

Important questions Of Rational Numbers

Question 1

Write the additive inverse of each of the following:

- i) 1
- ii) $-1/9$
- iii) $-2/3$
- (iv) 2
- (v) $-9/1$

Answer

(i) 1

Additive inverse = -1

(ii) $-1/9$

Additive inverse = $1/9$

(iii) $-2/3$

Additive inverse = $2/3$

(iv) 2

Additive inverse = -2

(v) $-9/1$

Additive inverse = 9

Question 2

What is the additive identity?

- 1) 1
- 2) -1
- 3) 0
- 4) None of the above

Answer 0

Question 3

True or False Statement

- i) The difference of two rational number is a rational number
- ii) Addition of rational numbers is associative
- iii) Addition of rational numbers is commutative
- iv) Subtraction of rational numbers is not commutative
- v) The addition or subtraction of two rational number is a rational number

Answer

All the statement are true

Question 4

Find the multiplicative inverse of the following.

- (i) $-11/12$
- (ii) $-10/9$
- (iii) $1/2$
- (iv) $-5/2 \times -2/5$
- (v) $-1/2 \times -2/5$
- (vi) -4

Answer

i) $-11/12$

Multiplicative inverse = $-12/11$

ii) $-10/9$

Multiplicative inverse = $-9/10$

iii) $1/2$

Multiplicative inverse = 2

iv) $-5/2 \times -2/5 = 1$

Multiplicative inverse =1

v) $-1/2 \times -2/5 = 1/5$

Multiplicative inverse =5

vi) -1

Multiplicative inverse =-1/4

Question 5

Which of these properties hold false for Multiplication of rational numbers?

- 1) Associative law
- 2) Closure law
- 3) Commutative law
- 4) Existence of Multiplicative identity
- 5) None of the these

Answer

None of these

Question 6

Find the below multiplication

i) $(-1/2) \times (9/10)$

ii) $(25/-9) \times (1/3)$

iii) $(7/24) \times 10$

Answer

i) $(-1/2) \times (9/10)$
 $= -1 \times 9/2 \times 10 = -9/20$

ii) $(25/-9) \times (1/3)$
 $= (-25/9) \times (1/3)$
 $= -25 \times 1/9 \times 3 = -25/27$

$$\begin{aligned} \text{iii)} \quad & (7/24) \times 10 \\ & = 7 \times 10 / 24 = 70/24 \end{aligned}$$

Question 7

Find the following

- i) $(1/2)^{-1}$
- ii) $(3)^{-1}$
- iii) $(-6)^{-1}$
- iv) $(1/-2)^{-1}$

Answer

- i) Multiplicative inverse of $(1/2)$ = 2
- ii) Multiplicative inverse of (3) = $1/3$
- iii) Multiplicative inverse of (-6) = $-1/6$
- iv) Multiplicative inverse of $(1/-2)$ = -2

Question 8

The product of two rational number is 2 , if one of the rational number is $1/7$,what is the value of other?

Answer:

Let a be the other number, then

$$a \times (1/7) = 2$$

Or

$$a = 2 \div (1/7)$$

$$a = 2 \times 7 = 14$$

Question 11

Fill in the blanks

- (i) $\frac{4}{5} \div (-3) = (-4/15)$
- (ii) The numbers 1 and -1 are their own reciprocals
- (iii) The reciprocal of 1 is 1 .
- (iv) $(1/2) \div (2/3) = 3/4$.
- (v) The product of two rational numbers is always a rational number.
- (vi) The reciprocal of a negative rational number is a negative rational number.

Answer:

- i) $4/5$
- ii) 1 and -1
- iii) 1
- iv) $3/4$
- v) Rational Number
- vi) negative rational number

Question 12

Write five rational numbers which are smaller than 5

Answer:

0,1,2,3,4

Question 13

Find five rational numbers between (1) and 2

Answer:

We can write as

$$1 = 10/10$$

$$2 = 20/10$$

So five rational numbers will be

$11/10, 12/10, 13/10, 14/10, 15/10$

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