Question:1

Compare the fractions:

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

ii $\frac{5}{9}$ and $\frac{11}{15}$

iii $\frac{11}{12}$ and $\frac{15}{16}$

Solution:

We have the following:

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

By cross multiplication, we get:

$5 \times 12 = 60$ and $7 \times 8 = 56$

However, $60 > 56$

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

ii $\frac{5}{9}$ and $\frac{11}{15}$

By cross multiplication, we get:

$5 \times 15 = 75$ and $9 \times 11 = 99$

However, $75 < 99$

$\therefore$ $\frac{5}{9} < \frac{11}{15}$

iii $\frac{11}{12}$ and $\frac{15}{16}$

By cross multiplication, we get:

$11 \times 16 = 176$ and $12 \times 15 = 180$

However, $176 < 180$

$\therefore$ $\frac{11}{12} < \frac{15}{16}$

Question:2

Arrange the following fractions in ascending order:

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

ii $\frac{4}{5}$, $\frac{7}{10}$, $\frac{11}{15}$, $\frac{17}{20}$

Solution:

i The given fractions are $\frac{3}{4}$, $\frac{5}{6}$, $\frac{7}{9}$ and $\frac{11}{12}$.

LCM of 4, 6, 9 and 12 = 36

Now, let us change each of the given fractions into an equivalent fraction with 72 as its denominator.

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

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

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

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

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

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

$\therefore$ The given fractions in ascending order are $\frac{3}{4}$, $\frac{7}{9}$, $\frac{5}{6}$ and $\frac{11}{12}$.

ii The given fractions are: $\frac{4}{5}$, $\frac{7}{10}$, $\frac{11}{15}$ and $\frac{17}{20}$.

LCM of 5, 10, 15 and 20 = 60

Now, let us change each of the given fractions into an equivalent fraction with 60 as its denominator.

$\frac{4}{5} = \frac{4 \times 12}{5 \times 12} = \frac{48}{60}$

$\frac{7}{10} = \frac{7 \times 6}{10 \times 6} = \frac{42}{60}$

$\frac{11}{15} = \frac{11 \times 4}{15 \times 4} = \frac{44}{60}$

$\frac{17}{20} = \frac{17 \times 3}{20 \times 3} = \frac{51}{60}$

Clearly, $\frac{42}{60} < \frac{44}{60} < \frac{48}{60} < \frac{51}{60}$

Hence, $\frac{7}{10} < \frac{11}{15} < \frac{4}{5} < \frac{17}{20}$

$\therefore$ The given fractions in ascending order are $\frac{7}{10}$, $\frac{11}{15}$, $\frac{4}{5}$ and $\frac{17}{20}$.

Question:3

Arrange the following fractions in descending order:

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

ii $\frac{2}{3}$, $\frac{3}{5}$, $\frac{7}{10}$, $\frac{8}{15}$

Solution:

We have the following:

i The given fractions are $\frac{3}{4}$, $\frac{7}{8}$, $\frac{7}{12}$ and $\frac{17}{24}$.

LCM of 4,8,12 and 24 = 24

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

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

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

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

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

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

Hence, $\frac{7}{8} > \frac{3}{4} > \frac{17}{24} > \frac{7}{12}$

$\therefore$ The given fractions in descending order are $\frac{7}{8}$, $\frac{3}{4}$, $\frac{17}{24}$ and $\frac{7}{12}$.

ii The given fractions are $\frac{2}{3}$, $\frac{3}{5}$, $\frac{7}{10}$ and $\frac{8}{15}$.

LCM of 3,5,10 and 15 = 30

Now, let us change each of the given fractions into an equivalent fraction with 30 as its denominator.

$\frac{2}{3} = \frac{2 \times 10}{3 \times 10} = \frac{20}{30}$

$\frac{3}{5} = \frac{3 \times 6}{5 \times 6} = \frac{18}{30}$

$\frac{7}{10} = \frac{7 \times 3}{10 \times 3} = \frac{21}{30}$

$\frac{8}{15} = \frac{8 \times 2}{15 \times 2} = \frac{16}{30}$

Clearly, $\frac{21}{30} > \frac{20}{30} > \frac{18}{30} > \frac{16}{30}$

Hence, $\frac{7}{10} > \frac{2}{3} > \frac{3}{5} > \frac{8}{15}$

∴ The given fractions in descending order are $\frac{7}{10}$, $\frac{2}{3}$, $\frac{3}{5}$ and $\frac{8}{15}$.

