7 DIVISION

Let us play a game- How many laddoo's has Mama given you?

Ask children to stand in a circle. Then ask them to run in the circle. Teacher says aloud "How many laddoo's has Mama given you?" Students answer" as many as you say." Teacher calls out "four." Then children run around to make groups of 4. The groups having more or less than 4 children will be out of the game. One should keep number of children in mind when calling out the number.

If the total number of children playing the game is 24 then how many groups will be formed?

Complete the table accordingly-

Students to be formed into groups	Students in each group	Number of groups formed
24	3	8
24	6	
24	8	
24	2	

(A) How many groups of three will be formed?

(B) What is the minimum number of groups formed?

(C) How many groups can be made with six students in each group?

(D) What is the maximum number of groups formed?

In another class there are 32 children.
Now complete the table accordingly-

Students to be formed into groups	Number of groups formed	Students in each group
32	16	2
32	8	
32	4	
32	2	

(A) How many children are there in each group when the highest number of groups are formed?

(B) If children are divided into 8 equal groups, how many children will be there in each group?

(C) If 4 equal groups are formed how many children will be there in each group?

(D) If 2 equal groups are formed , how many children will be there in each group?

How many in each group?

1. Laddoos and plates

There are 12 laddoos in a plate. Keep them equally in two plates.

Now, howmany laddoos are there in each plate?

Now keep 12 laddoos in three plates equally. How many will be there in each plate?
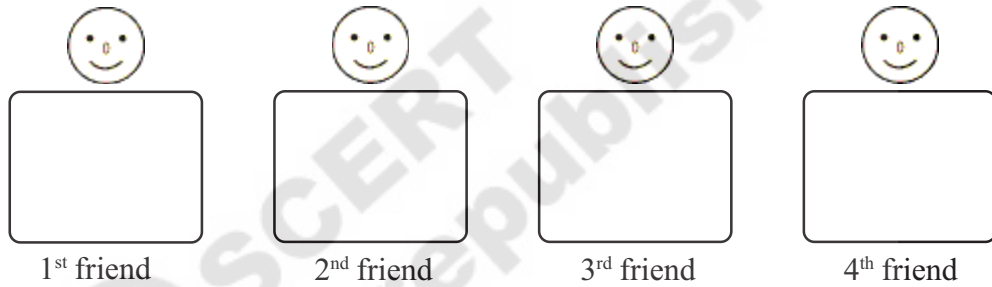
If 12 laddoos are kept in four plates equally. How many will be there in each plate?
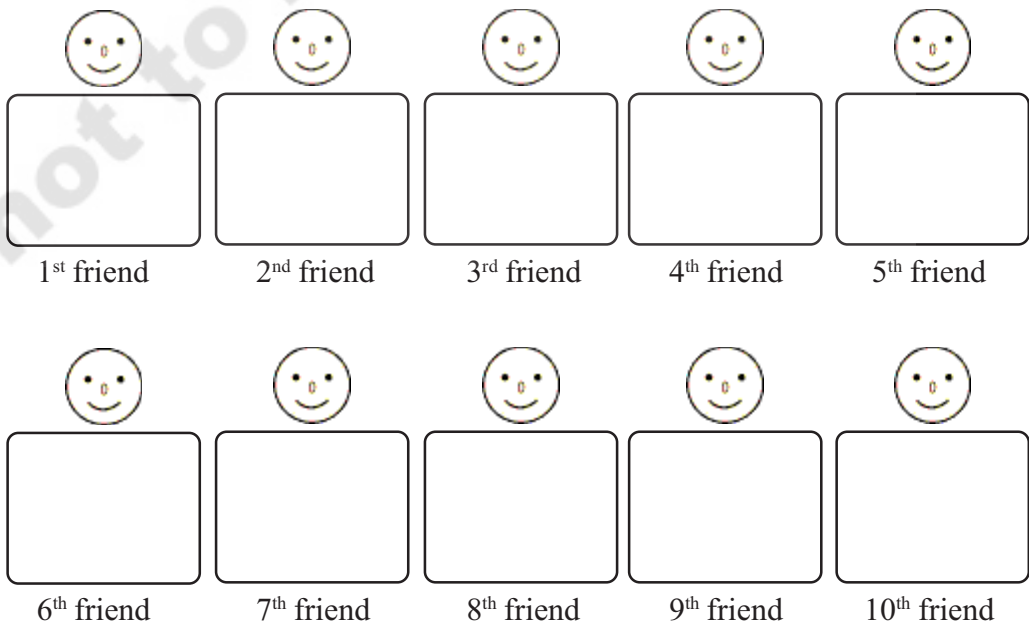
2. I have 20 toffees. I want to distribute them equally among my 5 friends. How many toffees does each friend get?

