

# <u>MATHEMATICS</u> MULTIPLICATION





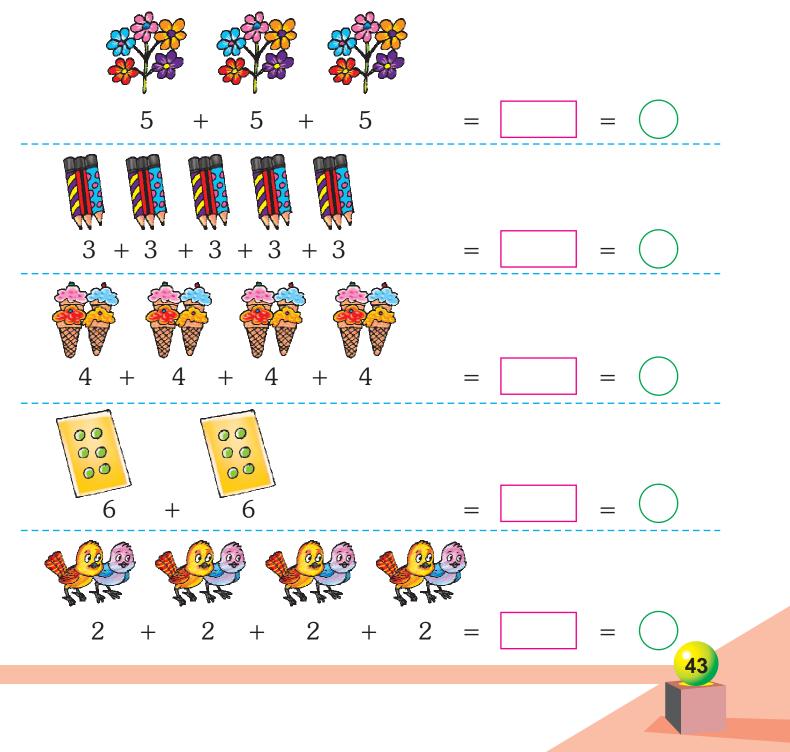
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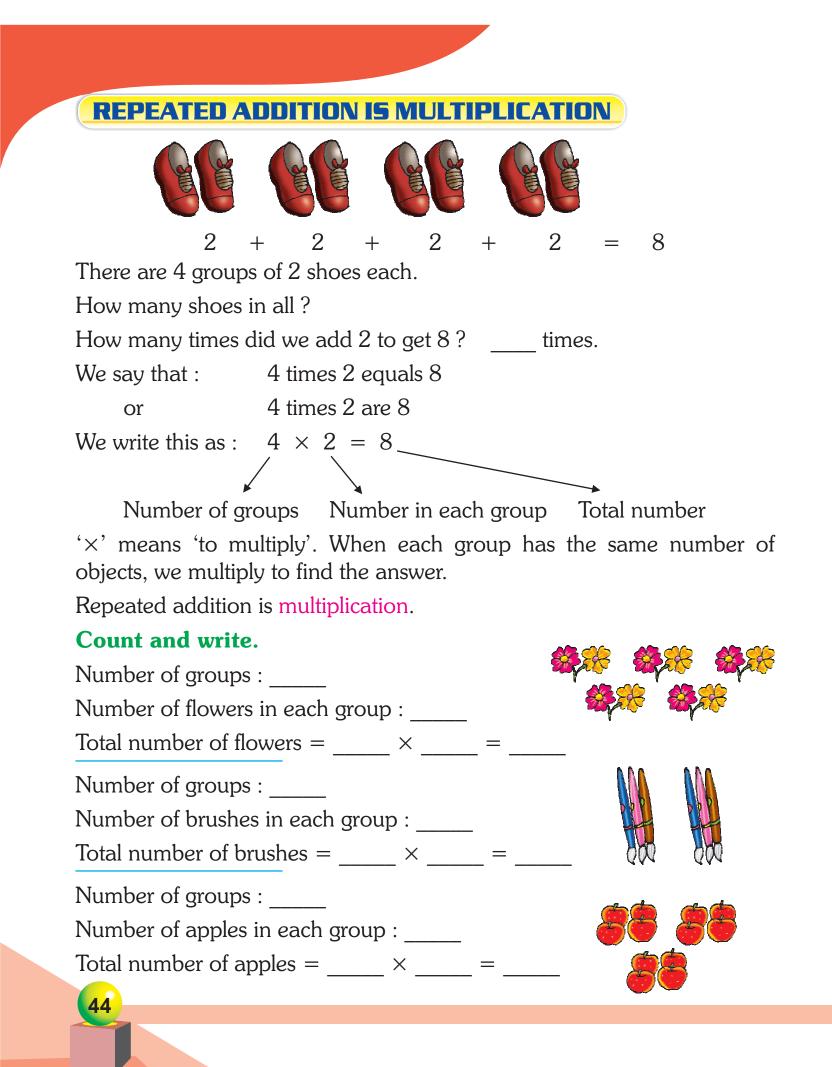