Question:4

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?

Solution:

We will compare the given fractions $\frac{2}{7}$ and $\frac{4}{5}$ in order to know who got the larger part of the apple.

We have,

By cross multiplication, we get:

$2 \times 5 = 10$ and $4 \times 7 = 28$

However, $10 < 28$

∴ $\frac{2}{7} < \frac{4}{5}$

Thus, Sonal got the larger part of the apple.

Now, $\frac{4}{5} - \frac{2}{7} = \frac{28-10}{35} = \frac{18}{35}$

∴ Sonal got $\frac{18}{35}$ part of the apple more than Reenu.

Question:5

Find the sum:

i $\frac{5}{9} + \frac{3}{9}$
ii $\frac{8}{9} + \frac{7}{12}$
iii $\frac{5}{6} + \frac{7}{8}$
iv $\frac{7}{12} + \frac{11}{16} + \frac{9}{24}$
v $3\frac{4}{5} + 2\frac{3}{10} + 1\frac{1}{15}$
vi $8\frac{3}{4} + 10\frac{2}{5}$

Solution:

i $\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$

ii $\frac{8}{9} + \frac{7}{12}$

$= \frac{32}{36} + \frac{21}{36}$

$$\because LCM of 9 and 12 = 36$$

$= \frac{32+21}{36}$

$= \frac{53}{36} = 1\frac{17}{36}$

$iii \ \frac{5}{6} + \frac{7}{8}$

$= \frac{20}{24} + \frac{21}{24}$

$$\therefore LCM \, of \, 6 \, and \, 8 = 24$$

$= \frac{20+21}{24}$

$= \frac{41}{24} = 1\frac{17}{24}$

$iv \ \frac{7}{12} + \frac{11}{16} + \frac{9}{24}$

$\frac{28}{48} + \frac{33}{48} + \frac{18}{48}$

$$\therefore LCM \, of \, 12, 16 \, and \, 24 = 48$$

$= \frac{28+33+18}{48}$

$= \frac{79}{48} = 1\frac{31}{48}$

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

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

$= \frac{114}{30} + \frac{69}{30} + \frac{32}{30}$

$$\therefore LCM \, of \, 5, 10 \, and \, 15 = 30$$

$= \frac{114+69+32}{30}$

$$= \frac{215}{30} = 7\,\frac{5}{30} = 7\,\frac{1}{6}$$

vi $8\,\frac{3}{4} + 10\,\frac{2}{5}$

$$= \frac{35}{4} + \frac{52}{5}$$

$$= \frac{175}{20} + \frac{208}{20}$$

$$\because LCM\,of\,4\,and\,5 = 20$$

$$= \frac{175+208}{20}$$

$$= \frac{383}{20} = 19\,\frac{3}{20}$$

Question:6

Find the difference:

i $\frac{5}{7} - \frac{2}{7}$
ii $\frac{5}{6} - \frac{3}{4}$
iii $3\,\frac{1}{5} - \frac{7}{10}$
iv
v
vi

Solution:

i

ii

$\because$ LCM of 6 and 4 = 12

=

=

iii

=

=   ∵ LCM of 5 and 10 = 10

=

=

iv

=

=   ∵ LCM of 1 and 3 = 3

=

v

=

=   ∵ LCM of 10 and 15 = 30

=

vi

=

=   ∵ LCM of 9 and 15 = 45

=

Question:7
Simplify:

i
ii
iii
Solution:
i

= 　∵ LCM of 3, 6 and 9 = 18

=

ii

=

= 　∵ LCM of 1, 2 and 4 = 4

=

iii

=

= 　∵ LCM of 6, 8 and 12 = 24

=

Question:8

Aneeta bought kg apples and kg guava. What is the total weight of fruits purchased by her?

Solution:

Total weight of fruits bought by Aneeta =

Now, we have:
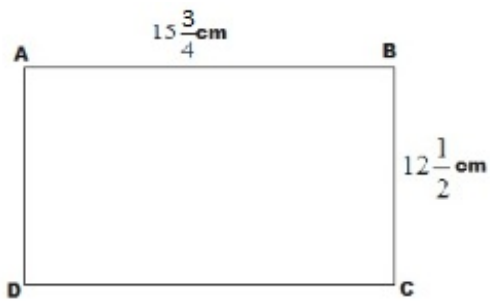
∵ LCM of 2 and 4 = 4

Hence, the total weight of the fruits purchased by Aneeta is .

