SYNOPSIS :

Multiplication means repeated addition.

Few important words and symbols in this chapter :

- **The symbol (✖)** – This is the symbol used for multiplication.
- **Multiplier** – It is the total number of groups.
- **Multiplicand** – It is the number in each group.
- **Product** – It is the answer that you get when you multiply.

WHAT IS A GROUP ?

A **group** is an equal group only if it has the same number of items as all of the other groups.

For Example –

There are 2 pencils in a box. We say, this a group of 2 pencils.

In the same way, if there are 2 pencils each in 3 boxes it will be said as 3 groups of 2 pencils each.

So we say, 1 group of 2 pencils.

In the same way here we say, 3 groups of 2 pencils each.

2 pencils + 2 pencils + 2 pencils = 6 pencils.

3 groups of 2 pencils each makes 6 pencils in all.

Thus, in the above example we can see that there are equal numbers in each group. So, to find the total, the same number is added again and again. This is why it is said that repeated addition is multiplication.

Multiplication means ' **equal groups of** ' and is written with a multiplication sign or symbol ' **x** ' .

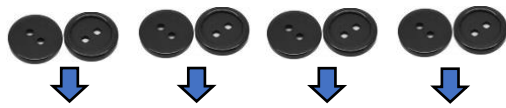For Example : 4 equal groups of 4 can be read as 4 × 4.

Multiplier, Multiplicand and **Product** are the important terms in Multiplication.

For Example : 4 groups of 2 pencils =   8 pencils.

⬇   ⬇   ⬇

Multiplier   Multiplicand   Product

MULTIPLYING BY 2

For Example – Count the total number of buttons.

  2   +   2   +   2   +   2   = 8   ➡️   Repeated Addition

4 groups of 2 each makes 8.

2 is added 4 times to make 8.

So, 4 times 2 is 8.

4	x	2		=	8
⬇	⬇	⬇			⬇
Number of groups	Multiplication Sign	Number of buttons in each group		Total	buttons

$$
\begin{array}{r}
4 \\
\times\,\underline{2} \\
\underline{8}
\end{array}
$$

4 × 2 = 8 is read as
- 4 times 2 is 8 or
- 4 twos are 8 or
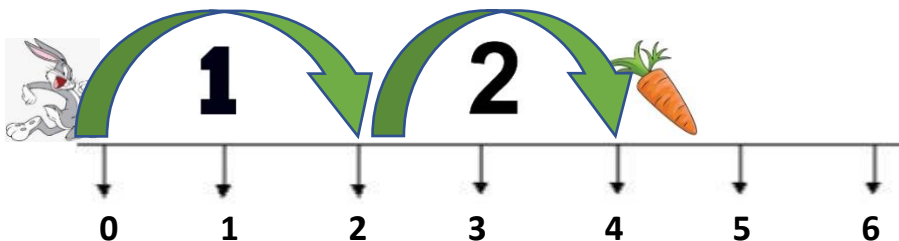- 4 multiplied by 2 is 8 or
- 4 into 2 is 8.

So, we know that in total there are 8 buttons.

SKIP COUNTING BY 2

Skip counting is often called counting by 2s or by 5s or by 10s. To skip count you add the same number over and over.
The example below shows how to count forward by twos.

Bunny wants to reach the carrot. She skips 2 numbers each time.

Add 2 to get the next number when skip counting by 2s. Do not count the in between numbers.

2 jumps of 2 steps each, 2 × 2 = **4**.

Bunny jumps 2 times.

Multiplication Fact – 2 × 2 = 4.

MULTIPLYING BY 5

For Example – Count the number of toffees.

5 + 5 + 5 + 5 = 20 ➡ Repeated Addition

4 groups of 5 each makes 20.

5 is added 4 times to make 20.

So, 4 times 5 is 20.

4	x	5	=	2 0

Number of groups | Multiplication Sign | Number of toffees in each group | Total toffees

So, we know that in total there are 20 toffees.

```
    4
  × 5
   20
```

4 × 5 = 20 is read as
- 4 times 5 is 20 or
- 4 fives are 20 or
- 4 multiplied by 5 is 20 or
- 4 into 5 is 20.

SKIP COUNTING BY 5

Help Mr. Bear to reach his honey pot. He jumps 5 steps each time.

