Name: _____

Grade : VI

Subject : Mathematics

Chapter 2: Whole Numbers

I. Multiple Choice Questions

1. The product of non-zero whole number and its successor is always
   a. an even number b. an odd number c. a prime number d. divisible by 3
2. A whole number is added to 25 and the same number is subtracted from 25. The sum of the resulting number is
   a. 0 b.25 c. 50 d. 75
3. The whole number which has no predecessor is
   a. 1 b. 0 c. 2 d. 3
4. 77 + 23 = 23 + 77 is an example of
   a. closure property b. associative property
   c. commutative property d. distributive property
5. By using dot (•) patterns, which of the following numbers can be arranged in all the three ways namely a line, a triangle and a rectangle?
   a. 9 b. 10 c. 11 d. 12
6. The predecessor of 1 lakh is
   a.99000 b. 99999 c. 999999 d. 100001
7. The successor of 1 million is
   a. 2 million b. 1000001 c. 100001 d. 10001
8. Which of the following is not zero?
   a. 0 x 0 b. $\frac{0}{2}$ c. $\frac{(8-8)}{2}$ d. 2 + 0
9. The product of two whole numbers is always a
   a. natural number b. even number
   c. odd number d. none of these
10. The greatest number which always divides the product of the predecessor and successor of an odd natural number other than 1, is
    a. 6 b. 4 c. 16 d. 32

1. an even number	2. 50	3. 0	4. commutative property	5. 10
6. 99999	7. 1000001	8. 2 + 0	9. none of these	10. 4

II. Multiple Choice Questions

1. Number of whole numbers between 38 and 68 is:
   a. 31 b. 30 c. 29 d. 28
2. The product of successor and predecessor of 999 is
   a. 999000 b. 998000 c. 989000 d. 1998
3. Which of the following is not true?
   a. (7 + 8) + 9 = 7 + (8 + 9) b. (7 x 8) x 9 = 7 x (8 x 9)
   c. 7 + 8 x 9 = (7 + 8) x (7 + 9) d. 7 x (8 +9) = (7 x 8) + (7 x 9)
4. Which of the following statements is not true?
   a. Both addition and multiplication are associative for whole numbers
   b. Zero is the identity for multiplication of whole numbers
   c. Addition and multiplication both are commutative for whole numbers.
   d. Multiplication of distributive over addition for whole numbers.
5. Which of the following statements is not true?
   a. 0 + 0 = 0 b. 0 - 0 = 0 c. 0 x 0 = 0 d. 0 ÷ 0 = 0
6. Which is the successor of 1099999?
   a. 1100001 b. 1100000 c. 1099998 d. 9999999
7. Which is the predecessor of 208090?
   a. 208089 b. 208091 c. 218090 d. 198090
8. What is the value of 8 x 1769 x 125:
   a. 1769000 b. 1768000 c. 1768010 d. 1769010
9. What is the value of 81265 x 169 – 81265 x 69:
   a. 81265000 b. zero c. 8126500 d. 8026500
10. Which of the following is the additive identity in the set of whole numbers?
    a. 1 b. zero c -1 d. any number
11. The school canteen charges ₹ 20 for lunch & ₹ 5 for milk each day. How much money will be charged in 5 days on these things?
    a. ₹ 125 b. ₹ 25 c.₹ 75 d. ₹ 100
12. The successor of the smallest counting number is :
    a. 0 b.1 c. 2 d. 3
13. The successor of the largest 2 digit number is :
    a. 98 b. 99 c. 100 d. 101
14. When any counting number is multiplied by 0, the product is:
    a. the counting number itself b. 1 c. 0 d. none of these

15. When N is divided by D, Q and R, then they are connected by the relation (D= Divisor, N = Number, Q = Quotient and R= Remainder):

a. N = D X Q + R b. D = Q X N + R c. Q = N X D + R d. N = D X Q – R

1.c	2.b	3.c	4.b	5.d
6.b	7.a	8.a	9.c	10.b
11.a	12.c	13.c	14.c	15.a

III. Multiple Choice Questions

1. The successor of 99 is.

a. 99 b. 98 c. 100 d.none of these

2. The predecessor of 100 is

a. 101 b. 100 c. 99 d.none of these

3. The successor of 27 is

a. 26 b. 25 c. 24 d. 28

4. The predecessor of 36 is

a. 32 b. 35 c. 33 d. 37

5. The natural number that has no predecessor in natural number is

a. 1 b. 10 c. 100 d. 1000

6. The difference between the successor of a number and the number itself is

a. 0 b. -1 c. 1 d.none of these

7. The difference between the predecessor of a number and the number itself is

a. 1 b. -1 c. 2 d. -2

8. The difference between the successor and the predecessor of a number is

a. 1 b. 2 c. -1 d. -2

9. To find the predecessor of a number, we have to subtract from the number itself.

a. 1 b. 2 c. 3 d. 4

10. To Find the successor of a number, we have to add to the number itself

a. 4 b. 3 c. 2 d. 1

11. The smallest whole number is

a. 0 b. 1 c. -1 d.none of these

12. Which of the following statements is true?

a. All natural numbers are also whole numbers

b. All whole numbers are also natural numbers

c. There is no smallest whole numbers.

d. The greatest whole number is 100.

13. Which of the following is true?

a. 210 > 201 b. 210 < 201 c. 210 = 201 d.none of these

14. Which of the following statements is true?

a. 1 is the smallest natural number b. 50 is the predecessor or 49

c. 1 is the smallest whole number. d. 599 is the successor of 600.

15. Which of the following statements is true?

a. The whole number 0 has no predecessor in whole numbers.

b. There are 10 whole numbers between 11 to 21.

c. The successor of a two digit number is always a two digit number.

d. The predecessor of a two digit number is never a single digit number.

16. How many natural numbers are there between 1 and 10?

a. 6 b. 7 c. 8 d. 9

17. Find 27 ÷ (9÷3).

a. 3 b. 6 c. 9 d. 27

18. Find (24 ÷ **4**) + **2**

a. 1 b. 3 c. 4 d. 2

19. Which of the following will not represent zero?

a. 0 + 1 b. 0 x 0 c. $\frac{0}{2}$ d. $\frac{2-2}{2}$

20. 1 + 0 =

a. 1 b. 0 c. 2 d. not defined.

