



DATE : 23.10.2021  
DAY : SATURDAY

4<sup>th</sup> STD MATHS

WS NOTES-M02-17 pages  
CW NOTES-M02-9 pages



## **TODAY'S TOPIC**



# **NUMBERS**

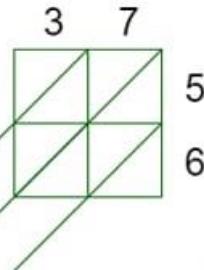


## MULTIPLICATION BY LATTICE ALGORITHM

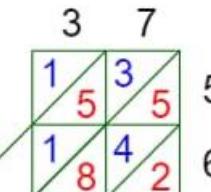
### Multiplication of 2- digit by a 2-digit number:

$$37 \times 56 =$$

Write the numbers to be multiplied on the top and on the right.

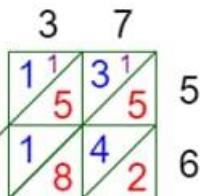


Multiply the number on top of the box with the number to the right of the box and write the answer in the box



Add the numbers in the box diagonally and carry to the next column when necessary.

2 0 7 2

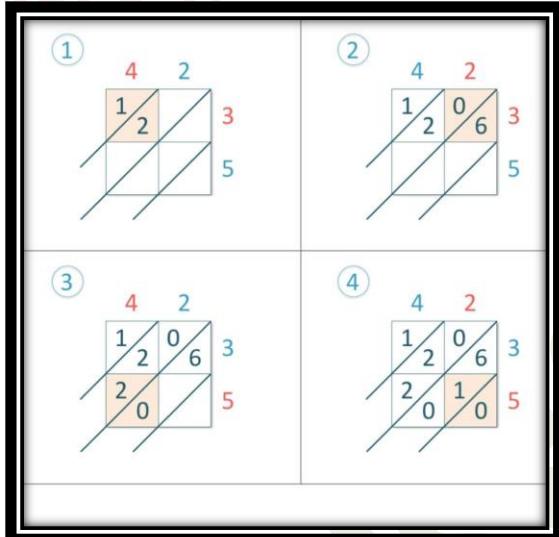


$$37 \times 56 = 2072$$

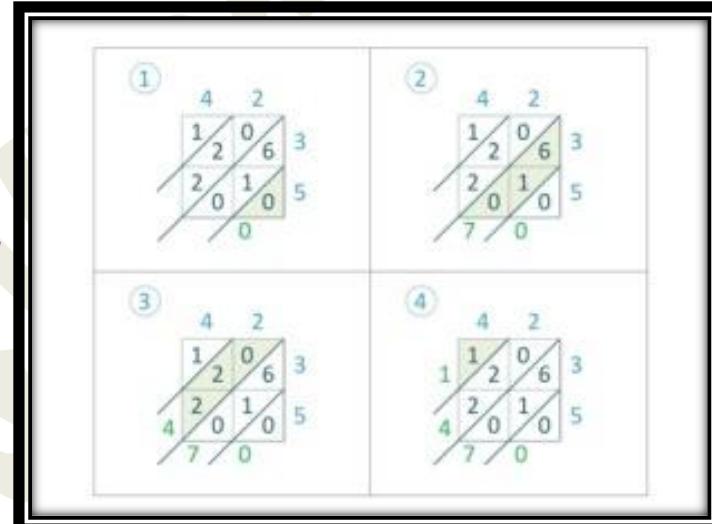


## EXAMPLE 1:

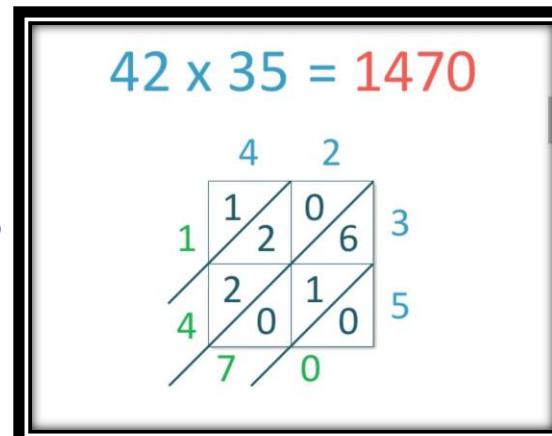
Step: 1



Step: 2



Step: 3





## EXAMPLE 2:

$$56 \times 35 = 1960$$

5 6

3 5

1	5
2	5
9	6
+1	0

1960



## MULTIPLICATION BY STANDARD ALGORITHM

### EXAMPLE 1:

Multiply:  $18 \times 24$ 

$$\begin{array}{r} 18 \times 24 \\ \hline 72 \\ 360 \\ \hline 432 \end{array}$$

Step: 1	Step: 2	Step: 3
18	18	72
$4 \times \text{ones}$	$20 \times \text{ones}$	$360 +$
72 ones	360 ones	432

