



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**

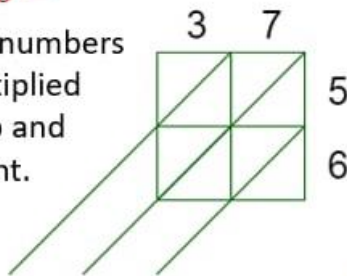


## MULTIPLICATION BY LATTICE ALGORITHM

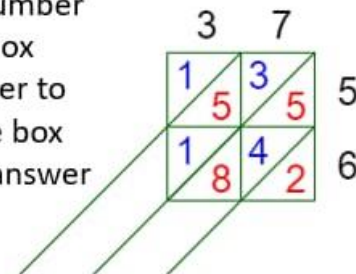
### Multiplication of 2- digit by a 2-digit number:

$$37 \times 56 =$$

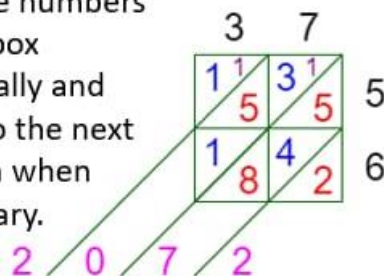
Write the numbers  
to be multiplied  
on the top and  
on the right.



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.

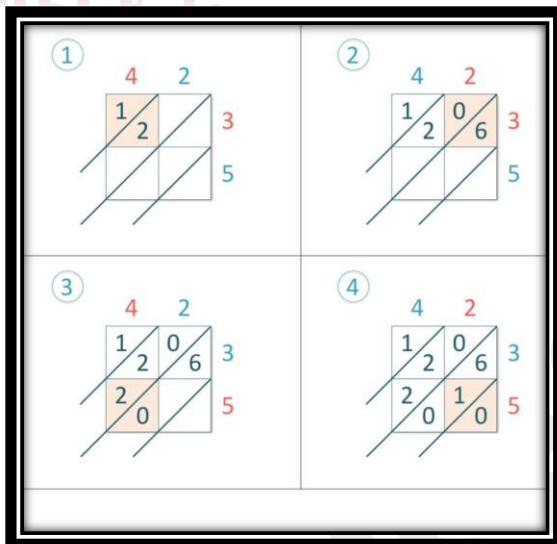


$$37 \times 56 = 2072$$

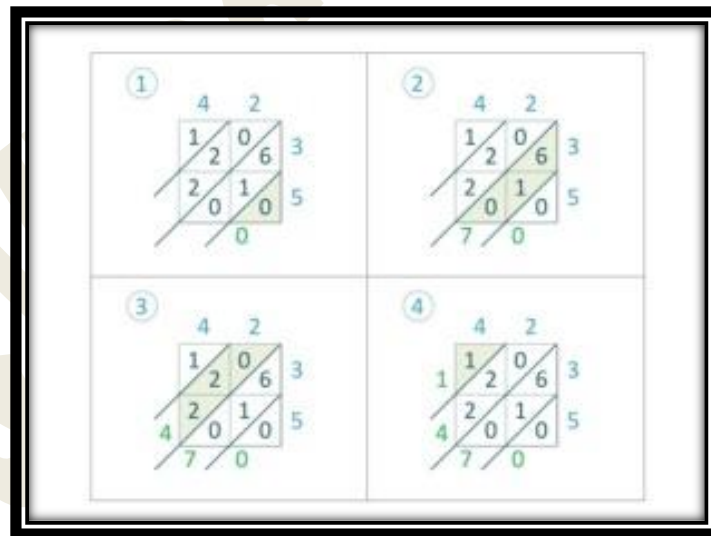


## EXAMPLE 1:

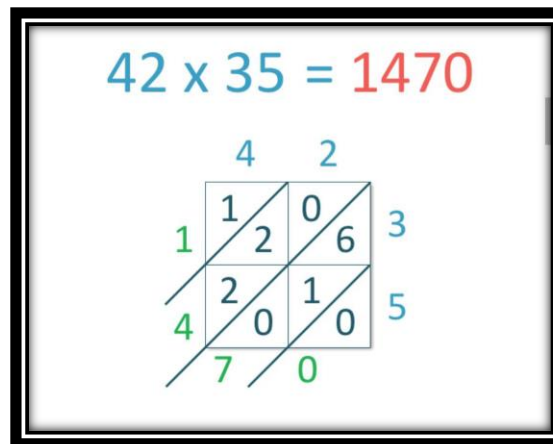
Step: 1



Step: 2



Step: 3



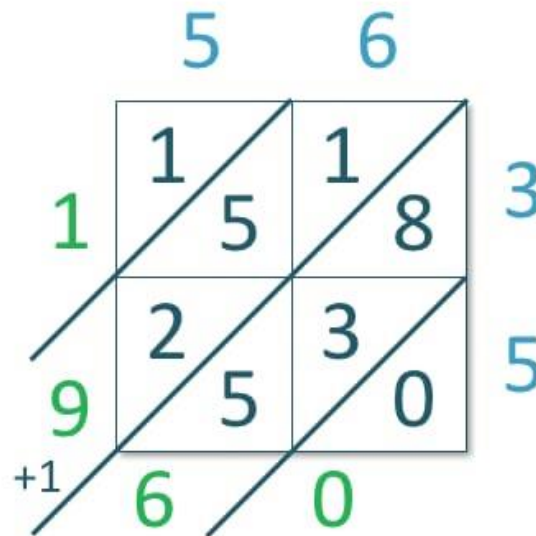
$$42 \times 35 = 1470$$



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$$56 \times 35 = 1960$$




## MULTIPLICATION BY STANDARD ALGORITHM

### EXAMPLE 1:

Multiply:  $18 \times 24$

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

72

360

432

Step: 1

18

$4 \times \text{ones}$

72 ones

Step: 2

18

$20 \times \text{ones}$

360 ones

Step: 3

72

360 +

432

### EXAMPLE 2:

$$282 \times 9$$

TH H T O

(7) (1)

2 8 2

$\times 9$

2 5 3 8

