NUMBER SYSTEM

SUBJECT : MATHEMATICS
CHAPTER NUMBER: 01
CHAPTER NAME : NUMBER SYSTEM
SUB TOPIC:PROBLEM SOLVING ON OPERATIONS ON LARGE NUMBERS
PERIOD NO:5

Learning outcome

*Students will be able to multiply and divide large numbers.

*Students will be able to apply it in real life situations

Previous Knowledge test

Q1. Arrange the numbers 1596496, 9524420, 5446837, 6174985 in ascending order and find their sum

Q2. Arrange the numbers 3440557, 544696, 5655237, 3446116 in descending order and find the difference between the largest and smallest number.

Multiplication and division of large numbers and its application
https://www.youtube.com/watch?v=-h3Oqhl8fPg

Multiplication and Division of Large Numbers

11
469
x 32
——
938

1) 2x9 = 18 carry the 1 on top of the
2) 2x6 = 12 + the carried 1 = 13, carr
    the 1 on top of the 4
3) 2x4 = 8 + the carried 1 = 9

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          34061
37 )1260257
    111
    150
    148
       225
       222
          37
          37
          ——
           0
```

Some Tricks of Multiplication

Multiply 32 x 11

Step 1

32

3   2

Step 2

3 + 2

3 5 2

Multiply 99 x 97

99   -100   = -01
x 97   -100   = -03

99   -01
x 97   -03   x

96   03

Some Tricks of Multiplication

$$96 \times 92 = 8{,}832$$

(A)

96	4
92	8

(4 is the difference from base)
(8 is the difference from base)

(B)

96	4
92	8
88	

Subtract crosswise from the left

$96 - 8 = \textbf{88}$

or

$92 - 4 = \textbf{88}$

(C)

96	4
92	× 8
88	32

Multiply vertically

$4 \times 8 = \textbf{32}$

Application of Multiplication and Division of Large Numbers

Q1 .Weight of one box is 4kg 800g .Find the weight of 150 such boxes

Solution:

Weight of one box is 4kg 800g=4800g

 Weight of 150 such boxes   = 4800g X 150 = 7,20,000g=720 kg

Q2.An oil-tin contains 6 litre 60 ml oil. How many identical bottles can the oil fill, if capacity of each bottle is 30 ml ?

Solution:

An oil-tin contains 6 litre 60 ml oil=6060ml

Capacity of each bottle =30 ml

No of bottles = 6060/30=202

Evaluation Question

Q.10. A man has ₹ 157184 with him. He placed an order for purchasing 80 articles at ₹ 125 each. How much money will remain with him after the purchase?

Solution:

A man has = ₹ 157184

Number of articles purchased by him = 80

Cost of one article = ₹ 125

Cost of 80 articles will be = 80 × 125

$\qquad$ = ₹ 10000

			1	2	5
×				8	0
			0	0	0
	1	0	0	0	×
	1	0	0	0	0

Remaining money with him after the purchase = Money in hand – Cost of 80 articles

= 157184 – 10000

= 147184

Evaluation Question

Q.11. A student multiplied 8035 by 87 instead of multiplying by 78. By how much was his answer greater than or less than the correct answer?

Solution:

Correct answer = 8035 × 87

= 699045

Wrong answer = 8035 × 78

= 626730

				8	0	3	5
		×				8	7
			5	6	2	4	5
	6		4	2	8	0	×
	6		9	9	0	4	5

Hence, correct answer greater than the wrong answer by = 699045 – 626730

= 72315

			8	0	3	5
	×				7	8
	6	4	2	8	0	
5	6	2	4	5	×	
6	2	6	7	3	0	

Evaluation Question

Q.12. Mohani has 30 m cloth and she wants to make some shirts for her son. If each shirt requires 2 m 30 cm cloth, how many shirts, in all, can be made and how much length of cloth will be left?

Solution:

Total length of cloth available with Mohani = 30 m= 30 × 100= 3000 cm

Each shirt requires = 2 m 30 cm= 200 cm + 30 cm= 230 cm cloth

Shirts made by using 30 m cloth = 3000/230= 13.04= 13 shirts

Cloth required to make 13 shirts = 230 × 13

= 2990 cm or 29 m 90 cm

∴ Remaining cloth = 30 m – 29 m= 1 m

Additional Home assignment

Q1. A factory produces 6985 screws per day. How many screws will it produce in 358 days?

2. The product of two numbers is 13421408. If one of the numbers is 364, find the other

3. If 36 flats cost Rs 68251500, what is the cost of each such flat?

4 An airplane covers 1485 km in 1 hour. How much distance will it cover in 72 hours?

HW
EX 1B Q No.13,15

THANKING YOU

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