### EXAMPLE 2:

$$282 \times 9$$

TH H T O

(7) (1)

2 8 2

 $\times 9$ 

2 5 3 8

$$282 \times 9 = 2538$$



1)

In a school there are 24 desks in each class room. If there are 18 class rooms in the school, Find the total number of desks.



**Solution:**

$$\text{Number of desks in each class rooms} = 24$$

$$\text{Number of desks in 18 class rooms} = 18 \times 24$$

$$24 = 20 + 4$$

$$\begin{array}{r} 18 \times 24 \\ \hline \end{array}$$

$$72$$

$$360$$

$$432$$

**Answer : 432 desks**



2) A book has 396 pages. How many pages are there in 9 such books?

**Solution:**

No. of pages in a book = 396 pages

Number of pages in 9 books =  $396 \times 9$

= 3564 pages.

$$\begin{array}{r}
 \text{TH} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \textcircled{8} \quad \textcircled{5} \\
 3 \quad 9 \quad 6 \\
 \times \quad 9 \\
 \hline
 3 \quad 5 \quad 6 \quad 4
 \end{array}$$



## Multiplication Table 7

$$7 \times 1 = 7$$

$$7 \times 2 = 14$$

$$7 \times 3 = 21$$

$$7 \times 4 = 28$$

$$7 \times 5 = 35$$

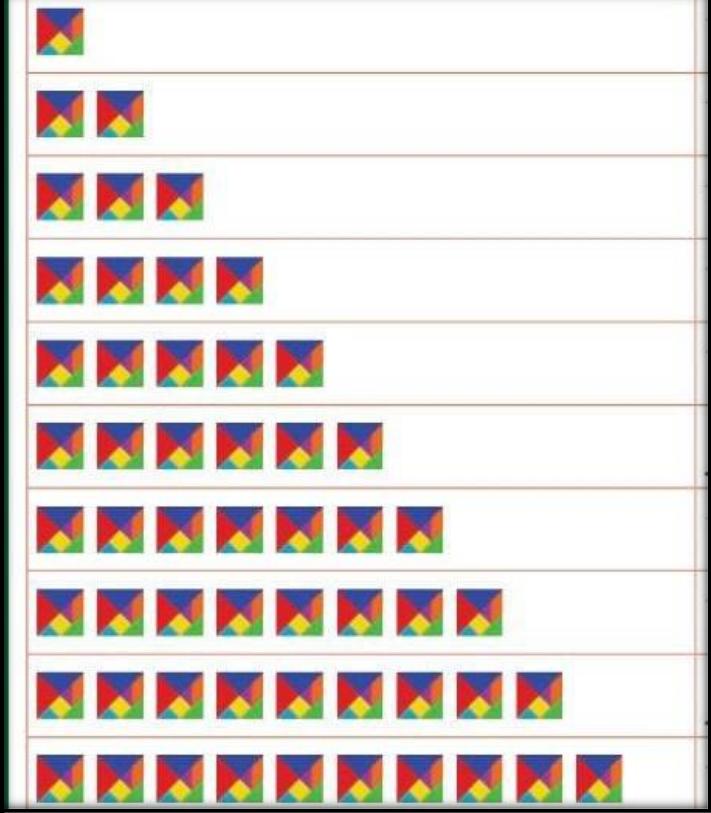
$$7 \times 6 = 42$$

$$7 \times 7 = 49$$

$$7 \times 8 = 56$$

$$7 \times 9 = 63$$

$$7 \times 10 = 70$$





## Multiplication Table 8

$$8 \times 1 = 8$$

$$8 \times 2 = 16$$

$$8 \times 3 = 24$$

