Section A

Mark the correct alternative in each of the following:

1. Which one of the following is the smallest whole number?

(a) 1 (b) 2 (c) 0 (d) None of these

Answer:

Option (c) is the correct answer.

We know that the set of whole numbers is {0, 1, 2, 3, 4 …}.

Hence, the smallest whole number is 0.

2. Which one of the following is the smallest even whole number?

(a) 0 (b) 1 (c) 2 (d) None of these

Answer:

Option (c) is the correct answer.

We know that the natural numbers along with 0 form the collection of whole numbers.

Hence, the numbers 0, 1, 2, 3, 4 … form the collection of whole numbers.

So the number which is divisible by 2 is an even number and 2 is the smallest even number.

3. Which one of the following is the smallest odd whole number?

(a) 0 (b) 1 (c) 3 (d) 5

Answer:

Option (b) is the correct answer.

We know that the natural numbers along with 0 form the collection of whole numbers.

Hence, the numbers 0, 1, 2, 3, 4 … form the collection of whole numbers.

So the natural number which is not divisible by 2 is called an odd whole number and 1 is the smallest odd whole number.

4. How many whole numbers are between 437 and 487?

(a) 50 (b) 49 (c) 51 (d) None of these

Answer:

Option (b) is the correct answer.

We know that the whole numbers between 437 and 487 are 438, 439, 440, 441, …, 484, 485 and 486.

In order to find the required number of whole numbers subtract 437 from 487 and then subtract again 1.

Hence, there are (487 − 437) − 1 whole numbers lying between 437 and 487.

So we get (487 − 437) − 1 = 50 − 1 = 49

5. The product of the successor of 999 and the predecessor of 1001 is
(a) one lakh (b) one billion (c) one million (d) one crore

Answer:

Option (c) is the correct answer.

We know that the successor of 999 = 999 + 1 = 1000

So the predecessor of 1001 = 1001 − 1 = 1000

It can be written as

Product of them = (Successor of 999) × (Predecessor of 1001)

By substituting the values

Product of them = 1000 × 1000 = 1000000 = one million

6. Which one of the following whole numbers does not have a predecessor?
(a) 1 (b) 0 (c) 2 (d) None of these

Answer:

Option (b) is the correct answer.

We know that the numbers 0, 1, 2, 3, 4 … form the collection of whole numbers.

Hence, the smallest whole number is 0 which does not have a predecessor.

7. The number of whole numbers between the smallest whole number and the greatest 2-digit number is

(a) 101 (b) 100 (c) 99 (d) 98

Answer:

Option (d) is the correct answer.

We know that the smallest whole number = 0

So the greatest 2-digit whole number = 99

Whole numbers which lie between 0 and 99 are 1, 2, 3, 4,…, 97, 98.

In order to find the number of whole numbers between 0 and 99, first subtract 1 from the difference of 0 and 99.

So the number of whole numbers between 0 and 99 = (99 − 0) − 1 = 99 − 1 = 98

8. If n is a whole number such that n + n = n, then n =?

(a) 1 (b) 2 (c) 3 (d) None of these

Answer:

Option (d) is the correct answer.

We know that 0 + 0 = 0, 1 + 1 = 2, 2 + 2 = 4….

Hence, the statement n + n = n is true only when n = 0.

9. The predecessor of the smallest 3-digit number is

(a) 999 (b) 99 (c) 100 (d) 101

Answer:

The option (b) is the correct answer.

We know that the smallest 3-digit number = 100

So the predecessor of 3 digit number = 100 − 1 = 99

10. The whole number n satisfying n + 35 = 101 is

(a) 65 (b) 67 (c) 64 (d) 66

Answer:

Option (d) is the correct answer.

It is given that

n + 35 = 101

By adding − 35 on both sides

n + 35 + (− 35) = 101 + (− 35)

On further calculation

n + 0 = 66

So we get

n = 66

11. Match the following

(i) 425 × 136 = 425 × (6 + 30 + 100)	(1) Commutativity under multiplication.
(ii) 2 × 49 × 50 = 2 × 50 × 49	(2) Commutativity under addition.
(iii) 80 + 2005 + 20 = 80 + 20 + 2005	(3) Distributivity of multiplication over addition.