1st friend	2nd friend	3rd friend	4th friend	5th friend
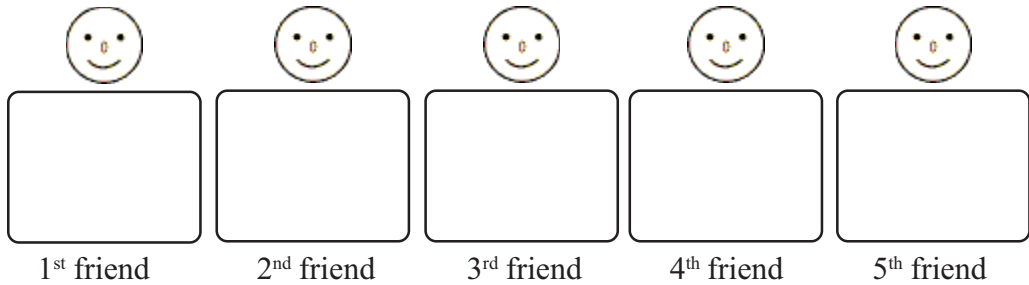
If I divide 20 toffees equally among 4 friends, how many toffees does each friend get?

1st friend	2nd friend	3rd friend	4th friend

If I divide 20 toffees equally among 10 friends, how many toffees does each friend get?

1st friend	2nd friend	3rd friend	4th friend	5th friend

6th friend	7th friend	8th friend	9th friend	10th friend

How many groups?

1.   Dharmendra has 15 toys. He wants to keep them in boxes. If he puts 3 toys in one box, how many boxes are needed?
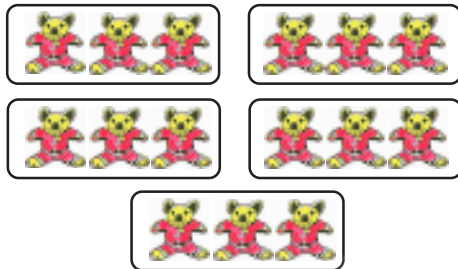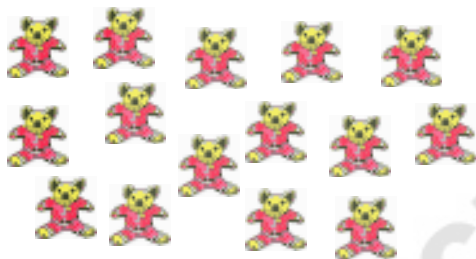
There are **15** toys

There are **3** toys in each box

So, **5** boxes are needed.

If Dharmendra puts 5 toys in each box, how many boxes are needed?

There are _____ toys

There are _____ toys in each box

So, _____ boxes are needed.

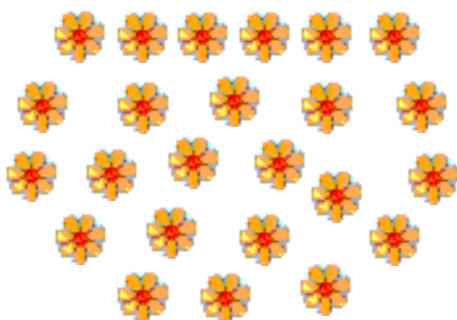2.   Radha has 24 flowers. She gives 6 flowers to each of her friends. Then to how many friends does she give?

There are _____ flowers

Flowers given to each friend _____

So, the number of friends she gives flowers is _____

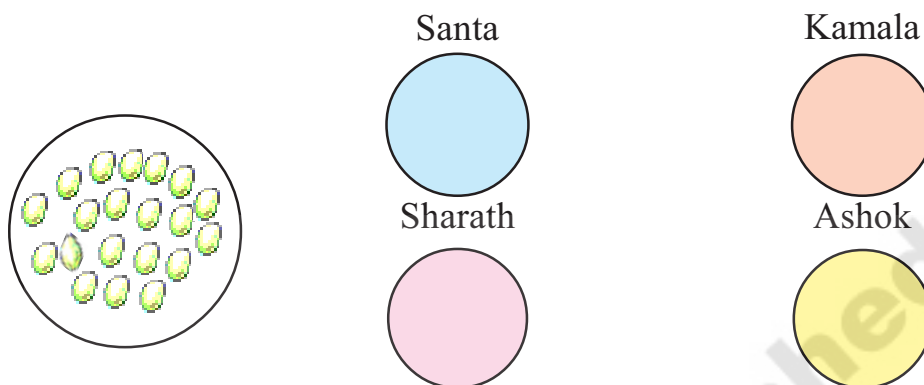If Radha gives 4 flowers to each of her friends, then to how many friends does she give?