$$8 \times 4 = 32$$

$$8 \times 5 = 40$$

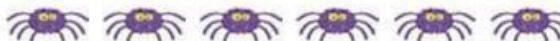
$$8 \times 6 = 48$$

$$8 \times 7 = 56$$

$$8 \times 8 = 64$$

$$8 \times 9 = 72$$

$$8 \times 10 = 80$$





## Multiplication Table 9

$$9 \times 1 = 9$$

$$9 \times 2 = 18$$

$$9 \times 3 = 27$$

$$9 \times 4 = 36$$

$$9 \times 5 = 45$$

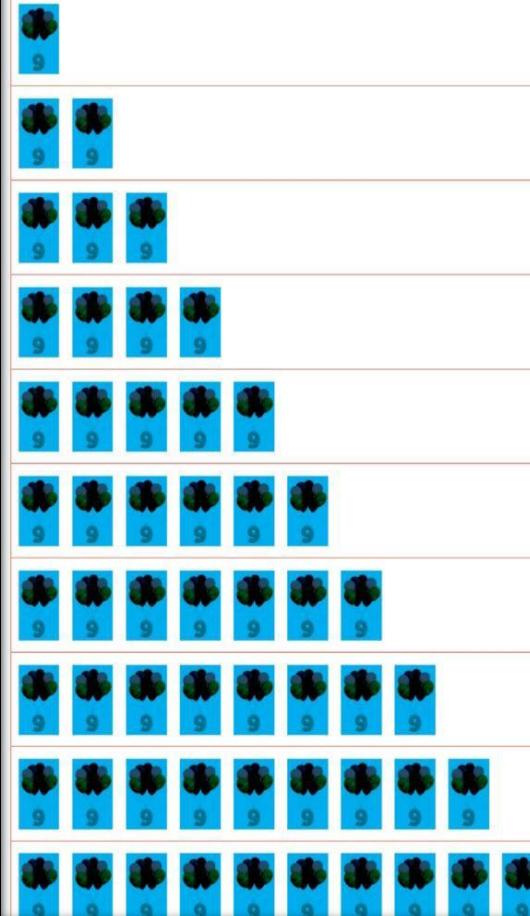
$$9 \times 6 = 54$$

$$9 \times 7 = 63$$

$$9 \times 8 = 72$$

$$9 \times 9 = 81$$

$$9 \times 10 = 90$$





## Multiply by 10, 100, 1000:

- 1)  $10 \times 7 = 70$
- 2)  $100 \times 16 = 1600$
- 3)  $1000 \times 9 = 9000$
- 4)  $10 \times 696 = 6960$
- 5)  $100 \times 696 = 69600$
- 6)  $1000 \times 696 = 696000$

When a number is multiplied by 10, 100, 1000, it is enough to write one zero, two zeros, three zeros respectively.

### Multiply by 1

$$\begin{array}{ll} 10 \times 1 = 10 & 7 \times 1 = 7 \\ 136 \times 1 = 136 & 9936 \times 1 = 9936 \\ 2000 \times 1 = 2000 & 789 \times 1 = 789 \end{array}$$

The product of one and any number is the number itself.

### Multiply by 0

$$\begin{array}{ll} 10 \times 0 = 0 & 6 \times 0 = 0 \\ 276 \times 0 = 0 & 7936 \times 0 = 0 \\ 3000 \times 0 = 0 & 675 \times 0 = 0 \end{array}$$

The product of zero and any number is zero.



