Question:1

What are rational numbers? Give examples of five positive and five negative rational numbers. Is there any rational number which is neither positive nor negative? Name it.

Solution:

The numbers that are in the form of $\frac{p}{q}$, where p and q are integers and q ≠0, are called rational numbers.

For example:

Five positive rational numbers:

$\frac{5}{7}, \frac{-3}{-4}, \frac{7}{8}, \frac{-14}{-15}, \frac{5}{9}$

Five negative rational numbers:

$\frac{-3}{7}, \frac{-3}{8}, \frac{8}{-9}, \frac{-19}{25}, \frac{8}{-25}$

Yes, there is a rational number that is neither positive nor negative, i.e. zero 0.

Question:2

Which of the following are rational numbers?

i $\frac{5}{-8}$
ii $\frac{-6}{11}$
iii $\frac{7}{15}$
iv $\frac{-8}{-12}$
v 6
vi –3
vii 0
$viii$ $\frac{0}{1}$
ix $\frac{1}{0}$
x $\frac{0}{0}$

Solution:

i) $\frac{5}{-8}$ is a rational number because it is in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

ii) $\frac{-6}{11}$ is a rational number because it is in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

iii) $\frac{-13}{15}$ is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

iv) $\frac{-8}{-12}$ is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

v) 6 is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

vi) -3 is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

vii) $0 = \frac{0}{1}$ is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

viii) $\frac{0}{1}$ is a rational number because it is in the form of $\frac{p}{q}$, w here p and q are integers and $q \neq 0$.

ix) $\frac{1}{0}$ is not a rational number because, here, $q = 0$.

x) $\frac{0}{0}$ is not a rational number because, here, $q = 0$.

Question:3

Write down the numerator and the denominator of each of the following rational numbers:

$i\ \frac{8}{19}$

$ii\ \frac{5}{-8}$

$iii\ \frac{-13}{15}$

$iv\ \frac{-8}{-11}$

$v\ 9$

Solution:

$i\ \frac{8}{19}$

Numerator = 8

Denominator =19

$ii \frac{5}{-8}$

Numerator = 5

Denominator = –8

$iii\ \frac{-13}{5}$

Numerator = –13

Denominator =15

$iv \frac{-8}{-11}$

Numerator = –8

Denominator = –11

$v\ 9$

i.e $\frac{9}{1}$

Numerator = 9

Denominator = 1

Question:4

Write each of the following integers as a rational number. Write the numerator and the denominator in each case.

i 5

ii –3

iii 1

iv 0

v –23

Solution:

i 5

The rational number will be $\frac{5}{1}$.

Numerator = 5

Denominator = 1

ii -3

The rational number will be $\frac{-3}{1}$.

Numerator = -3

Denominator = 1

iii1

The rational number will be $\frac{1}{1}$.

Numerator = 1

Denominator = 1

iv 0

The rational number will be $\frac{0}{1}$.

Numerator =0

Denominator = 1

v -23

The rational number will be $\frac{-23}{1}$.

Numerator = -23

Denominator = 1

Question:5

Which of the following are positive rational numbers?

$i\ \frac{3}{-5}$
$ii\ \frac{-11}{15}$
$iii\ \frac{-5}{-8}$
$iv\ \frac{37}{53}$
$v\ \frac{0}{3}$

Solution:

Positive rational numbers:

$iii\ \frac{-5}{-8}$

$iv\ \frac{37}{53}$

vi 8 because 8 can be written as $\frac{8}{1},\ \text{where}\ 1 \neq 0.$

0 is neither positive nor negative.

Question:6

Which of the following are negative rational numbers?