21. Whole numbers are closed under addition and multiplication. 'This property is know as

a. Closure property

b. Commutativity of addition and multiplication

c. associativity of addition and multiplication

d. distributive of multiplication over addition.

22.' 3 + 5 = 5 + 3'

The above is known as

a. closure property b. commutativity of addition

c. commutativity of multiplication. d. none of these.

23.' 3 x 5 = 5 x 3'

The above is known as

a. closure property b. commutativity of addition

c. commutativity of multiplication. d. none of these.

24.'(1 + 2) + 3 = 1 + (2 + 3)'

The above is knows as

a. commutativity of addition b. associativity of addition

c. commutativity of multiplication d. associativity of multiplication.

25. '(2 + 3) X 4 = 2 X (3 X 4)'

The above is knows as

a. commutativity of addition b. associativity of addition

c. commutativity of multiplication d. associativity of multiplication

26. ' 2 x (3 + 4) = (2 x 3) + (2 x 4)'

The above is knows as

a. distributivity of multiplication over addition

b. associativity of addition

c. associativity of multiplication

d. none of these

27. I purchased 10 litres of milk in the morning and 5 litres of milk in the evening. If the milk costs ₹ 30 per litre, how much money will I have to pay to the milkman?

a. ₹ 450 b. ₹ 300 c. ₹ 150 d.none of these

28. Which of the following is true?

a. the number 2 can be arranged as a line.

b. The number 2 can be arranged as a square

c. The number 2 can be arranged as a triangle

d. The number 2 can be arranged as a rectangle

29. The number 5 can be arranged as a

a. line b. rectangle c. square d. triangle

30. The number 5 cannot be shown as a

a. square b.rectangle c. line d. triangle

31. The number 10 cannot be shown as a

a. square b. rectangle c. line d. triangle

32. Which of the following numbers can be shown as square?

a. 11 b. 12 c. 13 d. 16

33. First triangular number is

a. 3 b. 6 c. 10 d. 13

34. Which of the following numbers cannot be shown by two rectangles?

a. 12 b. 16 c. 18 d. 15

35. Which of the following numbers is not a triangular number?

a. 3 b. 6 c. 10 d. 9

36. Which of the following numbers cannot be arranged as a rectangle?

a. 4 b. 6 c. 8 d. 7

1. c	2. c	3. d	4. b	5. a	6. c	7. a	8. b	9. a
10. d	11. a	12. a	13. a	14. a	15. a	16. c	17. c	18. b
19. a	20. d	21. a	22. b	23. c	24. b	25. d	26. a	27. a
28. a	29. a	30. a	31. a	32. d	33. a	34. d	35. d	36. d

IV. Multiple Choice Questions

1. The product of the place values of two 2' s in 4,28,721 is
   a. 4 b. 40,000 c. 4, 00, 000 d. 4, 00, 00, 000
2. The face value of 4 in 8,92,47,605 is
   a. 4 b. 40, 000 c. 47 605 d. 8, 924
3. The product of the place value of two 5 's in 6,53,250 is
   a. 25 b. 25, 000 c. 2, 50, 000 d. 25, 00, 000
4. If I is added to the greatest 7-digit number, it will be equal to
   a. 10 thousand b. 1 lakh c. 10 lakh d. 1 crore
5. The difference of the smallest three digit number and the largest two digit number is
   a. 100 b. 1 c. 10 d. 99
6. When rounded off to nearest thousands, the number 85, 642 is
   a. 85, 600 b. 85,700 c. 85, 000 d. 86, 000
7. The greatest number which on rounding off to nearest thousands gives 5, 000, is
   a. 5,001 b. 5,559 c. 5,999 d. 5,499
8. The smallest number which when rounded off to nearest hundred as 600, is
   a. 550 b. 595 c. 604 d. 599
9. The difference between the greatest and smallest numbers which when rounded off a number to the nearest hundred as 6, 700 is
   a. 100 b. 99 c. 98 d. 101
10. How many 8-digit numbers are there?
    a. 9, 99, 99,999 b. 8, 99, 99, 999 c. 9,00,00,00,000 d. none of these
11. In Indian system of Numeration, the number 58695376 is written as
    a. 58, 69, 53, 76 b. 58, 695, 376 c. 5, 86, 95, 376 d. 586, 95,376
12. The largest 4-digit number, using any one digit twice, from digits 5, 9, 2 and 6 is
    a. 9652 b. 9562 c. 9659 d. 9965
13. 3 x 10,000 + 7 x 1, 000 + 9 x 100 + 0 x 10 + 4 is the same as
    a. 3,794 b. 37,940 c. 37,904 d. 3, 79, 409
14. Which of the following numbers in Roman numerals is incorrect?
    a. LXXX b. LXX c. LX d. LLX
15. The expanded form of the number 9578 is
    a. 9 X 10, 000 + 5 x 1, 000 + 7 X 10 + 8 X 1
    b. 9 X 1, 000 + 5 X 100 + 7 X 10 + 8 X 1

c. 9 X 1, 000 + 57 X 10 + 8 X 1

d. 9 X 100 + 5 X 100 + 7 X 10 + 8 X 1.

1. c	2. a	3. d	4. d	5. b	6. d	7. d	8. a
9. b	10. c	11. c	12. d	13. c	14. d	15. b	

I. Fill in the Blanks

1. 300 is the predecessor of _____.
2. 450 is the successor of _____.
3. _____ is the successor of the largest 3-digit number
4. Whole numbers are closed under _____ and under _____.
5. Division of whole number by _____ is not defined.
6. Multiplication is distributive over _____ for whole numbers.
7. 10005 x 0 = _____.
8. 125 + (68 + 32) = (125 + _____) + 32.
9. 1785 x 3 + 1785 x 7 = _____.
10. 28 x 25 = 28 x $\frac{}{4}$ = 700
11. The smallest 6-digit natural number ending in 5 is _____.
12. 1001 x 2002 = 1001 x (1001 + ...)
13. 786 x 3 + 786 x 7 = _____.
14. 24 x 25= 24 x $\frac{}{4}$ = 600

