

Sub: Maths

class-5

Topic- Multiplication by Nikhilam sutra base 10.

Do all questions of Exercise-4.4.

EXERCISE 4.4

Use Cordova Smart Class Software on the smart board in class to do Ex.

Multiply by Nikhilam sutra on base 10.

1. 12×9

2. 15×12

5. 14×11

6. 9×16

3. 13×17

4. 8×9

7. 12×13

8. 13×10

CLASS-5

Exercise - 4.4 (Ch-4)
Multiplication of two Numbers -
(Nikhilom Base Sutra) Base 10

Q.1.
Ans.

$$12 \times 9 =$$

Step 1: Let the base be 10.
Deviations from the base
 $12 - 10 = +2$
 $9 - 10 = -1$

Step 2: multiply the
deviations

12	+ 2
9	- 1
	- 2

Step 3: put the cross Answer
on LHS (Left hand side)

$$12 - 1 = 11$$

$$9 + 2 = 11$$

Step 4: Negative number
cannot be put on
RHS (Right hand side)

So, carry one from LHS
(Left hand side) and
make it positive.

12	+ 2
9	- 1
11	- 2
= 10	10 - 2
= 10	8
	= 108

Therefore, $10 - 2 = 8$

Step 5: After taking 1 from from
LHS,

$$\text{we write } 11 - 1 = 10$$

$$\text{Therefore, } 12 \times 9 = 108$$

Q. 3:

13×17

Step 1: Let the base be 10.

Deviation of 13 from 10 = $13 - 10 = +3$

Deviation of 17 from 10 = $17 - 10 = +7$

Step 2: Multiply the deviations

$3 \times 7 = 21$

Step 3:

There should be

one digit on RHS

as there is one zero in Base 10. Excess.

put 1 in RHS & Carry 2.

Step 4: $13 + 7 = 17 + 3 = 20$ (cross operation)

$20 + 2(\text{Excess}) = 22$

$13 \times 17 = 22 \times 10 (\text{Base}) + 1$

$= 221$

13	+ 3
17	+ 7
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20 + 2	1
= 22	1
= 221	

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