 & 1, 1, 3 \\ \hline & 1, 1, 1 \end{array}$$

$$\frac{114 + 69 + 32}{30} = \frac{215}{30} = \frac{43}{6} = 7\frac{1}{6}$$

(Do Remaining parts)

Qno6) Find the difference:

i) $\frac{5}{7} - \frac{2}{7}$

sol) $\frac{5-2}{7} = \frac{3}{7}$

ii) $2\frac{5}{9} - 1\frac{7}{15}$

sol) $\frac{9 \times 2 + 5}{9} - \frac{15 \times 1 + 7}{15}$

$$\frac{23}{9} - \frac{22}{15}$$

$$\begin{aligned} \text{LCM of } 9 \text{ and } 15 \\ &= (3 \times 3 \times 5) = 45 \end{aligned}$$

now

$$\begin{aligned} \frac{115 - 66}{45} &= \frac{49}{45} \\ &= 1\frac{4}{45} \end{aligned}$$

$$\begin{array}{r|l} 3 & 9, 15 \\ 3 & 3, 5 \\ 5 & 1, 5 \\ \hline & 1, 1 \end{array}$$

Q no 9) A rectangular sheet of paper is $15\frac{3}{4}$ cm long and $12\frac{1}{2}$ cm wide. Find its perimeter.

Sol) Length of rectangular sheet of paper = $15\frac{3}{4}$ cm
Breadth of rectangular sheet of paper = $12\frac{1}{2}$ cm

We know that,

$$\text{Perimeter of rectangle} = 2(L + B)$$

$$= 2 \left(15\frac{3}{4} + 12\frac{1}{2} \right)$$

$$= 2 \left(\frac{63}{4} + \frac{25}{2} \right)$$

$$= 2 \left(\frac{63 + 50}{4} \right)$$

$$= 2 \left(\frac{113}{4} \right)$$

$$= \frac{113}{2} = 56\frac{1}{2}$$

$$\begin{array}{r} 2 \overline{) 113} 56 \\ \underline{10} \\ 13 \\ \underline{12} \\ 1 \end{array}$$

Q no 11) What should be added to $7\frac{3}{5}$ to get 18?

Sol) Required number = $18 - 7\frac{3}{5}$

$$= \frac{18}{1} - \frac{38}{5}$$

$$= \frac{90 - 38}{5} = \frac{52}{5} = 10\frac{2}{5} \text{ Ans.}$$

$$\begin{array}{r} 5 \overline{) 52} 10 \\ \underline{50} \\ 2 \end{array}$$

MULTIPLICATION OF FRACTIONS

(4)

Ex : 2B

Qno1) Find the product:
i) $\frac{3}{5} \times \frac{7}{11}$

Sol) $\frac{3 \times 7}{5 \times 11} = \frac{21}{55}$

Qno2) Simplify

✓ $2\frac{2}{17} \times 7\frac{2}{9} \times 1\frac{33}{52}$

$$\frac{4}{36} \times \frac{5}{65} \times \frac{5}{52}$$

$$= 5 \times 5 = 25 \text{ Ans.}$$

Qno3) Find :

i) $\frac{1}{3}$ of 24

Sol) $\frac{1}{3} \times 24$

$$= 8$$

(xii) $\frac{9}{20}$ of a metre

$$\text{Sol)} \quad \frac{9}{20} \times 100$$

$$= 9 \times 5$$

$$= 45 \text{ cm Ans.}$$

Q no 4) Apples are sold at ₹ $18\frac{2}{5}$ per kg.
What is the cost of $3\frac{3}{4}$ kg of apples?

$$\text{Sol)} \quad \text{Cost of one kg of apple} = ₹ 18\frac{2}{5}$$

$$\therefore \text{cost of } 3\frac{3}{4} \text{ kg of apples} = 18\frac{2}{5} \times 3\frac{3}{4}$$

$$= \frac{92}{5} \times \frac{15}{4}$$

$$= \frac{92^{\cancel{23}} \times 15^{\cancel{3}}}{\cancel{5} \times 4} = ₹ 69$$

Q no 14) Each side of a square field is $4\frac{2}{3}$ m.
Find its area.

$$\text{Sol)} \quad \text{Side of a square field} = 4\frac{2}{3} \text{ m}$$

$$\therefore \text{Area of square} = (\text{side})^2$$

$$= \left(4\frac{2}{3} \text{ m}\right)^2$$

(5)

$$\begin{aligned}
 &= \left(\frac{14}{3} \text{ m}\right)^2 \\
 &= \frac{196}{9} \text{ m}^2 \\
 &= 21\frac{7}{9} \text{ m}^2
 \end{aligned}$$

$$\begin{array}{r}
 9 \overline{) 196} 21 \\
 \underline{18} \\
 16 \\
 \underline{9} \\
 7
 \end{array}$$

Qno 9) Nine boards are stacked on the top of each other. The thickness of each board is $3\frac{2}{3}$ cm. How high is the stack?