$$282 \times 9 = 2538$$





## WORD PROBLEMS

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:**

Number of desks in each class rooms = 24

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

$$24 = 20 + 4$$

$$18 \times 24$$

$$72$$

$$360$$

$$432$$

**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.

TH	H	T	O
	8	5	
	3	9	6
		$\times$	9
3	5	6	4



## 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	×	1	=	9
9	×	2	=	18
9	×	3	=	27
9	×	4	=	36
9	×	5	=	45
9	×	6	=	54
9	×	7	=	63
9	×	8	=	72
9	×	9	=	81
9	×	10	=	90

9									
9	9								
9	9	9							
9	9	9	9						
9	9	9	9	9					
9	9	9	9	9	9				
9	9	9	9	9	9	9			
9	9	9	9	9	9	9	9		
9	9	9	9	9	9	9	9	9	
9	9	9	9	9	9	9	9	9	9



### 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

$$10 \times 1 = 10$$

$$7 \times 1 = 7$$

$$136 \times 1 = 136$$

$$9936 \times 1 = 9936$$

$$2000 \times 1 = 2000$$

$$789 \times 1 = 789$$

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

#### Multiply by 0

$$10 \times 0 = 0$$

$$6 \times 0 = 0$$

$$276 \times 0 = 0$$

$$7936 \times 0 = 0$$

$$3000 \times 0 = 0$$

$$675 \times 0 = 0$$

The product of zero and any number is zero.