1. 301	2. 449	3. 1000	4. addition & multiplication	5. 0	6. addition	7. 0
8. 68	9. 17850	10. 100	11. 100005	12. 1001	13. 7860	14. 100

II. Fill in the Blanks

1. The smallest whole number is _____.
2. Successor of 106159 is _____.
3. 400 is the predecessor of _____.

4. If 0 is subtracted from a whole number then the result is the _____itself.
5. The smallest 6 digit natural number ending in 5 is _____.
6. Natural numbers are closed under _____, and under _____.
7. 2395 x _____ = 6195 x 2695.
8. 2916 x _____ = 0.
9. 9128 x _____ 9128.
10. 125 + (68 + 17) = (125 + _____) + 17.
11. 8925 x 1 = _____.
12. 19 x 12 + 19 = 19 x (12 + _____)
13. 24 x 35 = 24 x 18 + 24 x _____.
14. 32 x (27 x 19) = (32 x _____) x 19.
15. Dividend = _____ X Quotient + _____.
16. Whole numbers are represented by _____and natural numbers are represented by _____.
17. _____is the additive identity of the whole numbers.
18. Product of even number is always _____.
19. Natural number 1 has no _____.

1. 0	2. 106160	3. 401	4. number	5. 100005	6. additional, multiplication	7. 6195
8. 0	9. 1	10. 68	11.8925	12. 1	13.17	14. 27
15. Divisor, Remainder	16. W,N	17. zero	18. Even	19. Predecessor		

I. Match the following

a. 127 + 73 = 73 + 127	i. Associative property of multiplication
b. (15 x 10) is a whole number	ii. Commutative property of multiplication
c. 128 x 20 = 20 X 128	iii. Distributive property of multiplication over addition
d. 64 X (16 X 25) = (64 X 16) X 25	iv. Commutative property of addition
e. 17 X (20 + 5) = 17 X 20 + 17 X 5	v. Closure property of multiplication

a. iv	2. v	3. ii	4. i	5. iii

II. Match the following

1. Division Algorithm is	a. None
2. Number of whole numbers between 0 and 1 aer	b. 0 and 1
3. Whole number satisfying a x a = a is	c. Repeated subtracted
4. Division by 0 is	d. Dividend = divisor x quotient + remainder
5. Division also means	e. Not defined

1. d	2. a	3. b	4. e	5. c

I. True or False

1. Successor of 1- digit number is always **a one -**digit number.
2. Successor of 3-digit number is always 3-digit number.
3. Predecessor of a 2-digit number is always a 2- digit number
4. 716 X 3 + 716 X 7 = 7160
5. 999999 is the largest whole number.
6. 17 X (5 + 3) = 17 X 5 + 17 X 3
7. 1 has no predecessor in the whole numbers
8. 3996 is a successor of 3995
9. Every whole numbers is except zero the successor of another whole number.
10. Sum of two whole numbers is always less than their product.
11. There is a whole number which when added to a whole number, gives the second whole number.
12. If a whole number is divided by another whole number which is greater than the first one, then the quotient is not equal to zero.
13. If the sum of two distinct whole numbers is odd, then their difference also must be odd.

1. False	2. False	3. False	4. True	5. False	6. True	7. False
8. True	9. True	10. False	11. True	12. False	13. True	

II. True or False

1. Every whole number has its successor.
2. Between any two natural numbers, there is one natural number.
3. The smallest 4-digit number is the successor of the largest 3-digits number.
4. Of the given two natural number, the one having more digits is greater.
5. Natural numbers are closed under addition.
6. Natural number are not closed under multiplication.
7. Natural numbers are closed under subtraction.
8. Addition is commutative for natural numbers.
9. 1 is the identity for addition of whole numbers.
10. 1 is the identity for multiplication of whole numbers.
11. There is a whole number which when added to a whole number give the number itself.
12. There is a natural number which when added to a natural number gives the number itself.
13. Any non-zero whole number divided by itself gives the quotient 1.
14. The product of two whole numbers need not be a whole number.
15. A whole number divided by another whole number greater than 1 never give the quotient equal to the former.
16. The natural number 1 has no predecessor.
17. If a and b are whole numbers and $a < b$, then $a + 1 < b + 1$.
18. Every whole number has its predecessor.
19. $10 \div (5 \times 2) = (10 \times 5) \times (10 \div 2)$.
20. $(20 \div 5) + 2 = (20 + 2) + 5$.

1. True	2. False	3. True	4. True	5. True	6. False	7. False
8. True	9. False	10. True	11. True	12. False	13. True	14. False
15. True	16. True	17. True	18. False	19. False	20. True	

I. Very Short Answer Type Questions

1. Write the two immediate predecessors of 2945.
   Given number is 2945
   Immediate predecessors are 2944 and 2943.
2. Write the three immediate successors of 3956
   Given number is 3956
   So, three immediate successors of 3956 are 3957, 3958, 3959.
3. How many natural numbers are there between 60 and 72?
   Given number is 60 and 72.
   Hence, natural numbers between 60 and 72
   $= (b-a) -1 = 72 - 60 -1 = 11$
4. Find the sum by suitable rearrangement 47 + 953 + 6437.
   We have, $47 + 953 + 6437 = (47 + 953) + 6437$
   $= 1000 + 6437 = 7437$
5. Find the product by suitable rearrangement 2 X 1768 X 50.
   We have, $2 \times 1768 \times 50 = (2 \times 50) \times 1768 = 100 \times 1768 = 176800$
6. Find the value of 92165 X 179 – 92168 X 79
   We have, 92165 X 179 – 92165 X 79
   = 92165 (179 - 79)
   (taking 92165 as common term)
   = 92165 X 100
   = 9216500.
7. What is the additive identity of 498?
   We know that, additive identity of any whole number is 0. So, additive identity of 498 is 0. i.e. 0 + 498 = 498
8. What is the multiplicative identity of 539?
   We know that , multiplicative identity of any whole number is 1. So, multiplicative of 539 is 1.
   i.e. 539 X 1 = 539
9. Can you divide 0 by 219? If yes, then what is the answer?
   Yes, we can divide 0 by 219 and answer is 0.
   i.e. $0 \div 219 = 0$