There are _____ flowers

Flowers given to each friend _____

So, the number of friends she gives flowers is _____

Division

Division means distributing into **equal parts**. Distribute the 20 marbles given in the circle equally among 4 friends.

Santa   Kamala

Sharath   Ashok

This is what Shalini does. She picks up a marble and puts it in Santa's circle. Then she puts a marble in Kamala's circle, then in Sharath's and then the 4th marble in Ashok's circle.

After giving one-one marble to each friend she starts distributing again. She keeps repeating this process till all the marbles in the big circle are distributed.

When 20 marbles are distributed among 4 friends, each one gets 5 marbles. This is written as 20 ÷ 4 = 5.

'÷' is the symbol we use for division.

Try This

1. How can you distribute 12 marbles among 3 children? Also write this using the '÷' symbol.

2. Do these divisions using marbles.

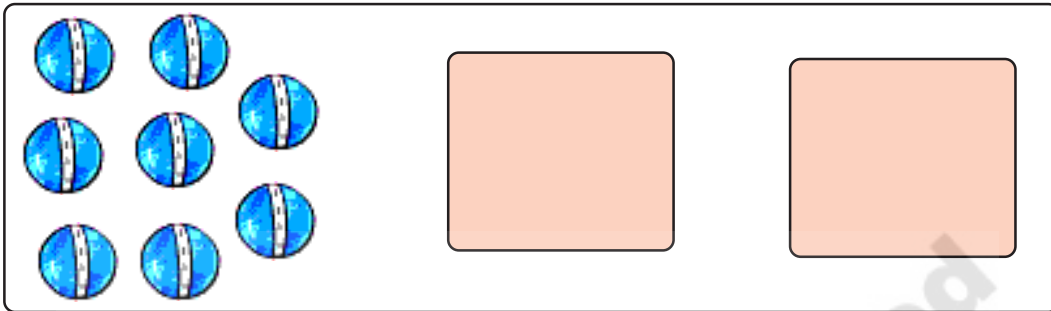   (A) 24 ÷ 3   (B) 15 ÷ 5

    (C) 14 ÷ 2   (D) 12 ÷ 4

    (E) 56 ÷ 7   (F) 42 ÷ 6

We can also repeatedly subtract to divide equally-

If we are distributing 8 balls into equal groups of 4, we will continue to subtract 4 balls till, all the balls are distributed-

Total balls are	8
First time taking away balls	− 4
Remaining balls	4
Second time taking away balls	− 4
Remaining balls	0

This is written as $8 \div 4 = 2$

This can also be shown as

$$4 \overline{)8 (}^{\,2} \\ \quad \underline{8} \\ \quad 0$$

8 is dividend

4 is divisor

2 is quotient

0 is remainder

Try This

Ramaiah brought 32 plants to plant in his garden. If he plants 8 in each row, how many rows are formed?

Let us see in how many rows

1st row   🌳🌳🌳🌳🌳🌳🌳🌳 $32 - 8 = 24$

2nd row   🌳🌳🌳🌳🌳🌳🌳🌳 $24 - 8 = 16$

3rd row   🌳🌳🌳🌳🌳🌳🌳 $16 - 8 = 8$

4th row   🌳🌳🌳🌳🌳🌳🌳 $8 - 8 = 0$

So when 8 plants are planted in each row we get 4 rows.

This is written as $32 \div 8 = 4$

If Ramaiah wants to plant 4 plants in each row, how many rows would there be?

Number of plants	32
Planted in 1st row	– 4
Remaining plants	28
Planted in 2nd row	– 4
Remaining plants	....
Planted in 3rd row	– 4
Remaining plants	....
Planted in 4th row	– 4
Remaining plants	....
Planted in 5th row	– 4
Remaining plants	....
Planted in 6th row	– 4
Remaining plants	....
Planted in 7th row	– 4
Remaining plants	4
Planted in 8th row	– 4
	0

So 8 rows are formed. This is written as $32 \div 4 = 8$

This can also be done as follows-

$$4 \overline{)\, 32 \,(}\, 8$$
$$\underline{-32}$$
$$0$$

> 32 is dividend
>
> 4 is divisor
>
> 8 is called quotient
>
> 0 is remainder

Now let us use units and tens to divide-

Let us divide 48 marbles among 4 people.

