4-5-20

Ch-2
Whole Numbers

Ex - 2.1

Q.1 Write the next three natural numbers after 10999.

Ans The next three whole numbers after 10999 are 11,000, 11001 and 11002.

Q.2 Write the three whole numbers occuring just before 10001.

Ans The three whole numbers occuring just before 10001 are 10000, 9999 and 9998.

Q.3 Which is the smallest whole number?

Ans The smallest whole number is 0.

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

Ans The whole numbers between 32 and 53 are:

(33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52)

Hence, there are 20 whole numbers between 32 and 53.

Q.5 Write the successor of :-

(a) 2440701 (b) 100199 (c) 1099999

(d) 2345670

Ans The successors are:

(a) 2440701 + 1 = 2440702
(b) 100199 + 1 = 100200

(c) 1099999 + 1 = 1100000
(d) 2345670 + 1 = 2345671

Q6 Write the predecessor of:

(a) 94 (b) 10000 (c) 208090

(d) 7654321

Ans The predecessors are:

(a) 94 - 1 = 93
(b) 10000 - 1 = 9999
(c) 208090 - 1 = 208089
(d) 7654321 - 1 = 7654320

Q7. In each of the following pairs of numbers, state which whole number is on the left of the number on the number line. Also write them with the appropriate sign (>, <) between them.

(a) 530, 503 (b) 370, 307 (c) 98765, 56789 (d) 9830415, 10023001

Ans - (a) Since, 530 > 503

Hence, 503 is on the left of 530 on the number line.

(b) Since, 370 > 307

Hence, 307 is on the left side of 370 on the number line.

(c) Since, 98765 > 56789

Hence, 56789 is on the left side of 98765 on the number line.

(d) Since, 9830415 < 10023001

Hence, 9830415 is on the left side of 10023001 on the number line.

Q.8 Which of the following statements are True (T) and which are False (F) ?

(a) Zero is the smallest natural number.

Ans. False, 0 is not a natural number.

(b) 400 is the predecessor of 399.

Ans. False, as predecessor of 399 is 398 (399 − 1 = 398).

(c) Zero is the smallest whole number.

Ans. True.

(d) 600 is the successor of 599.

Ans. True, as 599 + 1 = 600.

(e) All natural numbers are whole numbers.

Ans. True.

(f) All whole numbers are natural numbers.

Ans. False, as 0 is a whole number but it is not a natural number.

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

Ans. False, as predecessor of 10 is 9.

(h) 1 is the smallest whole number.

Ans. False, 0 is the smallest whole number.

(i) The natural number 1 has no predecessor.

Ans. True, as 0 is the predecessor of 1 but it is not a natural number.

(j) The whole number 1 has no predecessor.

Ans. False, as 0 is the predecessor of 1 and it is a whole number.

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

Ans. False, 13 does not lie in between 11 and 12.

(l) The whole number 0 has no predeccesor.

Ans. True, predeccesor of 0 is -1, which is not a whole number.

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

Ans. False, as successors of 99 is 100.

Date
11-4-20

DATE : / /
PAGE NO. :

Ex :- 2.2

Q.1 Find the sum by suitable arrangement :

(a) $837 + 208 + 363$

Ans. $837 + 208 + 363 = (837 + 363) + 208$
$= 1200 + 208$ [using associative property]
$= 1408.$

(b) $1962 + 453 + 1538 + 647$

Ans. $1962 + 453 + 1538 + 647$
$= (1962 + 1538) + (453 + 647)$
$= 3500 + 1100 = 4600.$

Q.2. Find the product by suitable arrangement.

(a) $2 \times 1768 \times 50$

Ans. $2 \times 1768 \times 50 = (2 \times 50) \times 1768 = 176800$

(b) $4 \times 166 \times 25$

Ans $4 \times 166 \times 25 = 166 \times (25 \times 4) =$
$166 \times 100 = 16600$.

(c) $8 \times 291 \times 125$

Ans $8 \times 291 \times 125 = (8 \times 125) \times 291 =$
$1000 \times 291 = 291000$.

(d) $625 \times 279 \times 16$

Ans $625 \times 279 \times 16 = (625 \times 16) \times 279 =$
$10000 \times 279 = 2790000$

(e) $285 \times 5 \times 60$

Ans $285 \times 5 \times 60 = 285 \times (5 \times 60) =$
$285 \times 300 = (300 - 15) \times 300 = 300$
$\times 300 - 15 \times 300 = 90000 - 4500 =$
85500.

(f) $125 \times 40 \times 8 \times 25$

Ans $125 \times 40 \times 8 \times 25 = (125 \times 8) \times (40 \times 25)$
$= 1000 \times 100 = 1000000$.

Q.3 Find the value of the following.

(a) $297 \times 17 + 297 \times 3$

Ans $297 \times 17 \times 297 \times 3 = 297 \times (17 + 3)$
$= 297 \times 20 = 297 \times 2 \times 10$
$= 594 \times 10 = 5940$.