## Order of multiplication

$$4 \times 6 = 24 = 6 \times 4$$

$$136 \times 15 = 2040 = 15 \times 136$$

$$1000 \times 9 = 9000 = 9 \times 1000$$

$$796 \times 9 = 7164 = 9 \times 796$$

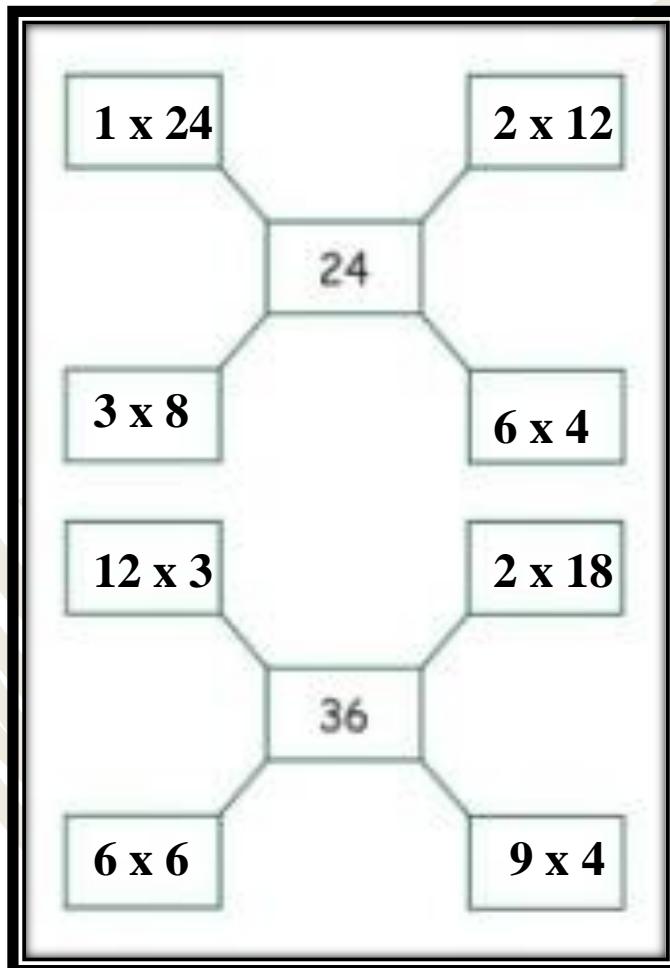
$$1326 \times 6 = 7956 = 6 \times 1326$$

$$26 \times 24 = 624 = 24 \times 26$$

The product of two number does not change,  
if we interchange the order of numbers.



## Write the numbers as the product of 2 numbers:





## Activity 1:

### Fill in the blanks:

1 a.  $9 \times \underline{\hspace{2cm}} = 18$

1 b.  $9 \times \underline{\hspace{2cm}} = 45$

2 a.  $\underline{\hspace{2cm}} \times 7 = 42$

2 b.  $\underline{\hspace{2cm}} \times 9 = 18$

3 a.  $\underline{\hspace{2cm}} \times 4 = 8$

3 b.  $\underline{\hspace{2cm}} \times 7 = 21$



## Activity 2:

**Multiply the following using standard algorithm:**

$$\begin{array}{r} 307 \\ \times 2 \\ \hline \end{array}$$

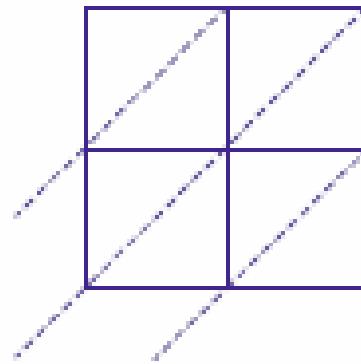
$$\begin{array}{r} 186 \\ \times 5 \\ \hline \end{array}$$



## Activity 3:

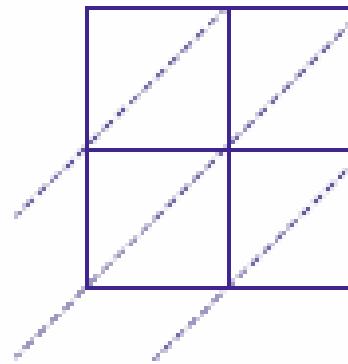
Use lattice multiplication method to  
find the product in each problem:

1)  $45 \times 68$



$45 \times 68 =$  \_\_\_\_\_

2)  $18 \times 72$



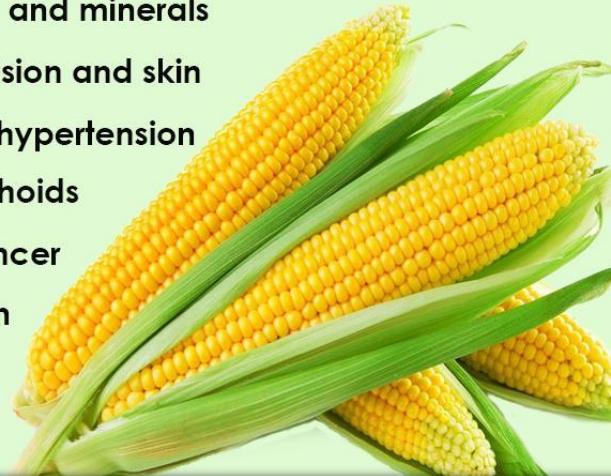
$18 \times 72 =$  \_\_\_\_\_



## Health Tips:

### **HEALTH BENEFITS OF CORN**

1. Reduces risk of various cardiovascular diseases
2. Reduces cholesterol absorption in body
3. Rich source of vitamins and minerals
4. Helps maintain good vision and skin
5. Controls diabetes and hypertension
6. Reduces risk of hemerrhoids
7. Lower risk of colon cancer
8. Improves bone strength
9. Boost immune system





Today (23.10. 2021) we are going to write the MATHS class work. Students write neatly. Use pen for writing.