Question:9

A rectangular sheet of paper is cm long and cm wide. Find its perimeter.

Solution:

We have:

Perimeter of the rectangle ABCD = AB + BC + CD + DA

=

=

=   ∵ LCM of 2 and 4 = 4

=

Hence, the perimeter of ABCD is .

Question:10

A picture is cm wide. How much should it be trimmed to fit in a frame cm wide?

Solution:

Actual width of the picture =

Required width of the picture =

∴ Extra width =

=   ∵ LCM of 5 and 10 is 10

=

Hence, the width of the picture should be trimmed by .

Question:11

What should be added to to get 18?

Solution:

Required number to be added =

=

=   ∵ LCM of 1 and 5 = 5

=

Hence, the required number is .

Question:12

What should be added to to get ?

Solution:

Required number to be added =

$$=$$

$$= \quad \because \text{LCM of 5 and 15 = 15}$$

$$=$$

Hence, the required number should be .

Question:13

A piece of wire m long broke into two pieces. One piece is m long. How long is the other piece?

Solution:

Required length of other piece of wire =

$$=$$

$$= \quad \because \text{LCM of 4 and 2 = 4}$$

$$=$$

Hence, the length of the other piece of wire is .

Question:14

A film show lasted of hours. Out of this time hours was spent on advertisements. What was the actual duration of the film?

Solution:

Actual duration of the film =

$$=$$

$$= \quad \because \text{LCM of 3 and 2 = 6}$$

$$=$$

Hence, the actual duration of the film was .

Question:15
Of and , which is greater and by how much?
Solution:
First we have to compare the fractions: .
By cross multiplication, we have:
2 9 = 18 and 5 3 = 15

However, 18 > 15
∴

So, is larger than .
Now,

= ∵ LCM of 3 and 9 = 9
=
Hence, is part more than .

Question:16
The cost of a pen is Rs and that of a pencil is Rs . Which costs more and by how much?
Solution:

First, we have to compare the cost of the pen and the pencil.
Cost of the pen = Rs

Cost of the pencil = Rs
Now, we have to compare fractions
By cross multiplication, we get:

83 4 = 332 and 19 5 = 95

However, 332 > 95

∴

So, the cost of pen is more than that of the pencil.
Now,

= ∵ LCM of 4 and 5 = 20

=

∴ The pen costs Rs more than the pencil.

Question:17
Find the product:

i
ii
iii
iv
v
vi
vii
viii
ix
x
xi
xii

Solution:
i

ii

iii

iv

v

vi

vii

viii

ix

x

xi

xii

Question:18
Simplify:

i
ii
iii
iv
v
vi

Solution:
We have the following:

i

ii

iii

iv

=

v

=

vi

=

Question:19
Find:

i of 24

ii of 32

iii of 45

iv of 1000

v of 1020

vi of Rs 220

vii of 54 metres

viii of 35 litres

ix of an hour

x of an year

xi of a kg

xii of a metre

xiii of a day

xiv of a week

xv of a litre

Solution:

We have the following:

i of 24 =

ii of 32 =

iii of 45 =

iv of 1000 =

v of 1020 =

vi of Rs 220 = Rs = Rs (20 5) = Rs 100

vii of 54 m = = (4 6) m = 24 m

viii of 35 L = = (6 5) L = 30 L

ix of 1 h = of 60 min = min = 10 min

x of an year = of 12 months = months = (2 5) months = 10 months

xi of a kg = of 1000 g = g = (50 7) gm = 350 g

xii of 1 m = of 100 cm = cm = (5 9) cm = 45 cm

xiii of a day = of 24 h = h = (3 7) = 21 h

xiv of a week = of 7 days = days = 3 days

xv of 1 L = of 1000 ml = ml = (20 7) ml = 140 ml

Question:20
Apples are sold at Rs per kg. What is the cost of kg of apples?
Solution:
Cost of 1kg of apples =
∴ Cost of of apples =

=

Hence, the cost of of apples is Rs 69.