II. Very Short Answer Type Questions

1. State the property used in
   29 + (14 + 16) = (29 + 14) + 16.
   Associativity.
2. Does 15 ÷ 0 represent zero?
   No.
3. Name a four digit number whose predecessor is 3 digit number.
   1000
4. Write one pair of numbers whose quotient is 4.
   12 and 3 (as 12÷ 3 = 4)
5. Replace each by the correct digit in each of the following:

   (i) 917 (ii) 1000000

   -*5* *****1

   5*8 * 7042*

   917 1000000

   - 359 - 29571

   558 970429

III. Very Short Answer Type Questions

1. Are all natural numbers also whole numbers? Are all whole numbers also natural numbers?
   Yes, every natural number is a whole numbers, but all whole numbers are not natural numbers. For example, 0 is a whole number which is not a natural number.
2. Write the next three whole numbers after 50, 999.
   51, 000, 51,001, 51, 002.
3. Write the predecessor of:
   (i) 27 (ii) 10, 000

(i) Predecessor of 27 = (27-1) = 26

(ii) Predecessor of 10,000 = (10, 000 -1) = 9,999

4. Write the successor of :

   (i) 10, 00, 909 (ii) 70, 39, 999

   (i) Successor of 10, 00, 909 = (10, 00, 909 + 1) = 10, 00, 910

   (ii) Successor of 70, 39, 999 = (70, 39, 999 + 1) = 70, 40, 000.

5. Give arguments in support of the statement that there does not exist the largest natural number.

   There is no largest natural number because every natural number has its successor.

6. The product of two whole numbers is zero. What do you conclude?

   If the product of two numbers is zero it means at least one of them is zero.

7. If the product of two whole numbers is 1, can we say that one or both of them will be 1? Justify through examples.

   Yes, both the numbers will be 1 as the product of the whole numbers is 1.

8. Which is the smallest whole number?

   Smallest whole number is 0.

9. How many whole numbers are there between 32 and 53?

   There are 20 whole numbers between 32 and 53.

10. How many whole numbers are there between 1, 032 and 1, 209.

    There are 176 whole numbers between 1, 032 and 1, 209.

I. Short Answer Type Questions

1. Write the predecessor of the following:

   a. 96 b. 9998

   We know that, predecessor is one less than the given whole number.

   a. Predecessor of 96 -1 = 95

   b. Predecessor of 9998= 9998-1 = 9997

2. Determine the sum of the four numbers as given below:

   a. Successor of 32

   b. Predecessor of 49

   c. Predecessor of the predecessor of 56

   d. Successor of the successor of 67

a. Successor of 32 = 32 + 1 = 33

b. Predecessor of 49 = 49 -1 = 48

c. Predecessor of 56 is 65

So, predecessor of the predecessor of

56 = 55 – 1 = 54

d. Successor of 67 is 68

So, Successor of the successor of 67 = 68 + 1 = 69

Hence, the sum of four numbers

33 + 48 + 54 + 69 = 204

3. Write the successor of the following

a. 299 b. 2923

We know that, successor is one more than the given whole number.

a. Successor of 299 = 299 + 1 = 300

b. Successor of 2923 = 2923 + 1 = 2924

4. In each of the following pairs of numbers, state which whole number is to the left of the other on the number line. Use appropriate symbol (> or <).

a. 497, 495 b. 3059, 3096

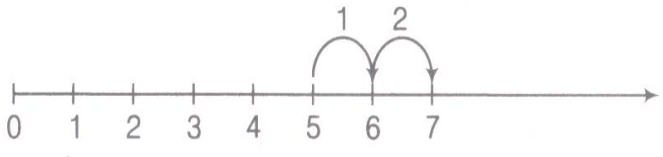
We know that, the number which lies to the right of other is a greater number.

a. 497 lies to the right of 495, so, 497 > 495

b. 3059 lies to the 3096, so, 3059 < 3096

5. Find 5 + 2 on the number line.

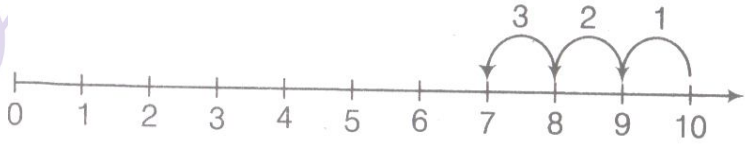
We start from 5, make 2 jumps to the right, we reach at 7.



So, 5 + 2 = 7

6. Find 10- 3 on the number line

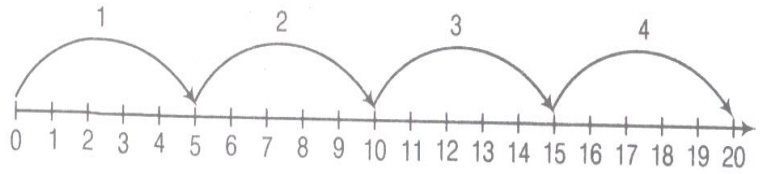
We start from 10, make 3 jumps to the left, we reach at 7.



So, 10-3 = 7

7. Find 5 X 4 on the number line.

   We start from 0, move 5 units at a time to the right, make 4 such moves. We reach at 20.



   So, 5 X 4 = 20.

8. Find the product of the largest three-digit number with the smallest four-digit number.

   Largest 3- digit number = 999

   And smallest 4- digit number = 1000

   ∴ Product = 999 X 1000 = 999000

9. There are two whole numbers, which when multiplied by itself gives the same number. What are they?

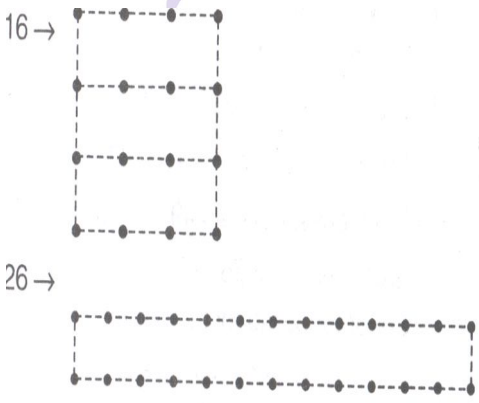
   If we multiply 0 by itself, it gives same number

   i.e. 0 X 0 = 0, and similarly, 1 X 1 = 1.