23.10.2021

Unit 2

Numbers

3) Multiply the following numbers by using lattice method:

a)  $789 \times 4$

Solution:

7	8	9		$1 \times 4 = 4$
2	3	3	4	$2 \times 4 = 8$
8	2	6		$3 \times 4 = 12$
1	5	6		$4 \times 4 = 16$
				$5 \times 4 = 20$
				$6 \times 4 = 24$
				$(7 \times 4 = 28)$
				$(8 \times 4 = 32)$
				$(9 \times 4 = 36)$
				$10 \times 4 = 40$

Answer: 3156



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Q)  $37 \times 29$

Solution:

3	7			1	7		
0	0	10		2	$1 \times 2 = 2$	$1 \times 9 = 9$	
6	4				$2 \times 2 = 4$	$2 \times 9 = 18$	
0	2	6	9		$3 \times 2 = 6$	$3 \times 9 = 27$	
7	3			7	$4 \times 2 = 8$	$4 \times 9 = 36$	
				3	$5 \times 2 = 10$	$5 \times 9 = 45$	
				2	$6 \times 2 = 12$	$6 \times 9 = 54$	
				1	$7 \times 2 = 14$	$7 \times 9 = 63$	
				0	$8 \times 2 = 16$	$8 \times 9 = 72$	
				9	$9 \times 2 = 18$	$9 \times 9 = 81$	
				8	$10 \times 2 = 20$	$10 \times 9 = 90$	

Answer: 1073



Fill in the blanks:

1) a)  $7 \times 6 = 42$   
b)  $8 \times 4 = 32$   
c)  $9 \times 3 = 27$   
d)  $9936 \times 1 = 9936$   
e)  $0 \times 276 = 0$   
f)  $100 \times 16 = 1600$   
g)  $1000 \times 6 = 6000$   
h)  $3000 \times 0 = 0$   
i)  $33 \times 1000 = 33000$



Multiply the following  
by using standard method:

a)  $206 \times 8$

Solution:

Th	1t	I	O
2	0	6	$0 \times 8 = 0$
$\times 8$			$1 \times 8 = 8$
<hr/>			$2 \times 8 = 16$
<hr/>			$3 \times 8 = 24$
<hr/>			$4 \times 8 = 32$
<hr/>			$5 \times 8 = 40$
<hr/>			$6 \times 8 = 48$
<hr/>			$7 \times 8 = 56$
<hr/>			$8 \times 8 = 64$
<hr/>			$9 \times 8 = 72$
<hr/>			$10 \times 8 = 80$

Answer: 1648



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Q.)  $93 \times 67$

Solution:

Th	H	T	O
①			
②			
9	3		

$\begin{array}{r} & 6 & 7 \\ \times & 6 & 7 \\ \hline 6 & 5 & 1 \end{array}$

$\begin{array}{r} 5 & 5 & 8 & 0 \\ \times & 6 & 7 \\ \hline 6 & 2 & 3 & 1 \end{array}$

$1 \times 6 = 6 \quad 1 \times 7 = 7$   
 $2 \times 6 = 12 \quad 2 \times 7 = 14$   
 $3 \times 6 = 18 \quad (3 \times 7 = 21)$   
 $4 \times 6 = 24 \quad 4 \times 7 = 28$   
 $5 \times 6 = 30 \quad 5 \times 7 = 35$   
 $6 \times 6 = 36 \quad 6 \times 7 = 42$   
 $7 \times 6 = 42 \quad 7 \times 7 = 49$   
 $8 \times 6 = 48 \quad 8 \times 7 = 56$   
 $9 \times 6 = 54 \quad 9 \times 7 = 63$   
 $10 \times 6 = 60 \quad 10 \times 7 = 70$

Answer: 6231



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1) Word Problems:

a) If the cost of one chair is ₹857. What will be the cost of 6 chairs?