$i\ \frac{-15}{-14}$
ii 0
$iii\ \frac{-5}{7}$
$iv\ \frac{4}{-9}$
v –6
$vi\ \frac{1}{-2}$

Solution:

Negative rational numbers:

$iii\ \frac{-5}{7}$

$iv\ \frac{4}{-9}$

v -6

$vi\ \frac{1}{-2}$

Question:7

Find four rational numbers equivalent to each of the following.

i $\frac{6}{11}$

ii $\frac{-3}{8}$

iii $\frac{7}{-15}$

iv 8

v 1

vi –1

Solution:

i Following are the four rational numbers that are equivalent to $\frac{6}{11}$.

$\frac{6\times2}{11\times2}, \frac{6\times3}{11\times3}, \frac{6\times4}{11\times4}$ and $\frac{6\times5}{11\times5}$

i. e. $\frac{12}{22}, \frac{18}{33}, \frac{24}{44}$ and $\frac{30}{55}$

ii Following are the four rational numbers that are equivalent to $\frac{-3}{8}$.

$\frac{-3\times2}{8\times2}, \frac{-3\times3}{8\times3}, \frac{-3\times4}{8\times4}$ and $\frac{-3\times5}{8\times5}$

i.e. $\frac{-6}{16}, \frac{-9}{24}, \frac{-12}{32}$ and $\frac{-15}{40}$

iii Following are the four rational numbers that are equivalent to $\frac{7}{-15}$.

$\frac{7\times2}{-15\times2}, \frac{7\times3}{-15\times3}, \frac{7\times4}{-15\times4}$ and $\frac{7\times5}{-15\times5}$

i.e. $\frac{14}{-30}, \frac{21}{-45}, \frac{28}{-60}$ and $\frac{35}{-75}$

iv Following are the four rational numbers that are equivalent to 8, i.e. $\frac{8}{1}$.

$\frac{8\times2}{1\times2}, \frac{8\times3}{1\times3}, \frac{8\times4}{1\times4}$ and $\frac{8\times5}{1\times5}$

i. e. $\frac{16}{2}, \frac{24}{3}, \frac{32}{4}$ and $\frac{40}{5}$

v Following are the four rational numbers that are equivalent to -1, i.e. $\frac{1}{1}$.

$\frac{1\times2}{1\times2}, \frac{1\times3}{1\times3}, \frac{1\times4}{1\times4}$ and $\frac{1\times5}{1\times5}$

i. e. $\frac{2}{2}, \frac{3}{3}, \frac{4}{4}$ and $\frac{5}{5}$

vi Following are the four rational numbers that are equivalent to -1, i.e. $\frac{-1}{1}$.

$\frac{-1\times2}{1\times2}, \frac{-1\times3}{1\times3}, \frac{-1\times4}{1\times4}$ and $\frac{-1\times5}{1\times5}$

i. e. $\frac{-2}{2}, \frac{-3}{3}, \frac{-4}{4}$ and $\frac{-5}{5}$

Question:8

Write each of the following as a rational number with positive denominator.

i $\frac{12}{-17}$

ii

iii

iv

Solution:

i

ii

iii

iv

Question:9

Express as a rational number with numerator

i 15

ii –10

Solution:

i Numerator of is 5.

5 should be multiplied by 3 to get 15.

Multiplying both the numerator and the denominator by 3:

ii Numerator of is 5.

5 should be multiplied by –2 to get –10.

Multiplying both the numerator and the denominator by –2:

Question:10

Express as a rational number with denominator

i 21

ii –35

Solution:

i Denominator of is 7.

7 should be multiplied by 3 to get 21.

Multiplying both the numerator and the denominator by 3:

=

=

ii

Denominator of is 7.

7 should be multiplied by -5 to get –35.

Multiplying both the numerator and the denominator by –5:

Question:11

Express as a rational number with numerator

i –48

ii 60

Solution:

i Numerator of is –12.

–12 should be multiplied by 4 to get 48.

Multiplying both the numerator and the denominator by 4:

ii Numerator of is –12.

–12 should be multiplied by –5 to get 60

Multiplying its numerator and denominator by -5:

Question:12

Express as a rational number with denominator

i 22

ii –55

Solution:

i Denominator of is 11.