Question:21
Cloth is being sold at Rs per metre. What is the cost of metres of this cloth?
Solution:
Cost of 1 m of cloth =
∴ Cost of of cloth = Rs

= Rs
Hence, the cost of of cloth is Rs 238.

Question:22
A car covers a certain distance at a uniform speed of km per hour. How much distance will it cover in 9 hours?
Solution:
Distance covered by the car in 1 h =
Distance covered by the car in 9 h =

=

Hence, the distance covered by the car in 9 h will be 600 km.

Question:23

One tin holds litres of oil. How many litres of oil can 26 such tins hold?

Solution:

Capacity of 1 tin =

∴ Capacity of 26 such tins =

=

Hence, 26 such tins can hold L of oil.

Question:24

For a particular show in a circus, each ticket costs Rs . If 308 tickets are sold for the show, how much amount has been collected?

Solution:

Cost of 1 ticket = Rs = Rs

∴ Cost of 308 tickets = Rs

Hence, 308 tickets were sold for Rs 10,934.

Question:25

Nine boards are stacked on the top of each other. The thickness of each board is cm. How high is the stack?

Solution:

Thickness of 1 board = cm

∴ Thickness of 9 boards =

= = (3 11) cm = 33 cm

Hence, the height of the stack is 33 cm.

Question:26

Rohit takes minutes to make complete round of a circular park. How much time will he take to make 15 rounds?

Solution:

Time taken by Rohit to complete one round of the circular park = min = min

∴ Time taken to complete 15 rounds = min

= (3 24) min

= 72 min

= 1 h 12 min   ∵ 1 hr = 60 min

Hence, Rohit will take 1 h 12 min to make 15 complete rounds of the circular park.

Question:27
Amit weighs 35 kg. His sister Kavita's weight is of Amit's weight. How much does Kavita weigh?
Solution:
Weight of Amit = 35 kg
Weight of Kavita = of Amit's weight
          = 35 kg x =
Hence, Kavita's weight is 21 kg.

Question:28
There are 42 students in a class and of the students are boys. How many girls are there in the class?
Solution:
Number of boys in the class = of the total no. of students
                = 42 =

∴ Number of girls in the class = 42 – 30 = 12

Hence, there are 12 girls in the class.

Question:29
Sapna earns Rs 12000 per month. She spends of her income and deposits rest of the money in a bank. How much money does she deposit in the bank each month?
Solution:
Sapna's total monthly income = Rs 12000
Monthly expenditure = of Rs 12000
                = Rs =Rs (7 1500) = Rs 10500
∴ Monthly savings = Rs 12000 – Rs 10500
                = Rs 1500

Hence, Sapna deposits Rs 1500 in the bank every month.

Question:30

Each side of a square field is m. Find its area.
Solution:
Side of the square field =
∴ Area of the square = side^2

=

=

Hence, the area of the square field is .

Question:31
Find the area of a rectangular park which is m long and m broad.
Solution:
Length of the rectangular park =

Its breadth =

∴ Its area = length breadth

= ^{2}

= (25 31) m = 775 m^2

Hence, the area of the rectangular park is 775 m^2.

Question:32
Write down the reciprocal of:

i
ii 7
iii
iv
Solution:
i Reciprocal of =   [∵]

ii Reciprocal of 7 =   [∵]

iii Reciprocal of   = 12   [∵]

iv Reciprocal of = Reciprocal of =   [∵]

Question:33

Simplify:

i

ii

iii

iv

v

vi

vii

viii

ix

Solution:

i   [∵ Reciprocal of =]

   =

ii   [∵ Reciprocal of =]

   =

iii   [∵ Reciprocal of 16 =]

   =

iv   [∵ Reciprocal of = 3]

   = 27

v   [∵ Reciprocal of =]

   = 4 7 = 28

vi

   =   [∵ Reciprocal of =]

=

vii

    =   [∵ Reciprocal of =]

    = 3 3 = 9

viii =

    =   [∵ Reciprocal of =]

    =

ix =

    =   [∵ Reciprocal of =]

    =

Question:34

Divide:

i
ii
iii
iv
v
vi

Solution:

i

    =   [∵ Reciprocal of =]

    =

ii =

    =   [∵ Reciprocal of =]

    = 5 2 = 10

iii =

    =   [∵ Reciprocal of =]

    = =

iv =

    =   [∵ Reciprocal of =]

    = 4 5 = 20

v =

    =   [∵ Reciprocal of =]

    = 5 5 = 25

vi =

    =   [∵ Reciprocal of =]

    = 7 4 = 28

Question:35

A rope of length m has been divided into 9 pieces of the same length. What is the length of each piece?