0   5   10   15   20   25   30

Add 5 to get the next number when skip counting by 5s. Do not count the in between numbers.

4 jumps of 5 steps each, 4 × 5 = **20**.

Mr. Bear jumps 4 times.

Multiplication Fact – 4 × 5 = 20.

MULTIPLYING BY 10

For Example – There are 3 big bowls. Each bowl has 10 apples. So how many are there in total ?

10   +   10   +   10   = 30   ➡️   Repeated Addition

3 groups of 10 each makes 30.

10 is added 3 times to make 30.

So, 3 times 10 is 30.

3	x	10	=	3 0

Number of groups	Multiplication Sign	Number of apples in each group	Total apples

So, we know that in total there are 30 apples.

$$\begin{array}{r} 3 \\ \times\underline{10} \\ \underline{30} \end{array}$$

$3 \times 10 = 30$ is read as

- 3 times 10 is 30 or
- 3 tens are 10 or
- 3 multiplied by 10 is 30 or
- 3 into 10 is 30.

SKIP COUNTING BY 10

Flappy wants to reach his house. He jumps 10 steps each time.

0   10   20   30   40   50   60
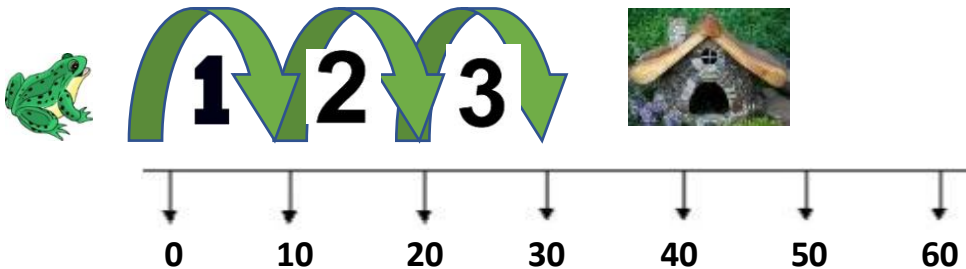
Add 10 to get the next number when skip counting by 10s. Do not count the in between numbers.

3 jumps of 10 steps each, $3 \times 10 = \underline{30}$.

Flappy took 3 jumps.

Multiplication Fact – $\underline{3 \times 10 = 30}$.

MULTIPLYING BY 0

For Example – There are 3 plates.

      How many mangoes are there on the plates ?
There are 0 mangoes.
$0 + 0 + 0 = \underline{0}$ mangoes.
3 groups of 0 mangoes each.
$3 \times 0 = \underline{0.}$

There are 0 mangoes on the plates

When you multiply any number by 0, the answer is always 0.

MULTIPLYING BY 1

For Example – There are 3 plates. There is 1 mango on each plate.

      How many mangoes are there on the plates ?
$1 + 1 + 1 = \underline{3 \text{ mangoes.}}$
3 groups of 1 mango each.
$3 \times 1 = \underline{3.}$

So, there are 3 mangoes in total on the plates.

When a number is multiplied by 1, the answer is the number itself.

Learning tables is very important for multiplication.

Some examples of multiplication are :

- $2 \times 1 = 2.$
- $3 \times 4 = 12.$
- T O
    2
  X 4
    8

> Step 1 : Multiply the numbers in the ones place 2×4. The answer we get is 8.
> Step 2 : Write 8 under the ones column. The answer is 8.

1. **Use the multiplication tables to fill in the blanks.**
    a. 2 × 4 = _____.
    b. 3 × 2 = _____.
    c. 4 × 4 = _____.
    d. 5 × 3 = _____.
    e. 2 × 8 = _____.

2. **Multiply.**

a. T O	b. T O	c. T O	d. T O	e. T O
2	3	4	6	5
× 3	x 6	x 0	x 4	x 4
—	——	——	——	——

TEXTBOOK EXERCISES

- Page 60 – Count the beads and build 2 times table. Say the table aloud.
- Page 61 – Ex 4.2 (A and B).
- Page 63 – Count the apples and build the 5 times table. Say the table aloud.
- Page 64 – Ex 4.3 (A).
- Page 66 – Count the cherries and build the 10 times table. Say the table aloud.
- Page 67 – Ex 4.4 (A).
- Pages 69 and 70 – Ex 4.5 (A).
- Learn the tables from 2 to 10.

----------✕----------