# **MULTIPLICATION**



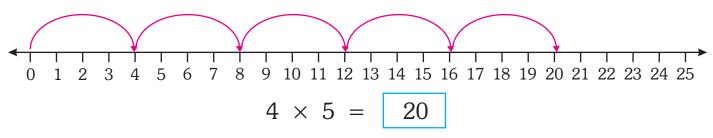
Write the following as multiplication statements.



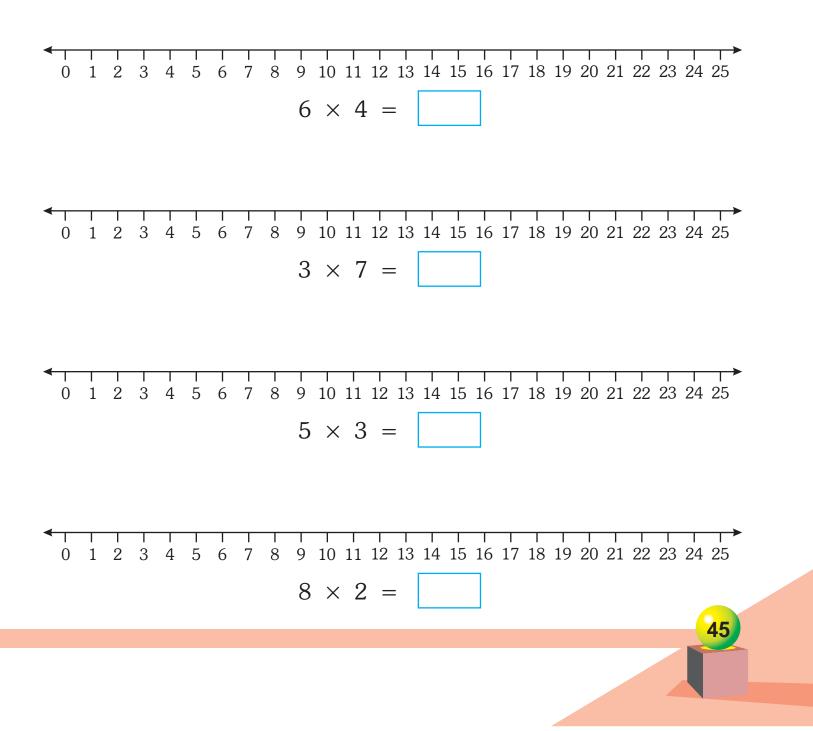


#### **MULTIPLICATION ON THE NUMBER LINE**

**Example : Multiply 4 by 5.** 



Multiply the following using the number line.



# **MULTIPLICATION TABLES**

Table of 5

	1 time 5 is 5	1 × 5 =
	2 times 5 is 10	2 × 5 =
	3 times 5 is 15	3 × 5 =
	4 times 5 is 20	4 × 5 =
	5 times 5 is 25	5 × 5 =
	6 times 5 is 30	6 × 5 =
	7 times 5 is 35	7 × 5 =
	8 times 5 is 40	8 × 5 =
	9 times 5 is 45	9 × 5 =
	10 times 5 is 50	10 × 5 =
46		