   ∴ The required whole number are 0 and 1.

10. Write the following numbers as directed using dots.

    a. 16 as a square b. 26 as a rectangle



11. Find the whole number n, when

    2n-6 = 0?

    We have 2n- 6 = 0

    2n = 6 $\Rightarrow$ n = $\frac{6}{2}$ = 3

12. Find the value of 968 X 73 + 968 X 27?

    We have, 968 X 73 + 968 X 27)

    = 968 (73 + 27) [taking 968 as common term]

    = 968 X 100 = 96800

II. Short Answer Type Questions - I

1. Taking a = 7, b = 4, c = 15, verify:
   a x (b + c) = a x b + a x c.

   LHS = a X (b + c)
   = 7 x (4 + 15)
   = 7 x 19 = 133

   RHS = a x b + a x c
   = 7 x 4 + 7x 15
   = 28 + 105 = 133

   LHS = RHS

   Hence, a x (b + c) = a x b + a x c.

2. Find the value of 24579 x 93 + 7 x 24579 using suitable property.
   24579 x 93 + 7 x 24579
   = 24579 x 93 + 24579 x 7
   = 24579 x (93 + 7)
   = 24579 x 100
   = 2457900.

3. The number of people in a game is 96209. If number of boys are 29642 and that of girls are 29167, then determine the number of old age people?

   Boys = 29642
   Girls = + 29167
   Total = 58809

   Total people = 96209
   -58809
   Old age people = 37400

4. Divide 16025 by 135 and verify the division.

   135) 16025 (118
   -135
   252
   - 135
   1175
   1080
   95

Dividend = Divisor X Quotient + Remainder

= 135 X 118 + 95

= 15930 + 95

Dividend = 16025

5. A builder constructed 690 hours at the rate of ₹ 5, 25, 175 house. What is total construction cost?

= 525175

X 690

00000

4726575 X

3151050 XX

362370750

Girls = + 29167

Total = 58809

Total people = 96209

= -58809

Old age people 37400

Total construction cost = 525175 x 690

= ₹ 36, 23, 70, 750.

6. Find the product using distributive property:

a. 728 X 101 b. 824 X 25

a. 728 X 101 = 728 X (100 + 1)

= 728 X 100 + 728 X 1

= 72800 + 728

= 73528

b. 824 X 25 = 824 (20 + 5)

= 824 X 20 + 824 X 5

= 16480 + 4120

= 20600.

7. Find the value of 887 X 10 X 461 – 8870 using suitable property.

887 X 10 X 461 – 361 X 8870

= 8870 X 461-361 X 8870

= 8870(461-361)

= 8870 X 100

= 887000.

II. Short Answer Type Questions - II

1. A loading tempo carry 482 boxes of biscuits weighing 15 kg each where as a van carry 518 boxes each of the same weight. Find the total weight that can be caused by both the vehicles.

   The total weight carried by loading tempo

   = No. of boxes X weight of biscuits in each box

   = 482 X 15 = 7,230 kg

   The Total weight carried by van

   = no. of boxes in van X weight of biscuits in each box

   = 518 X 15 = 7, 770 kg

   Hence total weight of both the vehicles

   = Total weight carried by loading tempo + Total weight carried by van

   = 7,230 + 7,770

   = 15, 000kg

2. Write down the next three consecutive whole numbers starting from 4009998

   Since, number = 4009998

   Then, 1st consecutive number = 4009998 + 1

   = 4009999

   IInd consecutive number = 4009999 + 1

   = 4010000

   and IIIrd consecutive number = 4010000 + 1

   = 4010001.

III. Short Answer Type Questions

1. Find the product using suitable property

   4 X 178 X 25

   4 X 178 X 25 = (4 X 25) X 178 [Associative property]

   = 100 X 178 = 17, 800

2. Simplify: 126 X 55 + 126 X 45.

   126 X 55 + 126 X 45 = 126 X (55 + 45)

   = 126 X 100 = 12,600.

3. Find the product using suitable properties.

(i) 738 X 103 ii) 258 X 1,008

(i) 738 X 103 = 738 (100 + 3)
= 738 X 100 + 738 X 3
= 73,800 + 2, 214 = 76, 014

(ii) 258 X 1,008 = 258 X (1000 + 8)
= 258 X 1, 000 + 258 X 8
= 2, 58, 000 + 2, 064 = 2, 60, 064.

4. Find the following products using distributivity.

(i) 11 X 69 (ii) 824 X 25

(i) 11 X 69 = (10 + 1) X 69
= 10 X 69 + 1 X 69
= 690 + 69 = 759

(ii) 824 X 25 = 824 X (20 + 5)
= 824 X 20 + 824 X 5
= 16, 480 + 4, 120 = 20, 600.

5. Find the sum by short method:

(i) 6, 784 + 9, 999 (ii) 10, 578 + 99, 999

(i) 6784 + 9,999 = 6784 + (10,000-1)
= (6784 + 10, 000) -1
= 16, 784 -1
= 16, 783

(ii) 10, 578 + 99, 999 = 10, 578 + (1, 00, 000)-1
= 1, 10, 578 – 1
= 1, 10, 577

6. Fill in the blanks:

(i) 125 + (69 + 17) = (125 + _____) + 17

(ii) 24 X 25 = 24 X - =600
4

(iii) 786 x 3 + 786 x 7 = _____.

(iv) If 0 is subtracted from a whole number, then the result is the _____itself.

1. 69	2. 100	3. 7, 860	4. number

7. A car moves at a uniform speed of 75 km per hour. How much distance will it cover in 98 hours?

   Car's speed = 75 km per hour

   Time taken = 98 hours

   So, distance covered by car would be

   Distance = speed X Time

   So, distance covered by car is 98 hours = 75 X 98

   = 75 X (100-2)

   = 75 X 100 -75 X 2

   = 7, 500 – 150 = 7, 350 km

8. Study the following pattern in triangular numbers and extend it to 3 more steps:

   8 X 1 + 1 = 9 = 3 X 3

   8 X 3 + 1 = 25 = 5 X 5

   8 X 6 + 1 = 49 = 7 X 7

   8 X 10 + 1 = 81 = 9 X 9

   8 X 15 + 1 = 121 = 11 X 11

   ……

   ……

   Now, fill in the blanks:

   (i) 8 times the 12^{th} triangular number plus 1 = _____X _____ = _____.