Solution:

Length of the rope = m = m

Number of equal pieces = 9

∴ Length of each piece = m

                    = m   [∵ Reciprocal of 9 =]

= m = m

Hence, the length of each piece of rope is m.

Question:36

18 boxes of nails weigh equally and their total weight is kg. How much does each box weigh?

Solution:

Weight of 18 boxes of nails = kg = kg

∴ Weight of 1 box = kg

           = kg   [∵ Reciprocal of 18 =]

           = kg = kg = kg = kg

Hence, the weight of each box is kg.

Question:37

By selling oranges at the rate of Rs per orange, a man gets Rs 210. How many oranges does he sell?

Solution:

Cost of 1 orange = Rs = Rs

Total cost of the oranges sold by the man = Rs 210

∴ Required number of oranges =

           =   [∵ Reciprocal of =]

           = (14 4) = 56

Hence, the man sold 56 oranges.

Question:38

Mangoes are sold at Rs per kg. What is the weight of mangoes available for Rs ?

Solution:

Cost of 1 kg of mangoes = Rs = Rs

Total cost of the required mangoes = Rs = Rs

∴ Weight of the required mangoes = kg

           = kg   [∵ Reciprocal of =]

           = kg = kg

Hence, the weight of the mangoes available for Rs is kg.

Question:39

Vikas can cover a distance of km in hours on foot. How many km per hour does he walk?

Solution:

Distance covered by Vikas in h = km

∴ Distance covered by him in 1 h = km

$\qquad\qquad$ = km

$\qquad\qquad$ = km

$\qquad\qquad$ = km = km = km

Hence, the distance covered by Vikas in 1 h is km.

Question:40

Preeti bought kg of sugar for Rs . Find the price of sugar per kg.

Solution:

Cost of kg of sugar = Rs

∴ Cost of 1 kg of sugar = Rs

$\qquad\qquad$ = Rs

$\qquad\qquad$ = Rs = Rs = Rs

Hence, the cost of 1 kg of sugar is Rs .

Question:41

If the cost of a notebook is Rs , how many notebooks can be purchased for Rs ?

Solution:

Cost of 1 notebook = Rs   = Rs

∴ Number of notebooks purchased for Rs =

$\qquad\qquad\qquad$ =

$\qquad\qquad\qquad$ =   [∵ Reciprocal of =]

$\qquad\qquad\qquad$ = = 9

Hence, 9 notebooks can be purchased for Rs .

Question:42

At a charity show the price of each ticket was Rs . The total amount collected by a boy was Rs .
How many tickets were sold by him?

Solution:

Cost of 1 ticket = Rs = Rs

Total amount collected by the boy = Rs = Rs

∴ Number of tickets sold =

= [∵ Reciprocal of =]

=

Hence, the boy sold 27 tickets of the charity show.

Question:43

A group of students arranged a picnic. Each student contributed Rs . The total contribution was Rs . How many students are there in the group?

Solution:

Amount contributed by 1 student = Rs = Rs

Total amount collected = Rs = Rs

∴ Number of students in the group =

= [∵ Reciprocal of =]

=

Hence, there are 11 students in the group.

Question:44

24 litres of milk was distributed equally among all the students of a hostel. If each student got litre of milk, how many students are there in the hostel?

Solution:

Quantity of milk given to each student = L

Total quantity of milk distributed among all the students = 24 L

∴ Number of students =

= [∵ Reciprocal of =]

= (12 5) = 60

Hence, there are 60 students in the hostel.

Question:45

A bucket contains litres of water. A small jug has a capacity of litre. How many times the jug has to be filled with water from the bucket to get it emptied?

Solution:

Capacity of the small jug = L

Capacity of the bucket = L = L

∴ Required number of small jugs =

$$= \quad [\because \text{Reciprocal of } =]$$

$$= = 27$$

Hence, the small jug has to be filled 27 times to empty the water from the bucket.

Question:46

The product of two numbers is . If one of the numbers is , find the other.

Solution:

Product of the two numbers = =

One of the numbers = =

∴ The other number =

$$= \quad [\because \text{Reciprocal of } =]$$

$$=$$

Hence, the other number is .