Clearly, 11×2= 22

Multiplying both the numerator and the denominator by 2:

ii Denominator of is 11.

Clearly, 11×5=55

Multiplying both the numerator and the denominator by 5:

Question:13

Express as a rational number with numerator

i 56

ii –70

Solution:

i Numerator of is 14.

Clearly, 14×4=56

Multiplying both the numerator and the denominator by 4:

=

=

ii –70

Numerator of is 14.

Clearly, 14×–5=–70

Multiplying both the numerator and the denominator by -5:

=

=

Question:14

Express as a rational number with denominator

i –40

ii 32

Solution:

i Denominator of is –8.

Clearly, (–8)×5= –40

Multiplying both the numerator and the denominator by 5:

ii Denominator of is –8.

Clearly, –8×(–4)= 32

Multiplying both the numerator and the denominator by –4:

=

Question:15

Express as a rational number with numerator

i –9

ii 6

Solution:

i Numerator of is -36.

Clearly, –36 ÷ 4= –9

Dividing both the numerator and the denominator by 4:

ii Numerator of is –36.

Clearly, –36 ÷ –6 = 6

Dividing both the numerator and the denominator by -6:

=

Question:16

Express as a rational number with denominator

i 7

ii –49

Solution:

i Denominator of is –147.

∴ –147 ÷–21=7

Dividing both the numerator and the denominator by -21:

iiDenominator of is –147.

–147÷3=–49

Dividing both the numerator and the denominator by 3:

Question:17

Write each of the following rational numbers in standard form:

i

ii

iii

iv

v

vi

vii

viii

Solution:

i

H.C.F. of 35 and 49 is 7.

$$
\begin{array}{r}
35\overline{)49}(1 \\
-35 \\
\hline
14\overline{)35}(2 \\
-28 \\
\hline
7\overline{)14}(2 \\
-14 \\
\hline
\times
\end{array}
$$

Dividing the numerator and the denominator by 7:

So, in the standard form.

ii

Denominator is -36, which is negative.

Multiplying both the numerator and the denominator by -1:

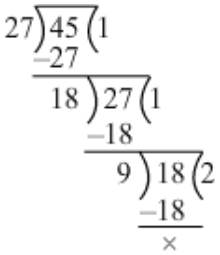
$$
\begin{array}{r}
8\overline{)36}(4 \\
-32 \\
\hline
4\overline{)8}(2 \\
-8 \\
\hline
\times
\end{array}
$$

H.C.F. of 8 and 36 is 4.

Dividing its numerator and denominator by 4:

So, in the standard form.

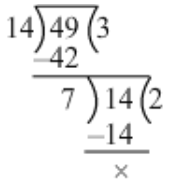
iii



H.C.F. of 27 and 45 is 9.

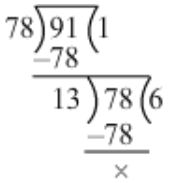
Dividing its numerator and denominator by 9:

Hence, in the standard form.



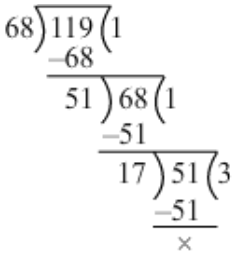
H.C.F. of 14 and 49 is 7.

Dividing both the numerator and the denominator by 7.



H.C.F. of 91 and 78 is 13.

Dividing both the numerator and the denominator by 13:



H.C.F. of 68 and 119 is 17.

Dividing both the numerator and the denominator by 17:

$$
\begin{array}{r}
87\overline{)116}(1 \\
-87 \\
\hline
29\overline{)87}(3 \\
-87 \\
\hline
\times
\end{array}
$$

H.C.F. of 87 and 116 is 29.

Dividing both the numerator and the denominator by 29:

The denominator is negative.

Multiplying both the numerator and denominator by -1:

$$
\begin{array}{r}
161\overline{)299}(1 \\
-161 \\
\hline
138\overline{)161}(1 \\
-138 \\
\hline
23\overline{)138}(6 \\
-138 \\
\hline
\times
\end{array}
$$

H.C.F. of 299 and 161 is 23.