	1 time 6 is 6	1 × 6 =
	2 times 6 is 12	2 × 6 =
	3 times 6 is 18	3 × 6 =
	4 times 6 is 24	4 × 6 =
ŤŤŤŤŤ	5 times 6 is 30	5 × 6 =
¥¥¥¥¥¥	6 times 6 is 36	6 × 6 =
¥¥¥¥¥¥¥	7 times 6 is 42	7 × 6 =
¥¥¥¥¥¥¥¥	8 times 6 is 48	8 × 6 =
¥¥¥¥¥¥¥¥¥	9 times 6 is 54	9 × 6 =
¥¥¥¥¥¥¥¥¥¥	10 times 6 is 60	10 × 6 =

	1 time 7 is 7	1 × 7 =
	2 times 7 is 14	2 × 7 =
	3 times 7 is 21	3 × 7 =
	4 times 7 is 28	4 × 7 =
	5 times 7 is 35	5 × 7 =
	6 times 7 is 42	6 × 7 =
	7 times 7 is 49	7 × 7 =
	8 times 7 is 56	8 × 7 =
	9 times 7 is 63	9 × 7 =
	10 times 7 is 70	10 × 7 =
48		

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

	1 time 9 is 9	1 × 9 =
	2 times 9 is 18	2 × 9 =
	3 times 9 is 27	3 × 9 =
	4 times 9 is 36	4 × 9 =
	5 times 9 is 45	5 × 9 =
	6 times 9 is 54	6 × 9 =
	7 times 9 is 63	7 × 9 =
	8 times 9 is 72	8 × 9 =
	9 times 9 is 81	9 × 9 =
	10 times 9 is 90	10 × 9 =
50		

1 time 10 is 10	1 × 10 =
2 times 10 is 20	2 × 10 =
3 times 10 is 30	3 × 10 =
4 times 10 is 40	4 × 10 =
5 times 10 is 50	5 × 10 =
6 times 10 is 60	6 × 10 =
7 times 10 is 70	7 × 10 =
8 times 10 is 80	8 × 10 =
9 times 10 is 90	9 × 10 =
10 times 10 is 100	10 × 10 =

Fill in the blanks

1 × 8 =	5 × 5 =	4 × 7 =
6 × 7 =	2 × 6 =	5 × 6 =
8 × 9 =	7 × 4 =	1 × 9 =
9 × 3 =	3 × 5 =	3 × 8 =
4 × 10 =	3 × 2 =	3 × 9 =
10 × 2 =	4 × 4 =	2 × 1 =
5 × 1 =	6 × 9 =	3 × 8 =
8 × 3 =	2 × 10 =	6 × 3 =
8 × 2 =	7 × 1 =	1 × 7 =
8 × 8 =	7 × 2 =	2 × 8 =
9 × 1 =	10 × 5 =	1 × 6 =
9 × 4 =	4 × 9 =	10 × 7 =
6 × 10 =	7 × 6 =	8 × 5 =

# MATHS LAB

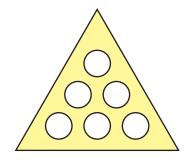
**Objective :** To learn and reinforce the concept of multiplication

Materials Required : Bingo cards, Pencils, Crayons for all students

For example,

This is a bingo card.

#### Steps :

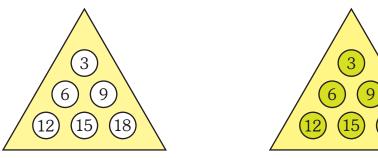


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- 1. Give each student a card like the one shown above, with 6 circles in each card.
- 2. Ask the students to write any 6 multiples of 3 in the circles.
- 3. Give a crayon to each student. Start calling out the multiples of 3 in any order. If a student has one of the called out numbers in his card, then he should colour that circle.

There are 3 ways of completing first.

- The three corners
- Each row
- All the circles



It is an excellent way of finding out if they know all the multiples of a given number. The game could be played many times to help every child get a chance to complete first.