## Order of multiplication

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

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

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

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

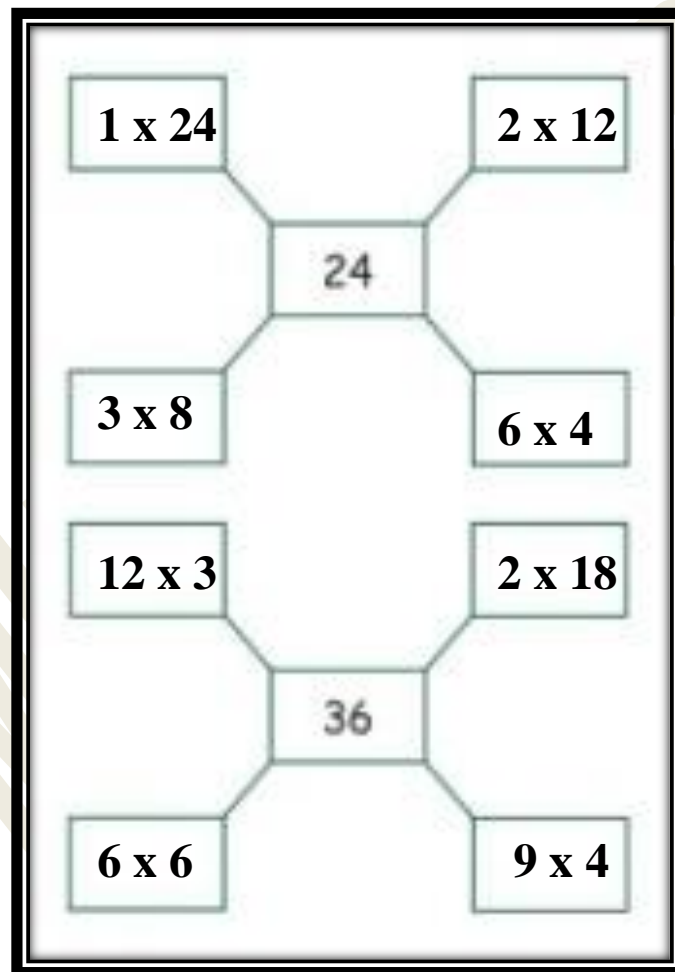
$$1326 \times 6 = 7956 = 6 \times 1326$$

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

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:

$$\begin{array}{r} 1) \quad 307 \\ \times \quad 2 \\ \hline \end{array}$$

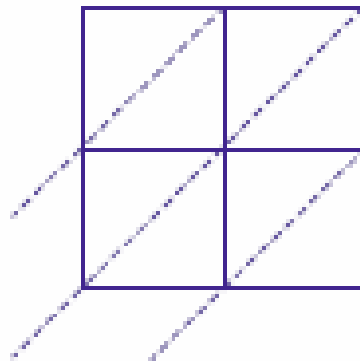
$$\begin{array}{r} 2) \quad 186 \\ \times \quad 5 \\ \hline \end{array}$$



### Activity 3:

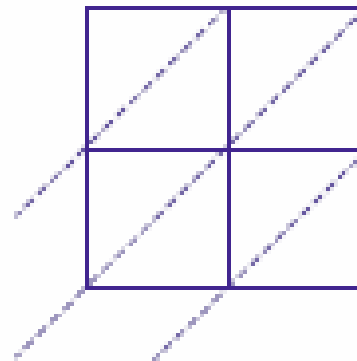
Use lattice multiplication method to find the product in each problem:

1)  $45 \times 68$



$45 \times 68 = \underline{\hspace{2cm}}$

2)  $18 \times 72$



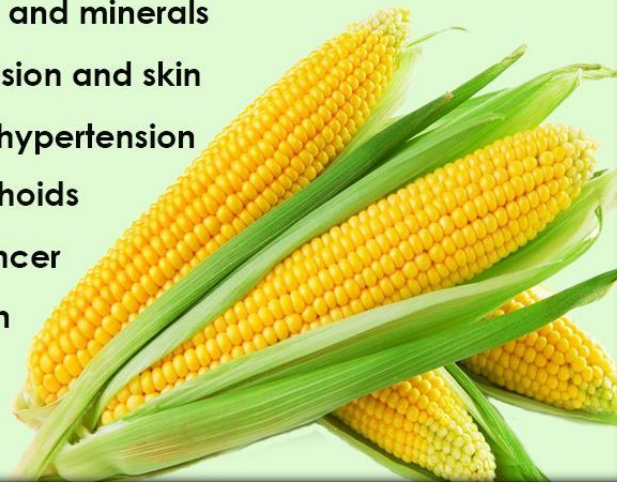
$18 \times 72 = \underline{\hspace{2cm}}$



