

# **BISHOP SCOTT BOYS' SCHOOL**

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## **STUDY COURSE MATERIAL**

### **MATHEMATICS**

**SESSION-2020-21**

**CLASS-IV**

## **TOPIC: CHAPTER 3- MULTIPLICATION**

### **DAY-1**

#### ❖ **TEACHING MATERIAL**

### **MULTIPLICATION**

When two numbers are **multiplied**, one is called multiplicand, another is called **multiplier** and the result is called **product**.

Example :-  $34 \times 5 = 170$

$34 = \text{Multiplicand}$
$\times 5 = \text{Multiplier}$
-----
$170 = \text{Product}$

## **EXERCISE**

Multiply the following:

- $45 \times 7$
- $89 \times 9$
- $716 \times 6$

Find the product:

- $72 \times 12$
- $81 \times 15$

c.  $705 \times 23$

Solve the following:

- Each person has 32 teeth. How many teeth will 15 people have in all?
- A farmer sold 56kg of fruits each day. How many kg fruits did he sell in a week?
- In a boutique, 27 dresses were stitched in a week. How many dresses were stitched in a year?

## PROPERTIES OF MULTIPLICATION

**1. ORDER PROPERTY:** The product of two numbers does not change, when the multiplicand and multiplier are interchanged.

Example:  $25 \times 5 = 125$   $5 \times 25 = 125$ , Thus,  $25 \times 5 = 5 \times 25$

**2. GROUPING PROPERTY:** The product of three or more numbers does not change, when grouping of the number is changed.

Example:  $5 \times (3 \times 80) = (5 \times 3) \times 80$ , we can check

$$5 \times (3 \times 80) = 5 \times (240) = 1200 \quad (5 \times 3) \times 80 = (15) \times 80 = 1200$$

Both the products are same.

**3. MULTIPLYING BY 1 :** When we multiply a number by 1, the product is the number itself.

Example:  $7 \times 1 = 7$

**4. MULTIPLYING BY 0 :** When we multiply a number by 0, the product is always 0.

Example:  $7 \times 0 = 0$

# EXERCISE

1. Find the product using suitable grouping:

- $5 \times 789 \times 2$
- $20 \times 345 \times 5$
- $25 \times 1089 \times 4$
- $2 \times 34 \times 50$

2. Write the next three numbers in the pattern:

a. 14,28,42,\_\_\_\_,\_\_\_\_,\_\_\_\_

b. 15,30,45,\_\_\_\_,\_\_\_\_,\_\_\_\_

c. 12,24,36,\_\_\_\_,\_\_\_\_,\_\_\_\_

d. 13,26,39,\_\_\_\_,\_\_\_\_,\_\_\_\_

3. Fill in the blanks with  $<$ ,  $>$  or  $=$

a.  $2 \times 8$  \_\_\_\_  $6 \times 1$

b.  $12 \times 8$  \_\_\_\_  $10 \times 10$

c.  $15 \times 5$  \_\_\_\_  $18 \times 4$

d.  $18 \times 5$  \_\_\_\_  $10 \times 9$

**VIDEO LINK**

<https://www.youtube.com/watch?v=xHaW9YTL4Pg>

## DAY-2

### ❖ TEACHING MATERIAL

## MULTIPLICATION BY 1-DIGIT, 2-DIGIT AND 3-DIGIT NUMBERS

Here are some examples,

**Example:** Find the product :  $23 \times 5$

H	T	O
	2	3
	X	5
1	1	5

**Example:** Find the product :  $429 \times 256$

L	TTH	TH	H	T	O
			4	2	9
		X	2	5	6
1	0	9	8	2	4

# EXERCISE

1. Multiply and write the product:

- $520 \times 314$
- $239 \times 707$
- $823 \times 427$
- $892 \times 427$

- A woman earns Rs. 685 each day. How much does she earn in one year?
- There are 780 five hundred rupee notes in a bag. How much money is there?

in the bag?

4. Find the product:
- $34 \times 78 \times 90$
  - $12 \times 39 \times 52$
  - $24 \times 45 \times 87$
  - $101 \times 67 \times 9$

### VIDEO LINK

<https://www.youtube.com/watch?v=FxsW0iLKX0>

<https://www.youtube.com/watch?v=dPksJHBZs4Q>

## DAY-3

### ❖ TEACHING MATERIAL

### SIMPLIFICATION

When there are expressions involving addition, subtraction and multiplication, we follow **DMAS** rule to solve:

**Division, Multiplication, Addition, Subtraction.**

1. First, do division, if it's there.
2. Then, do multiplication.
3. Then, do addition. While adding, add all the numbers that have the + sign together. Also, add the numbers with – sign together.
4. Finally, do the subtraction. That is, subtract the sum of – numbers from the sum of + numbers.