Solution:

Cost of one chair = ₹857

Cost of 6 chairs = ₹857 × 6

Th	H	T	O	$1 \times 6 = 6$
3	④			$2 \times 6 = 12$
8	5	7	4 2	$3 \times 6 = 18$
		x 6		$4 \times 6 = 24$
				$5 \times 6 = 30$
				$6 \times 6 = 36$
				$7 \times 6 = 42$
				$8 \times 6 = 48$

Answer:

Cost of 6 chairs = ₹5142



b) There are 28 pages in a daily newspaper. If Ajay buys newspapers for 45 days, how many pages will it contain?

Solution:

No. of pages in one newspaper = 28

No. of pages in 45 newspapers =  $28 \times 45$

Th	H	T	O		
		3		$1 \times 4 = 4$	$1 \times 5 = 5$
		4		$2 \times 4 = 8$	$2 \times 5 = 10$
		2	8	$3 \times 4 = 12$	$3 \times 5 = 15$
				$4 \times 4 = 16$	$4 \times 5 = 20$
				$5 \times 4 = 20$	$5 \times 5 = 25$
				$6 \times 4 = 24$	$6 \times 5 = 30$
				$7 \times 4 = 28$	$7 \times 5 = 35$
				$8 \times 4 = 32$	$8 \times 5 = 40$

Answer: 1260 pages



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c) The price of one ball is ₹10. Find the cost of 8 such balls?

Solution:

The price of one ball = ₹10

The price of 8 balls = ₹10 × 8

$$10 \times 8 = 80$$

Answer:

The price of 8 balls = ₹ 80

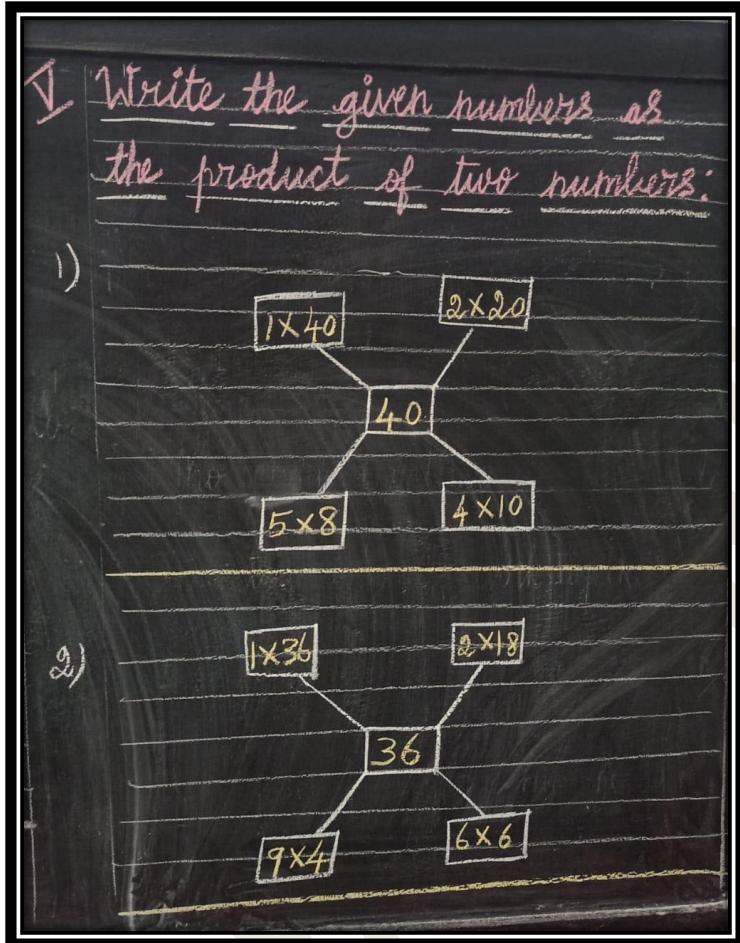
$$\begin{array}{l} 1 \times 8 = 8 \\ 2 \times 8 = 16 \\ 3 \times 8 = 24 \\ 4 \times 8 = 32 \\ 5 \times 8 = 40 \\ 6 \times 8 = 48 \\ 7 \times 8 = 56 \\ 8 \times 8 = 64 \\ 9 \times 8 = 72 \\ 10 \times 8 = 80 \end{array}$$



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**Thank you!**