Now 48 means $40 + 8$ i.e. 4 tens and 8 ones.

When we divide 4 tens by 4 we get 1 ten = 10

When we divide 8 ones by 4 we get 2 ones = 2

Each person would get $10 + 2 = 12$ marbles. This is represented as $48 \div 4 = 12$

This division can also be done as follows:

$$
\begin{array}{r}
\;1\;\;2 \\
4\,\overline{)\,4\;\;8} \\
\underline{4\;\;\downarrow} \\
0\;\;8 \\
\underline{\;\;8} \\
\;\;0
\end{array}
$$

This means $48 \div 4 = 12$

Example:

Find 39 ÷ 3 = ?

$$
\begin{array}{r}
1\ 3 \\
3\ \overline{)\ 3\ 9} \\
\underline{3} \\
0\ 9 \\
\underline{\ 9} \\
0
\end{array}
$$

This means

$$
\begin{array}{r}
1 \text{ tens} + 3 \text{ ones} \\
3\ \overline{)\ 3 \text{ tens} + 9 \text{ ones}} \\
\underline{3 \text{ tens}\phantom{+ 9 \text{ ones}}} \\
0 \text{ tens} + 9 \text{ ones} \\
\underline{9 \text{ ones}} \\
0 \text{ ones}
\end{array}
$$

Do This

(A) 30 ÷ 2	(B) 48 ÷ 4	(C) 45 ÷ 3
(D) 81 ÷ 9	(E) 60 ÷ 2	(F) 66 ÷ 6
(G) 86 ÷ 2	(H) 25 ÷ 5	(I) 36 ÷ 3
(J) 32 ÷ 4	(K) 35 ÷ 5	(L) 40 ÷ 4

Relation between division and multiplication

15 apples
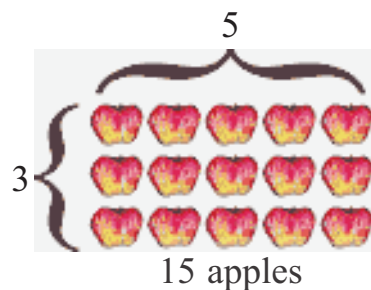
Multiplication	Division
3 Groups of 5 make 15 3 x 5 = 15 **and also :** 5 groups of 3 make 15 5 x 3 = 15	So 15 divided by 3 is 5 15 ÷ 3 = 5 So 15 divided by 5 is 3 15 ÷ 5 = 3

You can see from above that multiplication and division are related. Every multiplication can be written in the form of division and every division can be written in the form of a multiplication.

Try These

1.   Observe the picture and write division and multiplication statements.

(A)

12 mangoes

Multiplication	Division

(B)

5

4

20 balloons

Multiplication	Division

Do This

1. Fill the blanks.

Division				Multiplication			
12 ÷ 2	=	6		6 x 2	=	12
12 ÷ 6	=	2		2 x 6	=	12
18 ÷ 3	=	6		6 x 3	=	18
18 ÷ 3	=	6		3 x 6	=	18
20 ÷ 4	=	☐		☐ x 4	=	20
☐ ÷ 3	=	6		6 x 3	=	☐
15 ÷ ☐	=	5		5 x ☐	=	15
☐ ÷ ☐	=	2		2 x ☐	=	☐

86
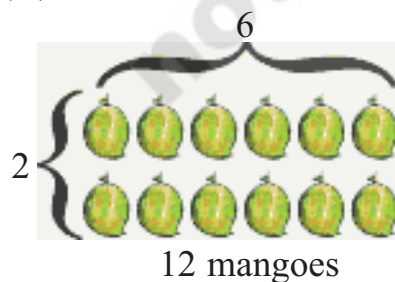
2. Fill the empty boxes and make two more.

Multiplication facts					Division forms				
4	x	3	=	12	12	÷	3	=	4
					12	÷	4	=	3
8	x	2	=	16	16	÷	☐	=	8
					16	÷	☐	=	2
5	x	4	=	☐	20	÷	☐	=	5
					20	÷	☐	=	4

3. (A) 4) 44 ((B) 3) 18 ((C) 6) 24 (

   (D) 2) 28 ((E) 5) 30 ((F) 4) 40 (

Do This ▶

1. There are 50 children in class 5. They are divided into groups of 5. How many groups are formed?

2. Harish has 36 toffees with him. He wants to divide them equally among 6 children. How many toffees does each child get?

3. In a class there are 28 children. A Kabaddi team can be made with 7 members. How many Kabaddi teams can be made?

4. If ₹ 68 is distributed among 4 children, how much money will each child get?