Answer:

(i) 425 × 136 = 425 × (6 + 30 + 100)	(3) Distributivity of multiplication over addition.
(ii) 2 × 49 × 50 = 2 × 50 × 49	(1) Commutativity under multiplication
(iii) 80 + 2005 + 20 = 80 + 20 + 2005	(2) Commutativity under addition

Section B

Q1. Using the distributivity of multiplication over the addition of whole numbers, find each of the following products:

(i) 736 × 103

(ii) 258 × 1008

Answer:

(i) 736 × 103

It can be written as

= 736 × (100 + 3)

By using the distributivity of multiplication over the addition of whole numbers

= (736 × 100) + (736 × 3)

On further calculation

= 73600 + 2208

We get

= 75808

(ii) 258 × 1008

It can be written as

= 258 × (1000 + 8)

By using the distributivity of multiplication over the addition of whole numbers

= (258 × 1000) + (258 × 8)

On further calculation

= 258000 + 2064

We get

= 260064

Q2. Find the sum by suitable arrangement.
2852 + 553 + 2648 + 647 + 300

Answer:

The correct option is D 7000
2852 + 553 + 2648 + 647 +300
= 553 + 647 + 2852 + 2648 + 300 [Commutativity property]
= (553 + 647) + (2852 + 2648) + 300
[Associative property]
=1200 + 5500 + 300
=7000

Q3. Find the product of 885 × 94

Answer:

885×94 = 885 × (100 – 6) (By distributive property over subtractive, multiplicative)

885 × 94 = 885 × 100− 885 × 6

885 × 94 = 88500 − 5310

885× 94 = 83190

Q4. Find the value of 1123 × 648 + 1123 × 122 + 1123 × 230

Answer:

By using the distributive property of multiplication over addition,

a × b + a × c = a (b + c)

1123 × 648 +1123 × 122+1123 ×230 = 1123 (648 +122 + 230).

1123 × 648 + 1123 × 122 + 1123 × 230 = 1123(1000).

1123 × 648 + 1123 × 122 + 1123 × 230 = 1123000.

Section C

Q5.

(16 – 8) × 24 = ……. = …….

16 × 24 – 8 × 24 = …….. – ……. = …….

Is (16 – 8) × 24 = 16 × 24 – 8 × 24? …….

Is the type of result always true? …….

Name the property used here ……

Answer:

(16 – 8) x 24 = 8 x 24 = 192

16 x 24 – 8 x 24 = 384 – 192 = 192

Is (16 – 8) x 24 = 16 x 24 – 8 x 24 ? Yes.

Is the type of result always true? Yes

Name the property used here Distributivity.

Q6. Find the value of the following:

(i) 54279 × 92 + 54279 × 8

(ii) 60678 × 262 – 60678 × 162

Answer:

(i) 54279 × 92 + 54279 × 8
= 54279 (92 + 8)
= 54279 × 100 = 5427900

(ii) 60678 × 262 – 60678 × 162
= 60678 (262 – 162)
= 60678 × 100 = 6067800

Section C

Q7. Find the number when divided by 58 gives a quotient 40 and the remainder 31.

Answer: We know that

Dividend = Divisor × Quotient + Remainder

By substituting values

Dividend = 58 × 40 + 31

On further calculation

Dividend = 2320 + 31

So we get

Dividend = 2351

Q8. A taxi driver filled his car petrol tank with 40 litres of petrol on Monday. The next day, he filled the tank with 50 litres of petrol. If the petrol costs ₹ 44 per litre, how much did he spend in all on petrol?

Answers:

Petrol quantity filled on Monday = 40 litres

Petrol quantity filled on Tuesday = 50 litres

Total petrol quantity filled = (40 + 50) litre

Cost of petrol per litre = ₹ 44

Total money spent = 44 × (40 + 50)

= 44 × 90

Q9. Write all whole numbers between 100 and 200 which do not change if the digits are written in reverse order.

Answer:

The whole numbers between 100 and 200 which do not change if the digits are written in reverse order are:
101, 111, 121, 131, 141, 151, 161, 171, 181, 191

Q10. How many 2-digit whole numbers are there between 5 and 92?

Answer:

2-digit numbers between 5 and 92 will be from 10 to 91 i.e. 91 – 9 = 82

Q11. How many 3-digit whole numbers are there between 72 and 407?

Answer:

3-digit whole numbers will be from 100 to 406 i. e. 406 – 99 = 307

Q12. Find the product of the largest 4-digit number and largest 3-digit number using the distributive law.

Answer:

Largest 4-digit number = 9999

Largest 3-digit number = 999

We know that distractive law,

a (b + c) = a × b + a × c…(i)

a (b – c) = a × b – a × c…(ii)

Product of largest 4-digit number and largest 3-digit number,

9999 × 999

Using (ii), we can write as 9999 × (1000 – 1)

9999 × (1000 – 1) = 9999 × 1000 – 9999 × 1

9999 × (1000−1) = 9999000 – 9999

9999 × (1000−1) = 9,989,001