(b) $54279 \times 92 + 8 \times 54279$

Ans $54279 \times 92 + 8 \times 54279 =$
$54279 \times (92 + 8) = 54279 \times 100 =$
5427900

(c) $81265 \times 169 - 81265 \times 69$

Ans $81265 \times 169 - 81265 \times 69$
$= 81265 \times (169 - 69)$
$= 81265 \times 100 = 8126500$

(d) $3845 \times 5 \times 782 + 769 \times 25 \times 218$

Ans. $3845 \times 5 \times 782 + 769 \times 25 \times 218$
$= 3845 \times 5 \times 782 + 769 \times 5 \times 5 \times 218$
$= 3845 \times 5 \times 782 + (769 \times 5) \times 5 \times 218$
$= 3845 \times 5 \times 782 + 3845 \times 5 \times 218$
$= 3845 \times 5 \times 782 + 3845 \times 5 \times 218$
$= 3845 \times 5 \times (782 + 218)$
$= 3845 \times 5 \times 1000$
$= 19225 \times 1000$
$= 19225000$

Q.4 Find the product using suitable properties.

(a) 738×103

Ans. $738 \times 103 = 738 \times (100 + 3)$
$= 738 \times 100 + 738 \times 3$ (Using distributive property)
$= 73800 + 2214 = 76014$

(b) 854×102

Ans. $854 \times 102 = 824 \times 2$ (Using distributive property)
$= 85400 + 1708 = 87108$

(c) 258×1008

Ans. $258 \times 1008 = 258 \times (1000 + 8)$
$= 258 \times 1000 + 258 \times 8$ (Using distributive property)
$= 258000 + 2064 = 260064$

(d) 1005×168

Ans. $1005 \times 168 = (1000 + 5) \times 168$
$= 1000 \times 168 + 5 \times 168$ (Using distributive property)
$= 168000 + 840 = 168840$.

Q.5 A taxidriver ..... petrol?

Ans. Petrol filled on Monday = 40 litres

Cost of petrol = ₹ 44 per litre
Petrol filled on Tuesday = 50 litre
Cost of petrol = ₹ 44 per litre
∴ Total money spent in all
= ₹ (40 × 44 + 50 × 44)
= ₹ (40 × 50) × 44 = ₹ 90 × 44 =
₹ 3960

Q.6 A vendor ..... per day?

Ans:- Milk Supplied in the morning = 32 litres
Cost of Milk = ₹ 15 Per litre
Milk Supplied in the evening = 68 litres
Cost of Milk = ₹ 15 Per litre

∴ Money paid to the vendor
= ₹ (32 × 15 + 68 × 15)
= ₹ (32 + 68) × 15
= ₹ 100 × 15
= ₹ 1500

Q.7 Match the following.

(i) $425 \times 136 = 425 \times (6 + 30 + 100)$

(ii) $2 \times 49 \times 50 = 2 \times 50 \times 49$

(iii) $80 + 2005 + 20 = 80 + 20 + 2005$

(a) Commutativity under multiplication

(b) Commutativity under addition

(c) Distributivity of multiplication over addition.

Answers:- Hence (i) ↔ (c),
(ii) ↔ a and (iii) ↔ (b)

Chapter 2.5

Q1. Which of the following will not represent 0:

(a) $1 + 0 \Rightarrow 1$ ✓ (Ans)

(b) $0 \times 0 \Rightarrow 0$

(c) $\frac{0}{2} \Rightarrow 0$

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

Q2. If the product of two whole numbers is 0, can we say that one or both of them will be 0? Justify through examples.

Ans If product of 2 whole no is 0; definitely 1 of them is 0.

ex ⇒ $0 \times 7 = 0$

If product of 2 whole no is 0; both of the digit may be 0

ex ⇒ $0 \times 0 = 0$

Q3. If the product of two whole no is 1, Can we say that one or both of them will be 1? Justify through example.

Ans If the product of 2 whole no is 1, both the no should be equal to 1.
ex $1 \times 1 = 1$

Hence, its clear that the product of 2 whole no will be 1, only in situation when both no to be matt multipled are 1.

Q4. Find using distributive property:-

(a) 728×101
$728 \times (100 + 1)$
$728 \times 100 + 728 \times 1$
$72800 + 728$
73528 Ans.

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

(c) 824×25

$824 \times (20+5)$

$824 \times 20 + 824 \times 5$

$16480 + 4120$

$20,600$ Ans

(d) 4725×125

$4725 \times (100+25)$

$4725 \times 100 + 4725 \times 25$

$472500 + 118125$

$5,90,625$ Ans

(e) 504×35

$504 \times (30+5)$

$504 \times 30 + 504 \times 5$

$15120 + 2520$

17640 Ans

Q5. Study the pattern :-

$1 \times 8 + 1 = 9$; $12 \times 8 + 2 = 98$; $23 \times 8 + 3 = 987$;
$1234 \times 8 + 4 = 9876$; $12345 \times 8 + 5 = 98765$

Write the next two steps. Can you say how the pattern work ?

Ans $123456 \times 8 + 6 \Rightarrow 987648 + 6 = 987654$
$1234567 \times 8 + 7 \Rightarrow 9876536 + 7 = 9876543$