   (ii) 8 times the ____ triangular number plus 1 = 27 X 27 = _____.

   Extending the pattern to three steps, we get

   8 X 1 + 1 = = 3 X 3

   8 X 3 + 1 == 5 X 5

   8 X 6 + 1 = = 7 X 7

   8 X 10 + 1 = 9 X 9

   8 X 15 + 1 = 11 X 11

   8 X 21 + 1 = 13 X 13

   8 X 28 + 1 = 15 X 15

   8 X 36 + 1 = 17 X 17

   (i) 8 times the 12^{th} triangular number plus 1 = 8 X 78 + 1 = 25 X 25

   (ii) 8 times the 27^{th} triangular number plus 1= 27 X 27= 8 X 91 + 1.

9. State whether the following statements are True or False:

   (i) Successor of a two digit number is always a 3-digit number.

   (ii) Predecessor of a two digit number is always a two digit number.

(iii) The smallest 4-digit number is the successor of the largest 3-digit number.

(iv) Of the given two natural numbers, the one having more digits is greater.

1. False	2. False	3. True	4. True

10. Find a number which when divided by 35 gives the quotient 20 and remainder 18.

We have, Divisor = 35

Quotient = 20

Remainder = 18

We have to find dividend. By the division algorithm we have,

Dividend = Divisor X Quotient + Remainder

Dividend = 35 X 20 + 18

= 700 + 18 = 718

Required number is 718.

11. Find the sum: (1, 546 + 498) + 3, 589.

Also, find the sum: 1, 546 + (498 + 3, 589).

Are the two sums equal? State the property satisfied.

Sum of (1, 546 + 498) + 3, 589 = 2, 044 + 3, 589

= 5, 633

Now, the sum of 1, 546 + (498 + 3, 589) = 1, 546 + 4, 087

= 5, 633

So, sum in both the cases are same.

The property here used is associative property and under this property we know that

(a + b) + c = a + (b + c)

12. On dividing 55, 390 by 299, the remainder is 75. Find the quotient using the division algorithm.

Dividend = 55, 390

Divisor = 299

Remainder = 75

We have to find the quotient by applying division algorithm, we have

Divided = (Divisor X Quotient) + 75

(299 X Quotient) = 55, 390 – 75

299 X Quotient = 55, 315

Quotient = $\frac{55,315}{299}$

Quotient = 185.

I. Long Answer Type Questions

1. Mr. Rajesh withdraws ₹ 100000 from his bank account. He purchased a TV set for ₹ 38650, a refrigerator for ₹ 23880 and jewellery worth ₹ 35560. How much was left with him?

   Given, money withdraws from bank = ₹ 100000

   Money spent on TV = ₹ 38650
   Money spent on refrigerator = ₹ 23880
   Money spent on jewellery = ₹ 35560
   Total amount spent ₹
   = 38650 + 23830 + 35560
   = 98090
   Left money = ₹ 100000- ₹ 98090= ₹ 1910

2. Find the difference between the smallest number of 7-digit and the largest number of 4- digit

   The smallest number of 7-digit = 1000000

   And the largest number of 4-digit = 9999
   ∴ The difference between them
   = 1000000-9999 = 990001.

3. In a city, polio drops were given to 212583 children on Sunday in March 2013 and to 216813 children in next month.
   a) Find the difference of the number of children getting polio drops in the two months.
   b) What is the value of vaccinating children for polio in India?

   a. Given, number of children , who got polio drops in March 2013 = 212583
   Number of children, who get polio drops in next month = 216813
   ∴ Difference of the number of children getting polio drops in two months.
   = 216813 – 212583 = 4230 children
   b. Importance of pulse polio drops

The children are vaccinated for their protection against deadly polio virus. All the babies below 5 yrs of age are given oral polio vaccine simultaneously; it helps to eradicate the virus.

4. Study the following patterns.

$1 = 1^2$

$1 + 3 = 2^2$

$1 + 3 + 5 = 3^2$

$1 + 3 + 5 + 7 = 4^2$

Hence, find the sum of

a) First 12 odd number

b) First 50 odd number

The given pattern is

$1 = 1^2$

$1 + 3 = 2^2$

$1 + 3 + 5 = 3^2$

$1 + 3 + 5 + 7 = 4^2$

a. Sum of first 12 odd numbers

$1 + 3 + 7 + 9 + 11 + 13 + 15 + 19 + 21 + 23 + 25 = 12^2 = 144$

b. Similarly, sum of first 50 odd numbers.

$= 50^2 = 2500.$

II. Long Answer Type Questions

1. Determine the sum of the four numbers as given below:

a. Successor of 32

b. Predecessor of 49

c. Predecessor of the predecessor of 56

d. Successor of the successor of 67

a. Successor of 32 = 32 + 1 = 33

b. Predecessor of 49 = 49 -1 = 48

c. Predecessor of 56 = 56 -1 = 55

Again, Predecessor of 55 = 55 -1 = 54

d. Successor of 67 = 67 + 1 = 68

Again, successor of 68 = 68 + 1 = 69

∴ Sum 33 + 48 + 54 + 69

= 204

2. Find the value of: 3845 X 5 X 782 + 769 X 25 X 218.

3845 X 5 X 782 + 769 X 25 X 218

= 3845 X 5 X 782 + (769 X 5) X 5 X 218

= 3845 X 5 X 782 + 3845 X 5 X 218

= 3845 X 5 X (782 + 218)

= 3845 X 5 X 1000

= 19225 X 1000

= 19225000.

3. Determine the product of the greatest number of four digits and the greatest number of three digits?

We know that

Greatest number of four digits = 9999

Greatest number of three digits = 999

∴ required product

= 9999 X 999

= 9999 X (1000-1)

= 9999 X 1000 – 9999 X 1

[∴ a x (b – c) = a x b – a x c]

= (10000-1) X 1000- (1000-1) X 1

= 10000000 – 1000 – 10000 + 1

= 10000001 – 11000

= 9989001.

