Class VI Mathematics
Chapter-2 Whole Numbers

Exercise 2.1

1. Write the next three natural numbers after 10999.

Ans:

10,999 + 1 = 11,000

11,000 + 1 = 11,001

11,001 + 2 = 11,002

2. Write the three whole numbers occurring just before 10001.

Ans:

10,001 – 1 = 10,000

10,000 – 1 = 9,999

9,999 – 1 = 9,998

3. Which is the smallest whole number?

Ans: '0' (zero) is the smallest whole number.

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

Ans: 53-32-1 = 20

5. Write the successor of:

(a) 2440701

Ans: Successor of 2440701 is 2440701 +1 = 2440702

(b) 100199

Ans: Successor of 100199 is 100199 + 1 = 100200

(c) 1099999

Ans: Successor of 1099999 is 1099999 + 1= 1100000

(d) 2345670

Ans: Successor of 2345670 is 2345670 + 1 = 2345671

6. Write the predecessor of:

(a) 94

Ans: The predecessor of 94 – 1 = 93

(b) 10000

Ans: The predecessor of 10000 – 1 = 9999

(c) 208090

Ans: The predecessor of 208090 – 1 = 208089

(d) 7654321

Ans: The predecessor of 7654321 – 1 = 7654320

7. In each of the following pairs of numbers, state which whole number is on the left of the other number on the number line. Also write them with the appropriate sign (>,<) between them.

(a) 530,503

Ans: 530>503 ; So 503 appear on left side of 530 on number line.

(b) 370,307

Ans: 370>307 ; So 307 appear on left side of 370 on number line.

(c) 98765, 56789

Ans: 98765>56789 ; So 56789 appear on left side of 98765 on number line.

(d) 9830415, 10023001

Ans: 9830415<10023001 ; So 9830415 appear on left side of 10023001 on number line.

8. Which of the following statements are true (T) and which are false (F):

(a) Zero is the smallest natural number.

Ans: False

(b) 400 is the predecessor of 399.

Ans: False

(c) Zero is the smallest whole number.

Ans: True

(d) 600 is the successor of 599.

Ans: True

(e) All natural numbers are whole numbers.

Ans: True

(f) All whole numbers are natural numbers.

Ans: False

(g) The predecessor of a two digit number is never a single digit number.

Ans: False

(h) 1 is the smallest whole number.

Ans: False

(i) The natural number 1 has no predecessor.

Ans: True

(j) The whole number 1 has no predecessor.

Ans: False

(k) The whole number 13 lies between 11 and 12.

Ans: False

(l) The whole number 0 has no predecessor.

Ans: True

(m) The successor of a two digit number is always a two digit number.

Ans: False

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Exercise 2.2

1. Find the sum by suitable re-arrangement:

(a) 837 + 208 + 363

Ans:

=(837+363) + 208
= 1200 + 208
= 1408

(b) 1962 + 453 + 1538 + 647

Ans:

= (1962+1538)+(453+647)
= 3500 + 1100
= 4600

2. Find the product by suitable arrangement:

(a) 2× 1768 ×50

Ans:

= (2× 50)× 1768
= 100 × 1768
= 176800

(b) 4× 166 ×25

Ans:

= (4 × 25) × 166
= 100 × 166
= 16600

(c) 8× 291 × 125

Ans:

= (8× 125) × 291
= 1000× 291
= 291000

(d) 625× 279 × 16

Ans:

= (625× 16) × 279
= 10000 × 279
= 2790000

(e) 285× 5 × 60

Ans:

= 285×(5× 60)
= 285×300
= 85500

(f) 125× 40 × 8 × 25

Ans:

= (125× 8) ×(40× 25)
= 1000× 1000
= 1000000

3. Find the value of the following:

(a) 297× 17 + 297 × 3

Ans:

= 297 ×(17+3)
= 297 ×20
= 5940

(b) 54279× 92 + 8 × 54279

Ans:

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

(c) 81265 × 169 − 81265 × 69

Ans:

= 81265 ×(169-69)
= 81265 ×100
= 8126500

(d) 3845× 5 × 782 + 769 × 25 × 218

Ans: = 3845 ×5 ×782+769 ×5 ×5 ×218
= 3845 ×5 ×782+3845 ×5 ×218
= 3845 ×5 ×(782+218)
= 3845 ×5×1000
= 19225000

4. Find the product using suitable properties:

(a) 738× 103

Ans:

= 738× (100 + 3)
= 738× 100 + 738 × 3
= 73800+2214
= 76014

(b) 854× 102

Ans:

$= 854\times (100 + 2)$

$= 854\times 100 + 854 \times 2$

$= 85400+1708$

$= 87108$

(c) 258× 1008

Ans:

$= 258\times (1000 + 8)$

$= 258\times 1000 + 258 \times 8$

$= 258000 + 2064$

$= 260064$

(d) 1005× 168

Ans:

$= (1000 + 5) \times 168$

$= 1000\times 168 + 5 \times 168$

$= 168000 + 840$

$= 168840$

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

Ans:

Petrol filled on Monday = 40 liters

Petrol filled on next day = 50 liters

Total petrol filled = 90 liters

Now, Cost of 1 liter petrol = ₹ 44

Cost of 90 liters petrol $= 44 \times 90$

$= 44 \times (100-10)$

$= 44 \times 100 - 44 \times 10$

$= 4400 - 440$

$= ₹3960$

6. A vendor supplies 32 liters of milk to a hotel in a morning and 68 liters of milk in the evening. If the milk costs ₹ 15 per liter, how much money is due to the vendor per day?

Ans:

Supply of milk in morning = 32 liters
Supply of milk in evening = 68 liters
Total supply = 32 + 68 = 100 liters

Now, Cost of 1 liter milk = ₹ 15
Cost of 100 liters milk = 15 × 100 = ₹ 1500

Therefore, ₹ 1500 is due to the vendor per day.

7. Match the following:

(i)	425 x 136 = 425 x (6 + 30 + 100)	(a)	Commutativity under multiplication
(ii)	2 x 48 x 50 = 2 x 50 x 48	(b)	Commutativity under addition
(iii)	80 + 2005 + 20 = 80 + 20 + 2005	(c)	Distributivity multiplication under addition

Ans:

(i)	425 x 136 = 425 x (6 + 30 + 100)	(c)	Distributivity multiplication under addition
(ii)	2 x 48 x 50 = 2 x 50 x 48	(a)	Commutativity under multiplication
(iii)	80 + 2005 + 20 = 80 + 20 + 2005	(b)	Commutativity under addition

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Exercise 2.3

1. Which of the following will not represent zero?

(a) $1+0$ (b) 0×0

(c) $\frac{0}{2}$ (d) $\frac{10-10}{2}$

Ans: (a) 1+0 is equal to 1

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

Ans: Yes, if we multiply any number with zero the resultant product will be zero.
Example: $2 \times 0 = 0, 5 \times 0 = 0, 9 \times 0 = 0$
If both numbers are zero, then the result also is zero.
$0 \times 0 = 0$

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

Ans: If only one number be 1 then the product cannot be 1.
Example: 5 x 1 = 5, 4 x 1 = 4, 8 x 1 = 8
If both numbers are 1, then the product is 1
$1 \times 1 = 1$

4. Find using distributive property:

(a) 728×101

Ans: 728×101
$= 728 \times (100 + 1)$
$= 728 \times 100 + 728 \times 1$
$= 72800 + 728$
$= 73528$

(b) 5437×1001
Ans: 5437×1001
$= 5437 \times (1000+1)$
$= 5437 \times 1000+5437 \times 1$
$= 5437000 + 5437$
$= 5442437$

(c) 824 × 25

Ans: 824 × 25
= 824 × (20+5)
= 824 × 20+824 × 5
= 16480 + 4120
= 20600

(d) 4275 × 125

Ans: 4275 × 125
= 4275 × (100 + 20 + 5)
= 4275 × 100 + 4275 × 20 + 4275 × 5
= 427500 + 85500 + 21375
= 534375

(e) 504 × 35

Ans: 504 × 35
= (500+4) × 35
= 500× 35 + 4× 35
= 17500 + 140
= 17640

5. Study the pattern:

1× 8 + 1 = 9; 12× 8 + 2 = 98;
123× 8 + 3 = 987; 1234× 8 + 4 = 9876;
12345× 8 + 5 = 98765
Write the next two steps. Can you say how the pattern works?
Ans:

123456 × 8 + 6 = 987654
1234567 × 8 + 7 = 9876543
Pattern works like this:

1×8+1=9
12 ×8+2=98
123 ×8+3=987
1234 ×8+4=9876
12345 ×8+5=98765
123456 ×8+6=987654
1234567 ×8+7=9876543