Question:47

By what number should be multiplied to get 42?

Solution:

Product of the two numbers = 42

One of the numbers = =

∴ The other number =

$$= \quad [\because \text{Reciprocal of } =]$$

$$=$$

Hence, the required number is .

Question:48

By what number should be divided to obtain ?

Solution:

Required number =

    =

    =   [∵ Reciprocal of =]

    =

Hence, we have to divide by to get .

Question:49

Mark ✓ against the correct answer

Which of the following is a vulgar fraction?

a

b

c

d none of these

Solution:

c

is a vulgar fraction, because its denominator is other than 10, 100, 1000, etc.

Question:50

Mark ✓ against the correct answer

Which of the following is an improper fraction?

a

b

c

d none of these

Solution:

c

is an improper fraction, because its numerator is greater than its denominator.

Question:51

Mark ✓ ***against the correct answer***

Which of the following is a reducible fraction?

a

b

c

d

Solution:

a

A fraction that is reducible can be reduced by dividing both the numerator and denominator by a common factor.

Thus, is a reducible fraction.

Question:52

Mark ✓ ***against the correct answer***

are

a like fractions

b irreducible fractions

c equivalent fractions

d none of these

Solution:

c equivalent fractions

Equivalent fractions are those which are the same but look different.

Thus, are equivalent fractions.

Question:53

Mark ✓ ***against the correct answer***

Which of the following statements is true?

a

b

c

d none of these

Solution:

c >

The two fraction are and .

By cross multiplication, we have:

9 24 = 216 and 13 16 = 208

However, 216 > 208

∴ >

Question:54

Mark ✓ against the correct answer

Reciprocal of is

a

b

c

d none of these

Solution:

d none of these

Reciprocal of = Reciprocal of =

Question:55

Mark ✓ against the correct answer

a

b

c

d none of these

Solution:

c

∵ LCM of 10 and 15 = 30

=

Question:56

a

b

c

d

Solution:

d

=

=   ∵ LCM of 4 and 3 = 12

=

Question:57

Mark ✓ *against the correct answer*

a 9

b

c

d 144

Solution:

d 144

   [∵ Reciprocal of = 4]

      = 144

Question:58

Mark ✓ *against the correct answer*

By what number should be multiplied to get ?

a

b

c

d

Solution:

b

Required number =

 =

 =   [∵ Reciprocal of =]

 =

Question:59

Mark ✓ against the correct answer

By what number should be divided to get ?

a
b
c
d

Solution:

d

Required number =

 =

 =   [∵ Reciprocal of =]

 =

Question:60

Mark ✓ against the correct answer

a
b
c
d none of these

Solution:

c

=   [∵ Reciprocal of =]

=

Question:61

Mark ✓ against the correct answer

a 1
b 2
c
d

Solution:

d

=   [∵ Reciprocal of =]

=

Question:62

Mark ✓ against the correct answer

The reciprocal of is
a
b
c
d

Solution:

d

Reciprocal of = Reciprocal of =

Question:63

Which one of the following is the correct statement?

a

b

c

d none of these

Solution:

b

The given fractions are

LCM of 5, 3 and 15 = 15

Now, we have:

, and

Clearly,

∴

Question:64

Mark ✓ against the correct answer

A car runs 16 km using 1 litre of petrol. How much distance will it cover in litres of petrol?

a 24 km

b 36 km

c 44 km

d km

Solution:

c 44 km

Distance covered by the car on L of petrol = km

$$= km$$

$$= (4 \ 11) \ km = 44 \ km$$

Question:65

Mark ✓ against the correct answer

Lalit reads a book for hours evrey day and reads the entire book in 6 days. How many hours does he take to read the entire book?

a hours

b hours

c hours

d hours

Solution:

a hours

Time taken by Lalit to read the entire book = h

$$= h$$

$$= h = h$$

Question:66

Define:

i Fractions

ii Vulgar fractions

iii Improper fractions

Give two examples of each.

Solution:

i A number of the form , where *a* and *b* are natural numbers, is called a natural number.
Here, *a* is the numerator and *b* is the denominator.

is a fraction with 2 as the numerator and 3 as the denominator.

is a fraction with 12 as the numerator and 5 as the denominator.

ii A fraction whose denominator is a whole number other than 10, 100, 1000, etc., is called a vulgar faction.
Examples: and

iii A fraction whose numerator is greater than or equal to its denominator is called an improper fraction.
Examples: and

Question:67

What should be added to to get 15?