Dividing both the numerator and the denominator by 23:

Question:18

Fill in the blanks:

i

ii

Solution:

i

ii

Question:19

Which of the following are pairs of equivalent rational numbers?

i

ii

iii

iv

v

vi

Solution:

i

We have:

$-13 \times -21 = 273$

And $7 \times 39 = 273$

ii

We have:

$3 \times 16 = 48$

And $-8 \times -6 = 48$

$\therefore 3 \times 16 = -8 \times -6$

iii

We have:

$9 \times -16 = -144$

And $4 \times -36 = -144$

$9 \times -16 = 4 \times -36$

Therefore, they are equivalent rational numbers.

iv

We have:

$7 \times 60 = 420$

And $15 \times -28 = -420$

$\therefore 7 \times 60 \neq 15 \times -28$

Therefore, the rational numbers are not equivalent.

v

We have:
$3 \times 4 = 12$
And $12 \times -1 = -12$
$12 \neq -12$
Therefore, the rational numbers are not equivalent.

vi

We have:

$2 \times 2 = 4$

And $3 \times 3 = 9$

$2 \times 2 \neq 3 \times 3$

Therefore, the rational numbers are not equivalent.

Question:20
Find x such that:

i
ii
iii
iv
v
vi
Solution:
i

$\Rightarrow -x = 5 \times 8$
$\Rightarrow x = -40$

ii
$\Rightarrow (-3)x = 7 \times 6$

$\Rightarrow x =$
$\Rightarrow x = -14$

iii
$\Rightarrow 5x = 3 \times -25$

=> $x=$

=>$x = -15$

iv

=> $13x=6\times-65$

=> $x=$

=> $x= 6\times(-5)$

=> $x = -30$

v

=>

=> $x= -4$

vi)

=>

=>

=>

$x= -24$

Question:21

Which of the following rational numbers are equal?

i

ii

iii

Solution:

i

$8\times15 =120$

And $-10\times-12=120$

$8\times15 =-10 \times-12$

Therefore, the rational numbers are equal.

ii)

$-3 \times -21 = 63$
And $7 \times 9 = 63$

$\therefore -3 \times -21 = 7 \times 9$

Therefore, the rational numbers are equal.

iii

$-8 \times 21 = -168$
And $15 \times (-14) = -210$

$-8 \times 21 \neq 15 \times 14$

Therefore, the rational numbers are not equal.

Question:22
State whether the given statement is true of false:

i Zero is the smallest rational number.
ii Every integer is a rational number.
iii The quotient of two integers is always a rational number.
iv Every fraction is a rational number.
v Every rational number is a fraction.
Solution:
i False
For example, –1 is smaller than zero and is a rational number.
iiTrue
All integers can be written with the denominator 1.
iii False
Though 0 is an integer, when the denominator is 0, it is not a rational number.
For example, is not a rational number.
ivTrue
v False
–1 is a rational number but not a fraction.

Question:23
Represent each of the following rational numbers on the number line:

i

ii

iii

iv

v

vi

vii

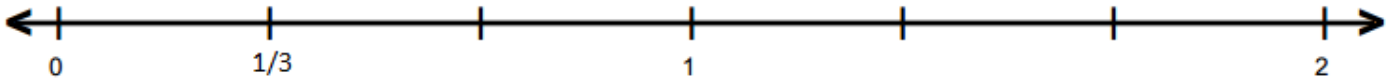
viii

ix

x

Solution:

i



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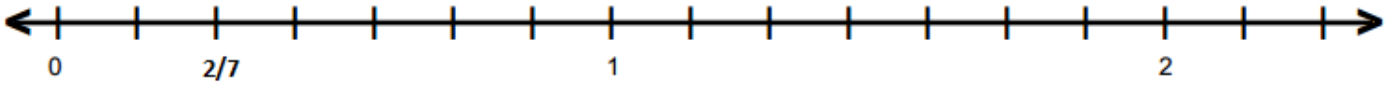
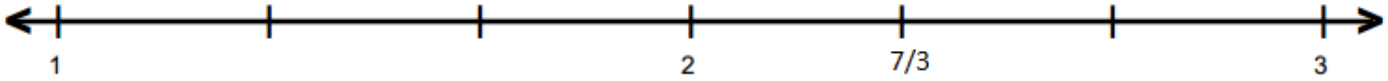
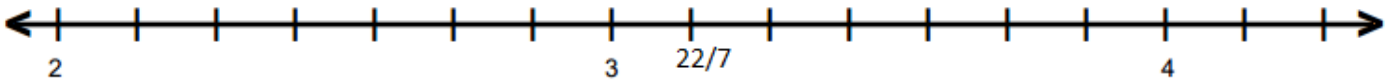


iii 7/3=2+1/3

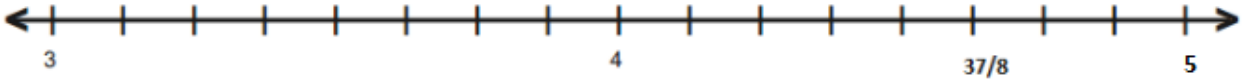


iv

can be written as . So, we need to move to the right of point 3. Then, we need to move distance more to the right.



v can be written as 4+. So, we need to move to the right of point 4. Then, we need to move distance more to the right.



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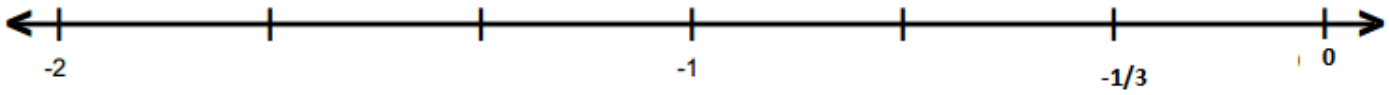
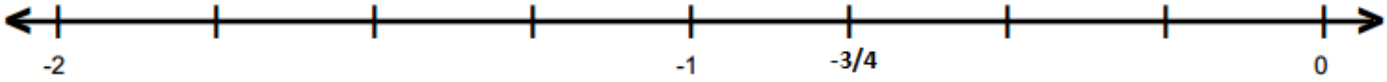
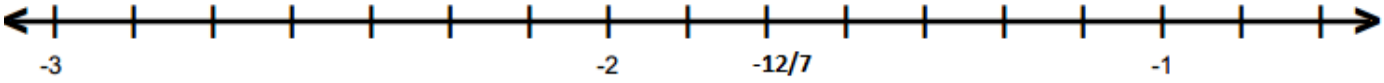


vii



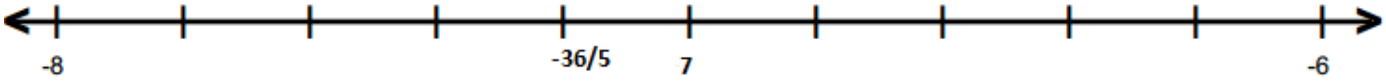
viii

can be written as . So, we need to move to the left of point -1. Then, we need to move distance more to the left.

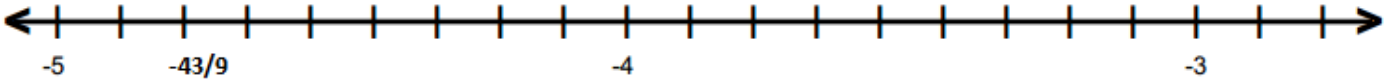


ix

can be written as . So, we need to move to the left of point -7. Then, we need to move distance more to the left.



x can be written as . So, we need to move to the left of point -4. Then, we need to move distance more to the left.