III. Long Answer Type Questions

1. Find the product using suitable properties.

i. 738 X 103 ii. 854 X 102

iii. 258 X 1, 008 iv. 1,005 X 168

i. 738 X 103 = 738 X (100 + 3)

= 73, 800 + 2,214 = 76, 014

ii. 854 X 102 = 854 X (100 + 2)

= 2, 58, 000 + 2,064 = 2, 60, 064

iii. 258 X 1008 = 258 X (1, 000 + 8)

= 2, 58, 000 + 2, 064 = 2, 60, 064

iv. 1, 005 X 168 = 1, 68, 000 + 840 = 1, 68, 840

= 1, 68, 000 + 840 = 1, 68, 840

2. Find the value of the following:

i. 297 X 17 + 297 X 3

ii. 54, 279 X 92 + 8 X 54, 279

iii. 81, 265 X 169 – 81, 265 X 69

iv. 3,845 X 5X 782 + 769 X 25 X 218

i. 297 X 17 + 297 X 3

By distributive law over addition, we have

297 X 17 + 297 X 3 = 297 (17 +3)

= 297 X 20

= 5, 940

ii. 54, 279 X 92 + 8 X 54, 279

By using distributive law, we have:

54, 279 X 92 + 8 X 54, 279 = 54, 279 (92 + 8)

= 54, 279 (100)

= 54, 27, 900

iii. 81, 265 X 169 – 81, 265 X 69

Using distributive law, we have:

81, 265 X 169 – 81, 265 X 69 = 81, 265 (169-69)

= 81, 265 (100)

= 81, 26, 500

iv. 3,845 X 5X 782 + 769 X 25 X 218

We can write this as 19, 225 X 782 + 19, 225 X 218

Using distributive law, we have

19,225 X 782 + 19, 225 X 218 = 19, 225 (783 + 218)

= 19, 225 (1000)

= 1, 92, 25, 000

3. Find the value using distributive property:

i. 728 X 101 ii. 5, 437 X 1, 001

iii. 824 X 25 iv. 4, 275 X 125

v. 504 X 35

i. 728 X 101

We can write this as 728 X (100 + 1)

Using distributive property, we have

728 X (100 + 1) = 728 X 100 + 728 X 1

= 72, 800 + 728 = 73, 528

ii. 5, 437 X 1, 001

We can write this as, 5, 437 X (1000 + 1)

Now using distributive property, we have

5, 437 X (1000 + 1) = 5, 437 X 1000 + 5, 437 X 1

= 54, 37, 000 + 5, 437 = 54, 42, 437

iii. 824 X 25

We can write this as 824 X (20 + 5)

Now using distributive property, we have

824 X (20 + 5) = 824 X 20 + 824 X 5

= 16, 480 + 4, 120 = 20, 600

iv. 4, 275 X 125

We can write this as 4, 275 X (1000 + 25)

Now using distributive property, we have

4, 275 X (100 + 25) = 4, 275 X 100 + 4, 275 X 25

= 4, 27, 500 +1, 06, 875

= 5, 34, 375

v. 504 X 35

We can write this as 504 X (50 - 15)

Now using distributive property, we have

504 X (50 - 15) = 504 X 50 – 504 X 15

= 25, 200 – 7, 560 = 17, 640.

4. Match the following

1. Successor of 7	a. not defined
2. Predecessor of 6	b. 0
3. Sum of two consecutive whole numbers	c. 1
4. Difference of any two consecutive whole numbers	d. 5
5. Product of two non-zero consecutive whole numbers	e. 6
6. Product of a whole number by zero	f. 7
7. Quotient when any whole number is divided by zero	g. 8
8. 2 added two times, to the smallest natural number	h. even
9. 3 added two times, to the smallest whole number	i. odd

1. g	2. d	3. i	4. f	5. h
6. b	7. a	8. f	9. e	

5. In the marriage of her daughter, Leela spent ₹ 2, 16, 766 on food and decoration,₹ 1, 22, 322 on jewellery, ₹ 88, 234 on furniture and ₹ 26, 780 on kitchen items. Find the total amount spent by her on the above items.

   Money spent on food and decoration = ₹ 2, 16, 766

   Money spent on jewellery = ₹ 1, 22, 322

   Money spent on furniture = ₹ 88, 234

   Money spent on kitchen items = ₹ 26, 780.

   Total amount spent = Money spent on food and decoration + jewellery + furniture + Kitchen items

   = ₹ 2, 16, 766 + ₹ 1, 22, 322 + ₹ 88, 234 + ₹ 26, 780

   = (2, 16, 766 + 88, 234) + 1, 22, 322 + 26, 780

   = 3, 05, 000 + 1, 22, 322 + 26, 780

   = (3, 05, 000 + 26, 780) + 1, 22, 322

   = 3, 31, 780 + 1, 22, 322 = ₹ 4, 54, 102

6. Find the product by suitable rearrangement

   i. 2 X 1, 768 X 50 ii. 4 X 166 X 25

   iii. 8 X 291 X 15 iv. 625 X 279 X 16

   v. 285 X 5 X 60 vi. 125 X 40 X 8 X 25

   i. 2 X 1, 768 X 50

   Using Associative law,

   2 X 1768 X 50 = 1, 768 X (2 X 50)

   = 1, 768 X (100) = 1, 76, 800

   ii. 4 X 166 X 25

   Using Associative law,

   4 X 166 X 25 = 166 X (25X 4)

   = 166 X 9100) = 16, 600

   iii. 8 X 291 X 15

   Using Associative law,

   8 X 291 X 125 = 291 X (125 X 8)

   = 291 X (1000) = 2, 91, 000

   iv. 625 X 279 X 16

   Using Associative law,

   625 X 279 X 16 = 279 X (625 X 16)

= 279 X (10, 000) = 27, 90, 000

v. 285 X 5 X 60

Using Associative law,

285 X 5 X 60 = 285 X (60X 5)

= 285 X 300 = 85, 500

vi. 125 X 40 X 8 X 25 = 125 X 40 X (8X 25)