**Example:** Simplify:  $2 \times 5 - 7 + 4$

$$10 - 7 + 4$$

$$10 + 4 - 7 = 14 - 7 = 7$$

### WORD PROBLEM

**Example:** A chocolate box contains 48 chocolates. How many chocolates are there in 25 such boxes?

**Solution :** one chocolate box contains 48 chocolates. 25 chocolate box contains =  $48 \times 25 = 1200$  chocolates.

**Answer:** There are 1200 chocolates in 25 such chocolate boxes.

# EXERCISE

1. An auditorium has 12 rows with each row having 45 chairs. How many chairs are there in the auditorium.
2. Sita works for 1 hour and earns Rs. 890. How much does she earn if she works 27 hours?
3. There are 30 mangoes in a crate. How many mangoes are there in 3400 such crates?
4. Sarita's monthly salary is Rs. 34,230. What is her annual salary?
5. The cost of a table is Rs. 5432. What will be the cost of 19 such tables?

## DAY-4

### ESTIMATING MULTIPLICATION

While estimating in multiplication, we follow the same rule as we use to round off the numbers in addition and subtraction.

**Example:** Multiply and estimate the product to the nearest hundred:  
 $897 \times 72$

**Solution :** Thus, the product is,  $897 \times 72 = 64,584$

We have to estimate the nearest hundreds place, i.e., 64,600.

# EXERCISE

1. Multiply and estimate the product to the hundreds place:
  - a.  $76 \times 27$
  - b.  $89 \times 12$
  - c.  $802 \times 43$
  - d.  $615 \times 72$
  - e.  $129 \times 29$

2. Estimate to tens place, and find the product:

- a.  $72 \times 19$
- b.  $37 \times 26$
- c.  $413 \times 36$
- d.  $519 \times 47$
- e.  $192 \times 71$

**VIDEO LINK**

[https://www.youtube.com/watch?v=xtnWAKYQ\\_ew](https://www.youtube.com/watch?v=xtnWAKYQ_ew)

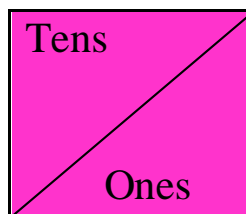
<https://www.youtube.com/watch?v=3mUKbyk4AJw>

## DAY-5

### LATTICE MULTIPLICATION

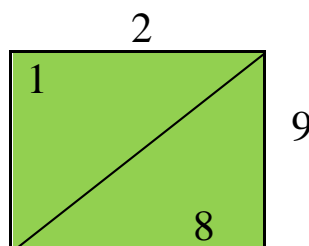
It is another method of multiplying numbers. Once understood, it is easier than the conventional method of multiplication, which makes us multiply faster.

The box is divided into two parts : Tens and Ones as shown below,



**Example :** Solve :  $2 \times 9 = ?$

$$2 \times 9 = 18$$



## ❖ VIDEO-LINKS

Link -1 <https://www.youtube.com/watch?v=N6maCFqpbI0>

Link-2 <https://www.youtube.com/watch?v=p4Mz0Q-KDFo>

## ❖ PPT LINKS

Link -1 <https://www.youtube.com/watch?v=oIhiUYjdJdw>

Link -2 <https://www.youtube.com/watch?v=wbVQbKGx8eY>

Link -3 <https://www.youtube.com/watch?v=xHaW9YTL4Pg>

# EXERCISE

Perform lattice multiplication:

1. Multiply:  $11 \times 22$
2. Multiply:  $16 \times 20$
3. Multiply:  $18 \times 10$
4. Multiply:  $15 \times 22$
5. Multiply:  $14 \times 12$

Simplify:

1.  $7 \times 9 + 6 \times 4$
2.  $80 - 56 + 9 \times 4 - 34 + 80$
3.  $124 \times 9 + 45 - 50 \times 4$
4.  $15 \times 8 - 7 \times 9 - 3 \times 15$
5.  $13 \times 9 + 13 \times 4 - 7 \times 6$