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9th Class Mathematics

Unit 1: Real Numbers

Review Exercise 1

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Review Exercise No. 1 Important MCQS Solved

Q. 1 Choose the correct option. (Book Exercise)

is:

(a) Integer (b) Rational number (c) Irrational number (d) Natural number

ii. and are

(a) Natural number (b) Integers (c) Rational number (d) Irrational number

iii. If n is not a perfect square, then is:

(a) Rational number (b) Natural number (c) Integer (d) Irrational number

vi. is

(a) Whole number (b) Integer (c) Rational number (d) Irrational number

v. For all is called:

(a) Reflexive property (b) Transitive number (c) Symmetric property (d) Trichotomy property

vi. Let then and is called property.

(a) Trichotomy (b) Transitive (c) Additive (d) Multiplicative

vii. then

(a) (b) (c) (d)

viii. Let then and is called property.

(a) Reflexive (b) Symmetric (c) Transitive (d) Additive

iv

(a) (b) (c) (d)

. The product of is:

(a) Prime number (b) odd number (c) Irrational number (d) Rational number

Answer Key

I	ii	iii	iv	v	vi	vii	viii	ix	x
C	d	d	d	a	b	a	b	d	d

Important Multiple-Choice Questions (MCQS) Solved

1. Which number system was used by the Sumerians?

(a) Decimal (b) hexadecimal (c) Sexagesimal (d) Binary

2. The sexagesimal system is a number system with the base:

(a) 2 (b) 10 (c) 16 (d) 60

3. Which number system was used by the Egyptians?

(a) Decimal (b) hexadecimal (c) Sexagesimal (d) Binary

4. How many letters are used in Roman numeral system?

(a) 3 (b) 5 (c) 7 (d) 10

5. In Roman counting the letter "L" represents the number:

(a) 10 (b) 50 (c) 100 (d) 500

6. The invention of zero is attributed to:

(a) Arabs (b) Egyptians (c) Sumerians (d) Indians

7. Which number system is known as Indo-Arabic numerals?

(a) Decimal (b) hexadecimal (c) Sexagesimal (d) Binary

8. Who did introduce the numerals to Europe?

(a) Arabs (b) Egyptians (c) Sumerians (d) Indian

9 Which of the following is one of the modern number systems?

(a) Roman Numerals (b) Egyptians numerals (c) Sexagesimal system (d) hexadecimal system

10.

(a) (b) Q (c) R (d)

11.

(a) (b) Q (c) R (d)

12. and are sets.

(a) disjoint (b) over lapping (c) intersecting (d) supper

13. For each prime number is an:

(a) Irrational (b) Rational (c) Real (d) Whole

14. Name the property of real numbers used in .

(a) Additive inverse (b) Multiplicative inverse (c) Additive identity (d) Multiplicative identity

15 Name the property of real numbers used in

(a) Additive identity (b) Additive Inverse (c) Multiplicative identity (d) Multiplicative Inverse

16. If and then.

(a) (b) (c) (d)

17 If then only one of or or holds is called - property.

(a) Trichotomy (b) Transitive (c) Additive (d) Multiplicative

18. In , the symbol is called:

(a) radical sign (b) index (c) exponent (d) base

19. In ' is called:

(a) base (b) radical sign (c) index (d) radical

20.

(a) (b) (c) (d)

21. Writing with radical sign we get

(a) (b) (c) (d)

22. In , the radicand is:

(a) 3 (b) 1 (c) 5 (d) 35

23. Which of the following is a Surd

(a) (b) (c) (d)

24. Which of the following is a binomial Surd?
(a) (b) (c) (d)
25. A surd which contains a single term is called surd
(a) Monomial (b) Binomial (c) Trinomial (d) None
26. Conjugate factor of the Surd is:
(a) (b) (c) (d)
27. is equal to:
(a) 14 (b) -14 (c) 12 (d) 8
28.
(a) (b) (c) (d)
29.
(a) (b) (c) (d)
- Q. 2 If and then verify that
(i)

Solution:

Now, R.H.S

From (i) and (ii), L.H.S = R.H.S
Hence
(ii)

Solution

Now, R.H.S

From (i) and (ii), L.H.S R.H.S
Hence is proved

Q. 3 If , then verify the associative property of real numbers w.r.t addition and multiplication.

Solution:

(i) Associative property w.r.t addition.

(ii) Associative property w.r.t multiplication.

Solution:

2	
2	
3	

Now, R.H.S

From (i) and (ii) L.H.S R.H.S

Hence,

Hence,

Q. 4 Is 0 a rational number? Explain.

Solution:

Yes, 0 is a rational number.

Explanation

A number in the form $\frac{p}{q}$ where p and q is a rational number. The number 0 can be written as $\frac{0}{1}$ Here $p=0$ and $q=1$ so we can say that 0 is a rational number.

Q. 5 State trichotomy property of real numbers.

solution:

for all values of

Either $a < b$ or $a = b$ or $a > b$

This property is called trichotomy property

Q. 6 Find two rational numl between 4 and 5 .

Solution:

Average of 4 and 5

Now we find,

Average of 4 and 5

Thus, two rational numbers between 4 and 5 are $\frac{9}{2}$ and $\frac{11}{2}$.

Thus two rational number between 4 and 5 are $\frac{9}{2}$ and $\frac{11}{2}$

Q. 7 Simplify the following:

(i)

Solution:

(ii)

Solution:

(iii)

Solution:

Q. 8 The sum of three consecutive odd integers is 51 . Find the three integers.

Solution:

Sum = 51

Let be three consecutive odd numbers.

numbers.

By condition:

$$(x) + (x + 2) + (x + 4) = 51$$

$$x + x + 2 + x + 4 = 51$$

$$3x + 6 = 51$$

$$3x = 51 - 6$$

$$3x = 45$$

$$x = \frac{45}{3}$$

$$x = 15$$

Thus, 15, 17 and 19 are required three consecutive odd numbers.

Q. 9 Abdullah picked up 96 balls and placed them into two buckets. One bucket has twenty-eight more balls than the other bucket. How many balls were in each bucket?

Solution

Total balls

Let balls in and bucket be and respectively.

By condition:

------(i)

By condition:

Adding eq.(i) and (ii)

By condition:

By condition:

Adding eq (i) and (ii)

Put it in eq. (i)

Thus bucket has 62 balls and bucket has 34 balls.

Q. 10 Salma invested Rs. 350,000 in a bank, which paid simple profit at a rate

Finding the profit for 5 years

Principal amount

Profit rate

Time period years

We know that

Finding the total profit:

Finding the total amount:

Total amount at the end of 7 years

Rs. 540,750 .