Question:24

Which of the two rational numbers is greater in each of the following pairs?

i

ii

iii

iv

v

vi

Solution:

Question:25

Which of the two rational numbers is greater in each of the following pairs?

i

ii

iii

iv

v

vi

Solution:

3	9,8
3	3,8
2	1,8
2	1,4
2	1,2
	1,1

3	9,8
3	3,8
2	1,8
2	1,4
2	1,2
	1,1

2	5,8
2	5,4
2	5,2
5	5,1
	1,1

Question:26

Fill in the blanks with the correct symbol out of >, = and <:

i

ii

iii

iv

v

vi

Solution:

13	13,91
7	1,7
	1,1

2	8,3
2	4,3
2	2,3
3	1,3
	1,1

3	9,10
3	3,10
5	1,10
2	1,2
	1,1

Question:27

Arrange the following rational numbers in ascending order:

i

ii

iii

iv

Solution:

5	5,10,15,30
2	1,2,3,6
3	1,1,3,3
	1,1,1,1

2	4,12,16,24
2	2,6,8,12
2	1,3,4,6
2	1,3,2,3
3	1,3,1,3
	1,1,1,1

5	10,15,20,30
2	2,3,4,6
3	1,3,2,3
3	1,3,1,3
	1,1,1,1

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

Question:28

Arrange the following rational numbers in descending order:

i

ii

iii

iv

Solution:

5	5,10,15,30
2	1,2,3,6
3	1,1,3,3
	1,1,1,1

3	1,6,3,3
2	1,2,1,1
	1,1,1,1

3	9,12,18,3
3	3,4,6,1
2	1,4,2,1
2	1,2,1,1
	1,1,1,1

5	5,10,15,30
2	1,2,3,6
3	1,1,3,3
	1,1,1,1

Question:29

Which of the following statements are true?

i lies to the left of 0 on the number line.
ii lies to the right of 0 on the number line.
iii lie on opposite sides of 0 on the number line.
iv lies to the left of 0 on the number line.
v lies on the right of on the number line.

Solution:

Question:30

Find five rational numbers between –3 and –2.

Solution:

Question:31

Find five rational numbers between –1 and 1.

Solution:

Question:32

Find five rational numbers between and .

Solution:

Question:33

Add the following rational numbers:

i

ii

iii

iv

v

vi

vii

viii

Solution:

i

ii

iii

iv

v

=

vi

vii

viii

Question:34

Add the following rational numbers:

i

ii

iii

iv

v

vi

vii

viii

Solution:

i

ii

3	9,3
3	3,1
	1,1

iii

iv

The denominators of the given rational numbers are 27 and 18.

3	27,18
3	9,6
3	3,2
2	1,2
	1,1

L.C.M. of 27 and 18 is 54.

v

3	36,12
2	12,4
2	6,2
3	3,1
	1,1

The denominators of the given rational numbers are 36 and 12.
L.C.M. of 36 and 12 is 36.

vi

3	9,27
3	3,9
3	1,3
	1,1

vii

3	24,18
2	8,6
2	4,3
2	2,3
3	1,3
	1,1

viii

2	4,8
2	2,4
2	1,2
	1,1

Question:35

Evaluate:

i

ii

iii

iv

v

vi

Solution:

ii

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

3	9,12,18
3	3,4,6
2	1,4,2
2	1,2,1
	1,1,1

2	8,16,4
2	4,8,2
2	2,4,1
2	1,2,1
	1,1,1

Question:36

Simplify:

i

ii

iii

iv

v

vi

Solution:

3	15,3
5	5,1
	1,1

5	10,15,20
2	2,3,4
2	1,3,2
3	1,3,1
	1,1,1

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

13	39,26
3	3,2
2	1,2
	1,1

2	2,4
2	1,2
	1,1

2	11,3,4
2	11,3,2
11	11,3,1
3	1,3,1
	1,1,1

Question:37

Express each of the following rational numbers as the sum of an integer and a rational number:

i

ii

iii

iv

Solution:

Question:38

Find the additive inverse of:

i 5

ii –9

iii

iv

v

vi

vii 0

viii

Solution:

i Additive inverse of 5 is –5.

ii Additive inverse of –9 is 9.

iii Additive inverse of .

iv Additive inverse of .

v Additive inverse of

vi Additive inverse of

vii Additive inverse of 0 is 0.

viii Additive inverse of

Question:39

Subtract:

i

ii

iii

iv

v

vi

vii

viii

ix

x

Solution:

vi

.