= 125 X 40 X 200

Using Associative law,

125 X 40 X 200 = 200 X (125 X 40)

= 200 X (5000) = 10, 00, 000

7. Find the difference:

i. 463 – 9 ii. 5, 632 – 99

iii. 8, 640-999 iv. 13, 3006 – 9, 999

i. 463 – 9

We can write this as 463 – (10 - 1)

463 – (10- 1) = 463 – 10 + 1

= 464 – 10 = 454

ii. 5, 632 – 99

We can write this as 5, 632 – (100 - 1)

5, 682 – (100 - 1) = 5, 632 – 100 + 1

= 5, 632 – 100

= 5, 533

iii. 8, 640 – 999

We can write this as 8, 640 – (1,000 - 1)

8, 640 – (1, 000 - 1) + 1

= (8, 640 + 1) – 1, 000

= 8, 641 – 1, 000

= 7,641

iv. 13, 3006 – 9, 999

We can write this as 13, 006 – (10, 000 – 1)

16, 006 – (10, 000 -1) = 13,005 – 10000 + 1

= 13,007 – 10, 000

= 3, 007.

8. A box contains 5 strips having 12 capsules of 500 mg medicine in each capsule. Find the total weight in grams of medicine in 32 such boxes.

We have,

Strips in a box = 5

Weight of medicine in each capsules = 500 mg

So now,

Total no. of capsules in a box = strips in box x capsules in each strip

= 5 X 12

= 60

Weight of medicine in the capsules in each box

= weight of medicine in each capsules X total no. of capsules

= 500 mg X 60

= 30, 000 mg

Now we have to find total weight in grams in 32 boxes. So,

Total weight = Total no. of boxes X total weight of medicine in capsules in each box.

= 32 X 30, 000 mg

= 9, 60, 000 mg

Total weight in grams = 960 g [1 gram = 1, 000mg]

I. High Order Thinking Skills Questions

1. Find the number which when divided by 46 gives a quotient 11 and remainder 18.

Since, Divisor = 46

Quotient = 11

and Remainder = 18

We know that,

Dividend = Divisor X quotient + Remainder

Then, Dividend = 46 X 11 + 18

= 506 + 18 = 524

Hence, the required number is = 524.

2. Which least number should be added to 1000 so that 45 divides the sum exactly?

Let r is the remainder, then the required number = 45 – r

45) 1000(22

90

100

90

10

∴

Hence, the required number = 45 – 10 = 35.

II. High Order Thinking Skills Questions

1. How much greater is the smallest 5-digit number with three different digits than the largest 4-digit number with all different digits?

Smallest 5-digit number = 10, 000

Smallest 5-digit number with three different digits = 10, 002

Largest 4- digit number = 9, 999

Largest 4-digit number with all different digits = 9876

Difference between the smallest 5- digit number with three different digits and the largest 4-digit number with all different digits = 10, 002 – 9, 876 = 126

So, the smallest 5-digit number with three different digits is greater than the largest 4-digit number with all different digits by 126.

2. Fill in the blank cells in the following magic square:

	8	13
	12	
11		

Since, diagonal 13 + 12 + 11 = 36, so, unknown number in first row is

36 – (8+ 13) = 15

Unknown number in second column = 36 – (8 + 12)

= 16

Unknown number in third row = 36- (16 + 11)

= 36-27

15	8	13
10	12	14
11	16	9

= 9

Unknown number in second row = 36 – (12 + 14)

= 36 – 26

= 10

3. In a large housing complex, there are 14 small buildings and 28 large buildings. Each of the large buildings ahs 12 floors with 2 apartments on each floor. Each of the small buildings has 14 floors with 3 apartments on each floor. How many apartments are there in all?

Number of small buildings = 14

Number of floors in each building = 14

∴ Number of floors in 14 buildings = 14 X 14 = 196

Number of apartments on each floor in a small building = 3

Total number of apartments in small buildings = 196 X 3

= 588

Number of large buildings = 28

Number of floors in each building = 12

∴ Number of floors in 28 buildings = 12 X 28

= 336

Number of apartments on each floor in large building = 2

Total number of apartments in large building = 336 X 2

= 672

Total number of apartments = Total number of apartments in small buildings + Total number of apartments in large buildings

= 588 + 672

= 1, 260

4. The product of 2-digit numbers is 3, 285. If the product of their unit's digit is 15 and that of ten's digit is 28, find the numbers.

We have,

Product of unit's digits = 15

Product of units digits = 3 X 5

So, units' digits are 3 and 5

Product of ten's digits = 28

Product of tens digits = 4 X 7

Ten's digits are 4 and 7

Thus, the two numbers are either 43 and 75 or 45 and 73.

Now, 43 X 75 = 43 X (70 + 5)

= 43 X 70 + 43 X 5

= 3010 + 215

= 3, 225

45 X 73 = 73 X (40 + 5)

= 73 X 40 + 73 X 5

= 2920 + 365

= 3, 285

It is given that the product of the numbers is 3285. Hence, the numbers are 45 and 73.

I. Value Based Questions

1. i. Multiply 475 by 64

ii. Find 3 X 3 using the number line.

i. 475 X 64

⇒ 475

X 64

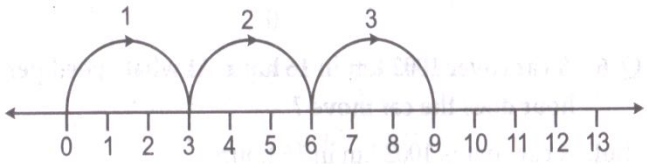
1900

2850 X

30400

Thus, 475 X 64 = 30, 400.

ii. For finding : 3 X 3



Start from 0, move 3 units at a time to the right, make such 3 moves, we reach at 9.

3 X 3 = 9.

2. i. A dealer purchased 125 C television sets. If the cost of each set is ₹ 19820, find the cost of all sets together.

ii. Write the successor and predecessor of one million.

i. Since the cost of each colour television set

= ₹ 19820

Therefore, the cost of 125 sets = ₹ 19820 X 125

= ₹ 2477500

ii. Since, 1 million = 1000000 + 1

= 1000001

And predecessor of 1 million = 1000000-1

= 999999.