Sol) Number of boards = 9

$$\begin{aligned}
 \text{Thickness of each board} &= 3\frac{2}{3} \text{ cm} \\
 &= \frac{11}{3} \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{Total height of the stack} &= \left(\frac{11}{3} \times 9\right) \text{ cm} \\
 &= 33 \text{ cm}
 \end{aligned}$$

Division of Fractions

Ex : 20

Qno1) Write down the reciprocal of:
i $\frac{5}{8}$

Ans The reciprocal of $\frac{5}{8}$ is $\frac{8}{5}$.

Qno2) Simplify

i $\frac{4}{7} \div \frac{9}{14}$

Sol) $\frac{4}{7} \div \frac{9}{14}$

$$= \frac{4}{7} \times \frac{14^2}{9}$$

$$= \frac{8}{9} \text{ Ans.}$$

[$\because$ the reciprocal of $\frac{9}{14}$ is $\frac{14}{9}$]

viii) $5\frac{4}{7} \div 1\frac{3}{10}$

$$= \frac{39}{7} \div \frac{13}{10}$$

$$= \frac{39}{7} \times \frac{10}{13} = \frac{30}{7} = 4\frac{2}{7} \text{ Ans.}$$

$$\begin{array}{r} 7 \overline{) 30} 4 \\ \underline{28} \\ 2 \end{array}$$

(6)

Q.4) A rope of length $13\frac{1}{2}\text{m}$ has been divided into 9 pieces of same length. What is the length of each piece?

Sol) Length of rope = $13\frac{1}{2}\text{m}$

Number of pieces = 9

$\therefore$ Length of each piece = $13\frac{1}{2} \div 9$

$$= \frac{27}{2} \div \frac{9}{1}$$

$$= \frac{27}{2} \times \frac{1}{9}$$

$$= 3\frac{1}{2}\text{m}$$

Q.9) Preeti bought $8\frac{1}{2}\text{kg}$ of sugar for ₹ $148\frac{3}{4}$. Find the price of sugar per kg?

Sol) Cost of $8\frac{1}{2}\text{kg}$ of sugar = ₹ $148\frac{3}{4}$

$\therefore$ Cost of 1 kg of sugar = $148\frac{3}{4} \div 8\frac{1}{2}$

$$= \frac{595}{4} \div \frac{17}{2}$$

$$= \frac{595}{4} \times \frac{2}{17} = \frac{35}{2} = ₹ 17\frac{1}{2} \text{ Ans}$$

$$\begin{array}{r} 2 \overline{) 35} 17 \\ \underline{2} \\ 15 \\ \underline{14} \\ 1 \end{array}$$

Q.15) The product of two numbers is $15\frac{5}{6}$.
If one of the numbers is $6\frac{1}{3}$. find the other?

Sol) Product of numbers = $15\frac{5}{6}$

One number = $6\frac{1}{3}$

$\therefore$ other number = $15\frac{5}{6} \div 6\frac{1}{3}$

$$= \frac{95}{6} \div \frac{19}{3}$$

$$= \frac{95}{6} \times \frac{3}{19}$$

$$= \frac{5}{2} = 2\frac{1}{2}$$

$$\begin{array}{r} 2 \overline{) 5} 2 \\ \underline{4} \\ 1 \end{array}$$

Q.16) By what number should $9\frac{4}{5}$ be multiplied to get 42?

Sol) Required number = $42 \div 9\frac{4}{5}$

$$= \frac{42}{1} \div \frac{49}{5}$$

$$= \frac{42}{1} \times \frac{5}{49}$$

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

$$= \frac{30}{7} = 4\frac{2}{7} \text{ Ans.}$$

$$\begin{array}{r} 7 \overline{) 30} 4 \\ \underline{28} \\ 2 \end{array}$$