Question:40

Evaluate:

i

ii

iii

iv

v

vi

vii

viii

Solution:

L.C.M. of 8 and 4 is 8.

Question:41

Subtract the sum of and from the sum of and .

Solution:

Question:42

The sum of two rational numbers is . If one of them is , find the other.

Solution:

Question:43

The sum of two rational numbers is . If one of them is , find the other.

Solution:

Question:44

The sum of two rational numbers is –3. If one of them is , find the other.

Solution:

Question:45

The sum of two rational numbers is . If one of them is –5, find the other.

Solution:

Question:46

What should be added to to get ?

Solution:

Let the required number be x.

Question:47

What should be added to to get 3?

Solution:

Let the number that is to be added be *x*.

Question:48

What should be added to to get ?

Solution:

Let the number that is to be added be *x*.

Question:49

What should be added to to get –1?

Solution:

Let the number that is to be added be *x*.

Question:50

What should be added to to get 1?

Solution:

Question:51

What should be subtracted from to get ?

Solution:

Question:52

What should be subtracted from to get ?

Solution:

Question:53

What should be subtracted from to get 1?

Solution:

Question:54

Multiply:

ii
iii
iv
v
vi
vii
viii
ix
Solution:

Question:55
Simplify:

i
ii
iii
iv
v
vi
Solution:

Question:56
Simplify:

i
ii
iii
iv
v
vi
Solution:

Question:57
Simplify:

i
ii
iii
iv
Solution:

Question:58

Find the cost of metres of cloth at Rs per metre.

Solution:

Question:59

A bus is moving at an average speed of km/h. How much distance will it cover in huors?

Solution:

Question:60

Find the multiplicative inverse of reciprocal of each of the following:

i 18

ii –16

iii

iv

v

vi

vii –1

viii 0

Solution:

Question:61

Simplify:

i

ii

iii

iv

v

vi

Solution:

Question:62

Fill in the blanks:

i ..... ÷

ii ..... ÷

iii

iv

Solution:

Question:63

Divide the sum of and by their difference.

Solution:

Question:64

By what number should be divided to get ?

Solution:

Question:65

By what number should be multiplied to get 24?

Solution:

Question:66

The product of two rational numbers is 10. If one of the numbers is –8, find the other.

Solution:

Question:67

The product of two rational numbers is –9. If one of the numbers is –12, find the other.

Solution:

Question:68

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

Solution:

Question:69

By what rational number should be multiplied to obtain ?

Solution:

Question:70

If 24 pairs of trousers of equal size can be prepared with 54 m of cloth, what length of cloth is required for each pair of trousers?

Solution:

Question:71

How many pieces, each of length m, can be cut from a rope of length 30 m?

Solution:

Question:72

The cost of metres of cloth is Rs . Find the cost of cloth per metre.

Solution:

Question:73

Mark ✓ against the correct answer

in standard form is

a

b

c

d none of these

Solution:

$$
\begin{array}{r}
33\overline{)\,55\,(1} \\
-33 \\
\hline
22\overline{)\,33\,(1} \\
-22 \\
\hline
11\overline{)\,22\,(2} \\
-22 \\
\hline
\times
\end{array}
$$

Question:74

Mark ✓ against the correct answer

in standard form is

a

b

c

d none of these

Solution:

$$
\begin{array}{r}
102\overline{)\,119\,(1} \\
-102 \\
\hline
17\overline{)\,102\,(6} \\
-102 \\
\hline
\times
\end{array}
$$