Solution:

Required number to be added =

=

= ∵ LCM of 1 and 5 = 5

=

Hence, the required number is .

Question:68

Simplify:

Solution:

We have,

=

= ∵ LCM of 6, 8 and 12 = 24

= =

Question:69

Find:

i of a litre
ii of a kilogram
iii of an hour

Solution:

We have:

i of 1 L = of 1000 ml = ml = (40 12) ml = 480 ml

ii of 1 kg = of 1000 g = g = (125 5) g = 625 g

iii of 1 h = of 60 min = min = (12 3) min = 36 min

Question:70

Milk is sold at Rs per litre. Find the cost of litres milk.

Solution:

Cost of 1 L of milk = Rs = Rs

Cost of L of milk = Rs

= Rs

= Rs = Rs = Rs

Hence, the cost of L of milk is Rs .

Question:71

The cost of kg of mangoes is Rs 189. At what rate per kg are the mangoes being sold?

Solution:

Cost of kg of mangoes = Rs 189

Cost of 1 kg of mango = Rs

= Rs

= Rs   [∵ Reciprocal of =]

= Rs (9 4) = Rs 36

Hence, the mangoes are being sold at Rs 36 per kg.

Question:72

Simplify:

i

ii

Solution:

We have:

i

=

=

ii

=

=   [∵ Reciprocal of =]

=

Question:73
By what number should be divided to obtain ?
Solution:
Required number =

=

=   [∵ Reciprocal of =]

= =

Hence, we have to divide by to obtain .

Question:74
Each side of a square is m long. Find its area.
Solution:
Side of the square = m = m

Its area = side^2 = =

Hence, the area of the square is .

Question:75
Mark ✓ against the correct answer
Which of the following is a vulgar fraction?

a

b

c

d

Solution:

d

is a vulgar fraction, because its denominator is other than 10, 100, 1000, etc.

Question:76

Mark ✓ against the correct answer

Which of the following is an irreducible fraction?

a

b

c

d

Solution:

c

A fraction is said to be irreducible or in its lowest terms if the HCF of *a* and *b* is 1.

46 = 2 23 1

63 = 3 3 21 1

Clearly, the HCF of 46 and 63 is 1.

Hence, is an irreducible fraction.

Question:77

Mark ✓ against the correct answer

Reciprocal of is

a

b

c

d none of these

Solution:

d none of these

Reciprocal of = Reciprocal of =

Question:78

Mark ✓ against the correct answer

a

b

c

d none of these

Solution:

c

=

=   [∵ Reciprocal of =]

=

Question:79

Mark ✓ against the correct answer

Which of the following is correct?

a

b

c

d

Solution:

b

The given fractions are and .

LCM of 5, 3 and 15 = 15

Now, we have:

, and

Clearly,

∴

Question:80

Mark ✓ against the correct answer

By what number should be divided to get ?

a

b

c

d

Solution:

c

Required number =

=

=   [∵ Reciprocal of =]

=

Question:81

Mark ✓ against the correct answer

A car runs 9 km using 1 litre of petrol. How much distance will it cover in litres o petrol?

a 36 km

b 33 km

c km

d 22 km

Solution:

b 33 km

Distance covered by the car on L of petrol = km

= km

= (3 11) km = 33 km

Question:82

Fill in the blanks.

i Reciprocal of is ....

ii

iii

iv

v in irreducible form= ......

Solution:

i The reciprocal of is .

Reciprocal of = Reciprocal of =

ii

iii

= = 9

iv

=

v irreducible form =

The HCF of 84 and 98 is 14.

∴

Question:83

Write 'T' for true and 'F' for false

i

ii Among and , the largest is

iii

iv of a litre = 440 mL.

v

Solution:

i **F**

  By cross multiplication, we have:

  9 24 = 216 and 13 16 = 208

  However, 216 > 208

  ∴

ii **F**

  The LCM of 5, 35 and 14 is 70.

  Now,

  Clearly,

  ∴

iii **T**

  The LCM of 15 and 20 = (5 3 4) = 60

   ∴

iv **T**

  of 1 L = of 1000 ml = ml = (40 11) ml = 440 ml

v **F**

   =

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