## **MULTIPLICATION FACTS**

When a number is multiplied by 0, the answer is always zero.

$$2 \times 0 = 0$$
  $14 \times 0 = 0$   $19 \times 0 = 0$ 

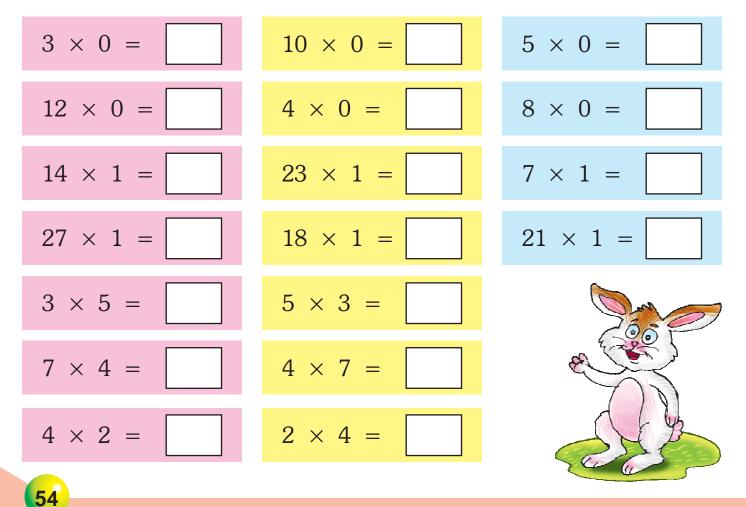
When a number is multiplied by 1, the answer is the number itself.

 $7 \times 1 = 7$   $12 \times 1 = 12$   $22 \times 1 = 22$ 

A change in the order of the factors does not change the answer.

 $3 \times 4 = 12$   $4 \times 3 = 12$ 

#### Fill in the blanks.



#### MULTIPLICATION OF A 2-DIGIT NUMBER WITH A 1-DIGIT NUMBER

#### **Example :** Multiply 23 by 2.

Step 1 : Multiply the digit 3 in ones place by 2 and write the answer in ones column.

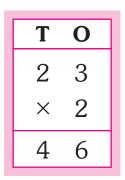
$$(3 \times 2 = 6)$$

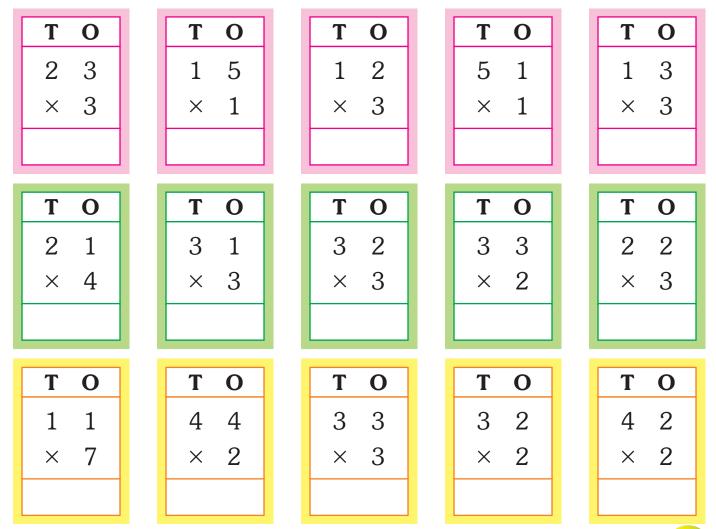
Step 2 : Multiply the digit 2 in tens place by 2 and write the answer in tens column.

$$(2 \times 2 = 4)$$

So, 
$$23 \times 2 = 46$$

#### Find the product.





#### MULTIPLICATION OF A 2-DIGIT NUMBER WITH A 1-DIGIT NUMBER (WITH CARRYING)

Example :	Multiply 27 by 3.
Step 1 :	Multiply the digit 7 in ones place by 3.
	$7 \times 3 = 21$ (2 tens + 1 one)
	Write 1 in the ones column of the answer.
	Carry 2 tens to the tens column.
Step 2 :	Multiply the digit 2 in tens place by 3.
	$2 \times 3 = 6$ tens
	Add 2 tens (carried from the ones column)
	6  tens + 2  tens = 8  tens
	Write 8 in the tens column.
	Answer is 81.

**T** ② 2

X

8

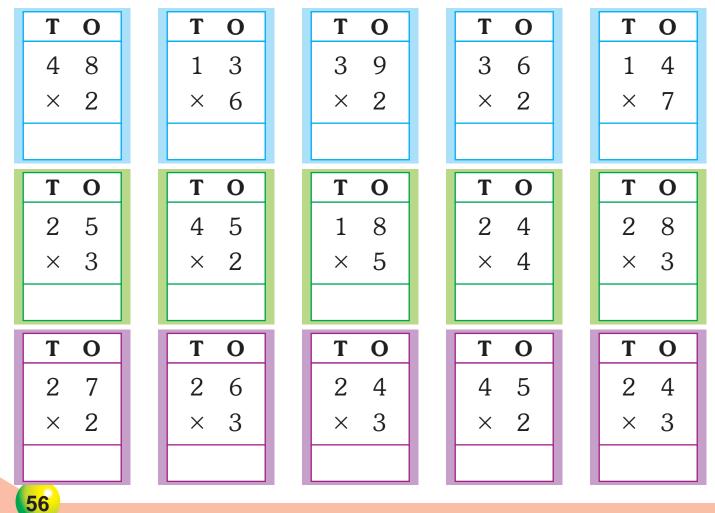
0

7

3

1

Find the product.



#### **MULTIPLICATION OF A 3-DIGIT NUMBER** WITH A 1-DIGIT NUMBER (without carrying)

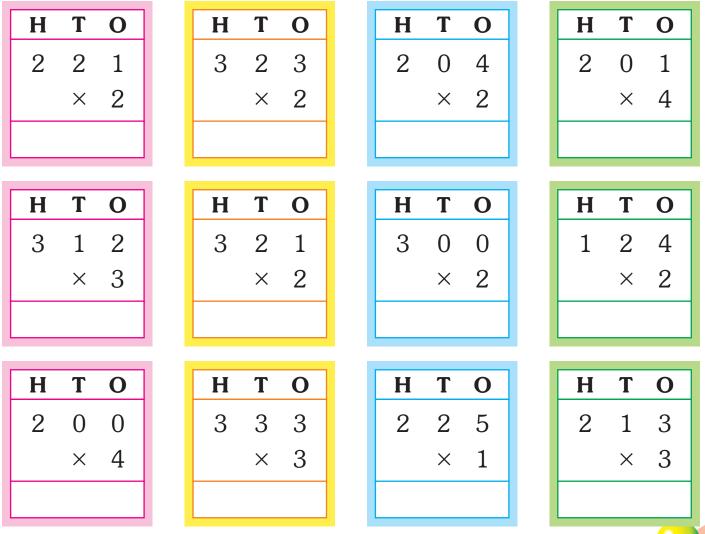
#### **Example :** Multiply 224 by 2.

Step 1 : Multiply the digit 4 in ones place by 2. 4 ones  $\times 2 = 8$  ones. Write 8 in the ones column. Step 2 : Multiply the digit 2 in tens place by 2.

2 tens  $\times$  2 = 4 tens. Write 4 in the tens column.

Step 3 : Multiply the digit 2 in hundreds place by 2. 2 hundreds  $\times$  2 = 4 hundreds. Write 4 in the hundreds column. Answer is 448.

Find the product.



Η	Τ	0
2	2	4
	X	2
4	4	8

#### MULTIPLICATION OF A 3-DIGIT NUMBER WITH A 1-DIGIT NUMBER (with carrying)

**T** (1) 2

 $\times$ 

7

0

4

3

2

Η

2

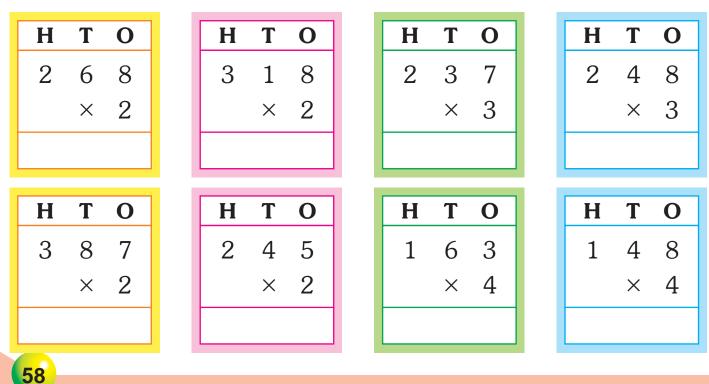
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#### **Example :** Multiply 224 by 3.

-	1 5 5
Step 1 :	Multiply the digit 4 in ones place by 3.
	4 ones $\times$ 3 = 12 ones. (1 ten + 2 ones)
	Write 2 in the ones column.
	Carry 1 ten to the tens column.
Step 2 :	Multiply the digit 2 in tens place by 3.
	2 tens $\times$ 3 = 6 tens.
	Add 1 ten carried from the ones column.
	6  tens + 1  ten = 7  tens.
	Write 7 in the tens column.

Step 3 : Multiply the digit 2 in hundreds place by 3. 2 hundreds  $\times$  3 = 6 hundreds Write 6 in the hundreds column. Answer is 672.

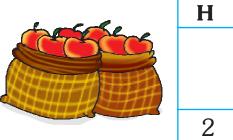
#### Find the product.



ΗΤΟ	ΗΤΟ	ΗΤΟ	ΗΤΟ
3 5 8	1 3 4	2 5 8	1 4 5
× 2	× 7	× 3	× 3
НТО	ΗΤΟ	ΗΤΟ	ΗΤΟ
4 2 5	2 4 7	3 8 5	3 6 5
× 2	× 3	× 2	× 2
НТО	ΗΤΟ	ΗΤΟ	НТО
1 3 7	3 8 4	1 5 3	1 1 6
× 4	× 2	× 5	× 6
НТО	ΗΤΟ	ΗΤΟ	ΗΤΟ
2 5 0	1 2 4	3 2 5	3 6 7
× 3	× 8	× 2	× 2
НТО	ΗΤΟ	ΗΤΟ	ΗΤΟ
1 8 7	4 5 5	1 2 3	1 8 8
× 5	× 2	× 8	× 4

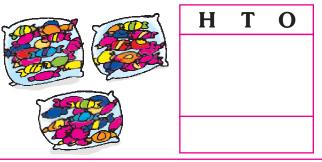
#### WORD PROBLEMS

There are 35 bags of apples. Each bag contains 6 apples. How many apples are there in 35 bags ?

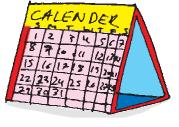


**T** ③ 0 3 5 6 X 1 0

There are 52 toffees in one packet. How many toffees are there in 3 packets?



How many days will be there in 32 weeks ? (1 week = 7 days)





Η

Т

Τ

0

0

There are 28 rows of trees in a garden. There are 7 trees in each row. How many trees are there in the garden?



There are 17 mangoes in 1 basket. How many mangoes are there in 4 such baskets ?



If each boy has 24 toffees, how many toffees do 5 boys have ?

There are 380 apples on a tree. How many apples are there on 2 trees if they have equal number of apples ?

6 buttons are stitched on each shirt. How many buttons are needed for 129 shirts?

Each tricycle has 3 wheels. How many wheels will be needed for 243 tricycles ?

Each car carries 4 students. How many students will 176 cars carry?





Η

Η

Η

Τ

Τ

0

0







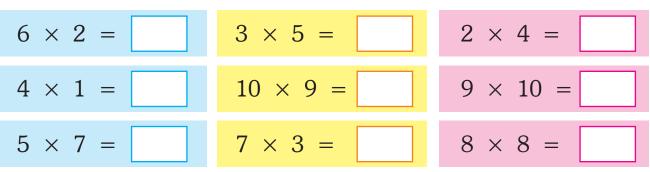
Τ

0



# WORKSHEET

## 1. Recall and fill up the blanks.



# 2. Multiply.

ΗΤΟ	ΗΤΟ	H T
32	4 3	1 2
× 2	× 6	×

Н	Τ	0
3	6	4
	×	2

0

3

3

## **3.** Solve these word problems.

How many days are there in 45 weeks ?	H T O
How many wheels are there in 236 auto rickshaws ?	H  T  O
There were 3 children standing in 1 row. How many children will stand in 125 rows ?	H T O