## 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





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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

1) Multiply the following numbers by using lattice method:

a)  $789 \times 4$

Solution:

7	8	9
20	32	36
8	2	6
1	5	6

Answer: 3156

1x4=4  
2x4=8  
3x4=12  
4x4=16  
5x4=20  
6x4=24  
7x4=28  
8x4=32  
9x4=36  
10x4=40





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Q)  $37 \times 29$   
Solution:

	3	7	
1	0	0	10
	6	4	
0	2	6	9
	7	3	
	7	3	

Answer: 1073

17  
10

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



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III Fill in the blanks:

a)  $7 \times 6 = \underline{42}$

b)  $8 \times 4 = \underline{32}$

c)  $9 \times 3 = \underline{27}$

d)  $9936 \times 1 = \underline{9936}$

e)  $0 \times 276 = \underline{0}$

f)  $100 \times 16 = \underline{1600}$

g)  $1000 \times 6 = \underline{6000}$

h)  $3000 \times 0 = \underline{0}$

i)  $33 \times 1000 = \underline{33000}$



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III, Multiply the following  
by using standard method:

a)  $206 \times 8$

Solution:

Th	H	T	O
		4	
2	0	6	
		$\times 8$	$\times 8$
<hr/>			
1	6	4	8
<hr/>			

Answer: 1648

$0 \times 8 = 0$
$1 \times 8 = 8$
$2 \times 8 = 16$
$3 \times 8 = 24$
$4 \times 8 = 32$
$5 \times 8 = 40$
$6 \times 8 = 48$
$7 \times 8 = 56$
$8 \times 8 = 64$
$9 \times 8 = 72$
$10 \times 8 = 80$





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Ex)  $93 \times 67$

Solution:

Th	H	T	O
		①	
		②	
	9	3	
	$\times 67$		
①	①		
	65	1	
5	5	8	0
	$\times 3$		
	6231		

Answer: 6231

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



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IV, 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

③ ④

8 5 7

x 6

30 + 4 = 34

5 1 4 2

48 + 3 = 51

$$1 \times 6 = 6$$

$$2 \times 6 = 12$$

$$3 \times 6 = 18$$

$$4 \times 6 = 24$$

$$5 \times 6 = 30$$

$$6 \times 6 = 36$$

$$7 \times 6 = 42$$

$$8 \times 6 = 48$$

Answer:

Cost of 6 chairs = ₹5142





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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  
④

28

$\times 45$

140

1120

1260

10+4=14

30

8+3=11

$1 \times 4 = 4$

$2 \times 4 = 8$

$3 \times 4 = 12$

$4 \times 4 = 16$

$5 \times 4 = 20$

$6 \times 4 = 24$

$7 \times 4 = 28$

$8 \times 4 = 32$

$1 \times 5 = 5$

$2 \times 5 = 10$

$3 \times 5 = 15$

$4 \times 5 = 20$

$5 \times 5 = 25$

$6 \times 5 = 30$

$7 \times 5 = 35$

$8 \times 5 = 40$

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

$1 \times 8 = 8$
$2 \times 8 = 16$
$3 \times 8 = 24$
$4 \times 8 = 32$
$5 \times 8 = 40$
$6 \times 8 = 48$
$7 \times 8 = 56$
$8 \times 8 = 64$
$9 \times 8 = 72$
$10 \times 8 = 80$



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1) Write the given numbers as the product of two numbers:

1)

$1 \times 40$   $2 \times 20$

$40$

$5 \times 8$   $4 \times 10$

2)

$1 \times 36$   $2 \times 18$

$36$

$9 \times 4$   $6 \times 6$

Thank you!