Question:75

Mark ✓ against the correct answer

If then the value of *x* is

a –14

b 14

c 21

d –21

Solution:

Question:76

What should be added to to get 1?

a

b

c

d

Solution:

Question:77

What should be subtracted from to get ?

a

b

c

d

Solution:

Question:78

Mark ✓ against the correct answer

Which is smaller out of ?

a

b

c cannot be compared

Solution:

Question:79

Mark ✓ against the correct answer

Which is larger out of and ?

a

b
c cannot be compared
Solution:

Question:80
Mark ✓ against the correct answer
Reciprocal of –6 is

a 6
b
c
d none of these
Solution:

Question:81
Mark ✓ against the correct answer
Multiplicative inverse of is
a
b
c
d none of these
Solution:

Question:82
Mark ✓ against the correct answer

a
b
c
d
Solution:

Question:83
Mark ✓ against the correct answer

a
b
c
d

Solution:

Question:84

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:85

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:86

Which is greater between and ?

a

b

c both are equal

Solution:

The correct option is b.

Question:87

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:88

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:89

Mark ✓ against the correct answer

a

b 2

c

d

Solution:

Question:90

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:91

Mark ✓ against the correct answer

a not defined

b

c 0

d

Solution:

Question:92

Mark ✓ against the correct answer

a

b 0

c

d not defined

Solution:

Question:93

Express each of the following rational numbers in standard form:

i

ii

iii

Solution:

$$209\overline{)247}\,(1$$
$$-209$$
$$\overline{38\overline{)209}\,(5}$$
$$-190$$
$$\overline{19\overline{)\,38\,}\,(2}$$
$$-38$$
$$\overline{\times}$$

$$46\overline{)115}\,(2$$
$$-92$$
$$\overline{23\overline{)\,46\,}\,(2}$$
$$-46$$
$$\overline{\times}$$

$$84\overline{)147}\,(1$$
$$-84$$
$$\overline{63\overline{)\,84\,}\,(1}$$
$$-63$$
$$\overline{21\overline{)\,63\,}\,(3}$$
$$-63$$
$$\overline{\times}$$

Question:94

List five rational numbers between –2 and –1.

Solution:

Question:95

The sum of two rational numbers is –4. If one of them is , find the other.

Solution:

Question:96

What should be added to to get ?

Solution:

Hence , the other number is

Question:97

A car is moving at an average speed of km per hour. How much distance will it cover in hours?

Solution:

Question:98

By what number should be divided to obtain ?

Solution:

Question:99

How many pieces, each of length m, can be cut from a rope of length 45 m?

Solution:

Question:100

Find the cost of m of cloth at Rs per metre.

Solution:

Question:101

Mark ✓ against the correct answer

in standard form is

a

b

c

d none of these

Solution:

$$
\begin{array}{r}
55\overline{)\,66\,(1} \\
-55 \\
\hline
11\overline{)\,55\,(5} \\
-55 \\
\hline
\times
\end{array}
$$

Question:102

Mark ✓ against the correct answer

What should be subtracted from to get ?

a

b

c

d

Solution:

Question:103

Mark ✓ against the correct answer

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

a

b

c

d

Solution:

Question:104

Mark ✓ against the correct answer

The multiplicative inverse of is

a

b

c

d none of these

Solution:

Question:105

Mark ✓ against the correct answer

a

b

c

d

Solution:

Question:106

Mark ✓ against the correct answer

a

b

c

d none of these

Solution:

Question:107

Mark ✓ against the correct answer

Which is smaller between and ?

a

b

c cannot be compared

Solution:

Question:108

Fill in the blanks.

i

ii

iii

iv Multiplicative inverse of is ..... .

Solution:

Question:109

Write 'T' for true and 'F' for false for each of the following:

i lies to the left of 0 on the number line.

ii lie on opposite side of 0 on the number line.

iii lies to the left of 0 on the number line.

iv .

v is the largest among .

Solution: