Tomorrow is Gopal's favourite festival.

Gopal and Dhara are very excited. Their beloved Atya (father's sister) is visiting them today. They have cleaned and decorated their house.

Carefully observe Gopal's house.

What do you find interesting here?

.................................................................................................

Find and count the number of each of these objects and write.

Leaves ( )    Glasses ( )    Pomegranate ( )    Flowers ( )

# Celebration begins!

Dhara's mother has bought some material for the festival.
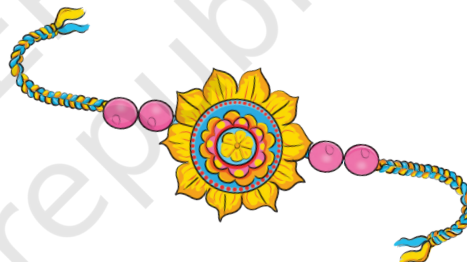Guess the festival they are preparing for.

Raksha bandhan!

## Let's make Rakhis

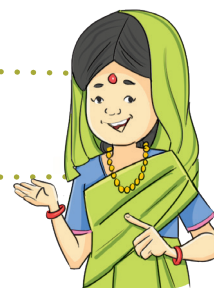Look! My teacher has taught us to make Rakhis.

For each Rakhi we need one flower, ......... threads and .......... beads.

We need to make 5 Rakhis.

**How many threads, flowers and beads do they need?**

Raksha Bandhan

Each Rakhi uses 1 flower. We need to make 5 Rakhis.

Dhara takes

| 1 | + | 1 | + | 1 | + | 1 | + | 1 | = | ...... |

This can also be said as   5  times   1

or                          5    ×      1 = 5

For 5 *Rakhis*, we need ......... flowers.

Each Rakhi uses 2 threads. We need to make 5 Rakhis.

Dhara takes

| 2 | + | 2 | + | 2 | + | 2 | + | 2 | = | ...... |

or     5  times  2

or     5    ×    2

For 5 *Rakhis*, we need ............. threads.

Each Rakhi uses 4 beads. We need to make 5 Rakhis.

| 4 | + | 4 | + | 4 | + | 4 | + | 4 | = | ...... |

or     5  times  4

or     5    ×    4

For 5 *Rakhis*, we need ............. beads.

For making 10 such *Rakhis,* we need ......... flowers, ......... threads and ......... beads.

There are 30 flowers, 30 threads and 30 beads. How many *Rakhis* can you make with this material? Use drawings if needed to find out the answer.

**FUN ACTIVITY**

Try making a colourful *Rakhi* at your home. Show it in the class.

Bappa, Our Atya likes laddoos. Let's buy some.

1, 2, 3, 4,... oh I am getting confused in counting them!

Sure!
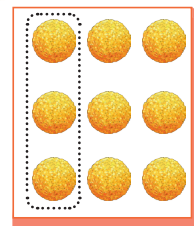
Wait Dhara! Let the shopkeeper arrange them in a box.

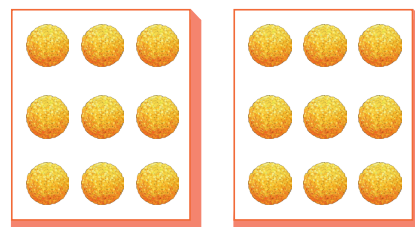How would we count the laddoos in this box?

$3 + 3 + 3 = $ ......

or, three times three equals 9

or, $3 \times 3 = $ ......

There are ...... laddoos in this box.

Please give me 2 boxes of laddoos.

$9 + 9 = 18$

Two times nine equals 18.

$2 \times 9 = 18$

There are 18 laddoos.

$3 + 3 + 3 + 3 + 3 + 3 + 3 = $ ...... .

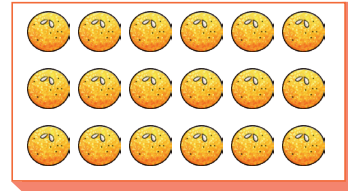Or, 6 times 3 equals 18.

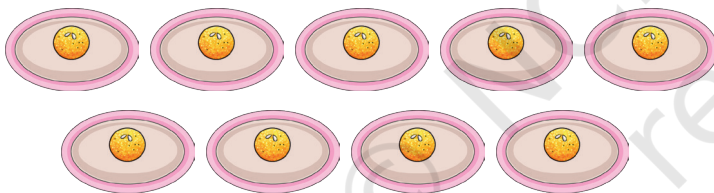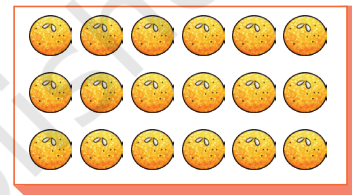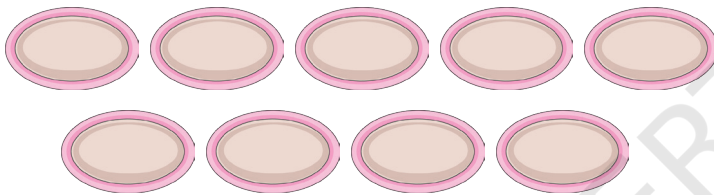Or, $6 \times 3 = 18$

There are 18 laddoos.

After Atya and children come, we will be 9 people in the house. When we distribute 18 laddoos equally to all, how many will each of us get?
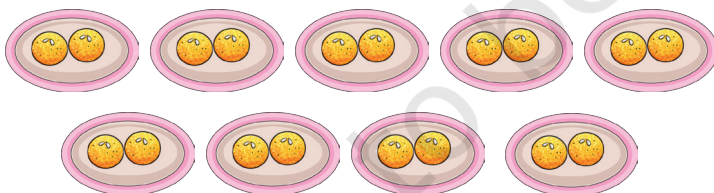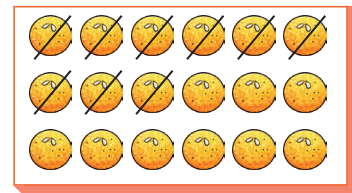
**Can you help Dhara find this out?**

Imagine yourself to be Dhara. Distribute 18 laddoos equally among nine of your friends.
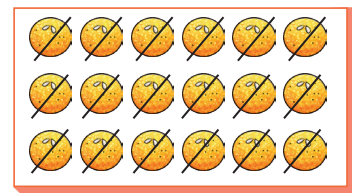
Let's see how Dhara has done it.

Items left:

........

Items left:

........

When 18 laddoos are shared equally among nine people, each of them gets ............ laddoos.

18 equally shared by 9 is 2 each.

Or, 18 ÷ 9 = 2 laddoos.

Look at the figure carefully. Estimate the number of *kaju katlis*.
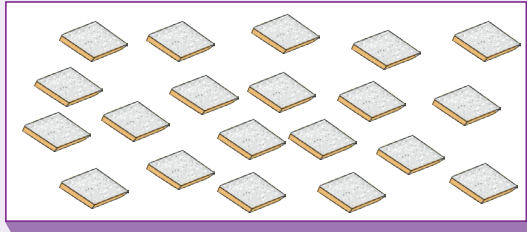
Count and write the number of *kaju katlis*.

Total number of *kaju katlis* = .........

Distribute all *kaju katlis* equally among 5 people. You can do it by drawing *kaju katlis* on the plates. How many will each get?

Compare your work with Dhara's work.
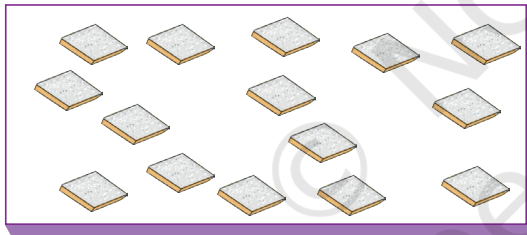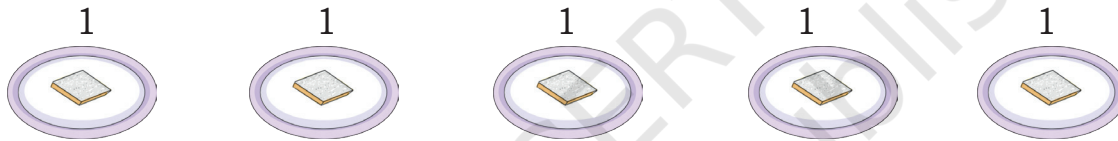
1          1          1          1          1

$$\begin{array}{cc} 2 & 0 \\ - & 5 \\ \hline \end{array}$$
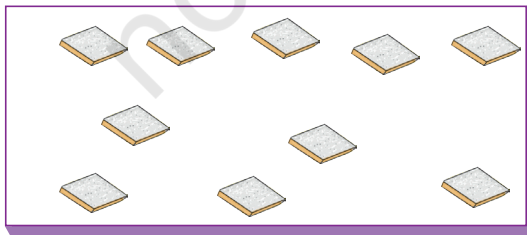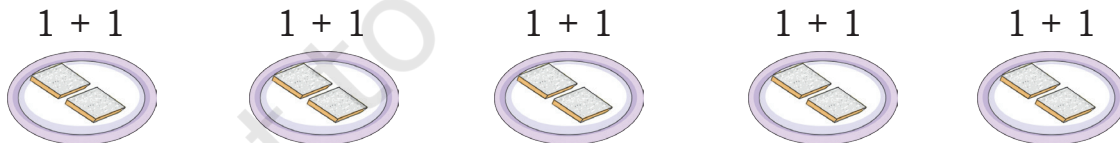
Items left: _____
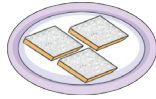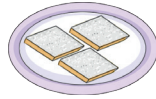
1 + 1      1 + 1      1 + 1      1 + 1      1 + 1
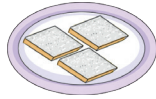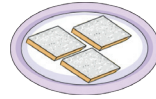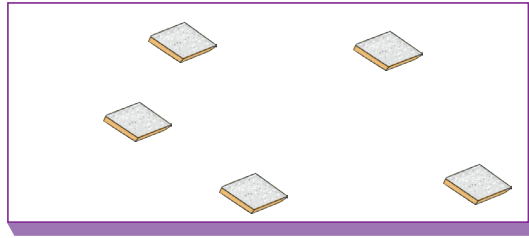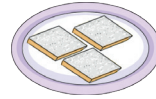
$$\begin{array}{cc} 2 & 0 \\ - & 5 \\ \hline 1 & 5 \\ - & 5 \\ \hline \end{array}$$

Items left:   1   0

1 + 1 + 1     1 + 1 + 1     1 + 1 + 1     1 + 1 + 1     1 + 1 + 1

$$
\begin{array}{rr}
2 & 0 \\
- & 5 \\
\hline
1 & 5 \\
- & 5 \\
\hline
1 & 0 \\
- & 5 \\
\hline
\end{array}
$$

Items left:　　5

1 + 1 + 1 + 1     1 + 1 + 1 + 1     1 + 1 + 1 + 1

1 + 1 + 1 + 1     1 + 1 + 1 + 1

$$
\begin{array}{rr}
2 & 0 \\
- & 5 \\
\hline
1 & 5 \\
- & 5 \\
\hline
1 & 0 \\
- & 5 \\
\hline
& 5 \\
- & 5 \\
\hline
\end{array}
$$
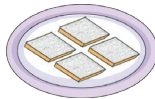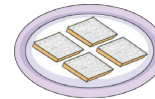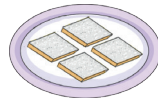
Items left:　　0

20 equally shared by 5 is 4 each.

20 ÷ 5 = 4

1. Distribute all the *kaju katlis* equally among 4 people. How many *kaju katlis* will each get?

   Let us do this in the picture given below. Strike out the *kaju katlis* from the tray and draw them in the plates.
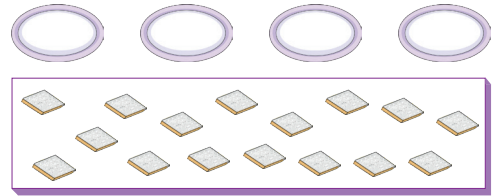
   The first step has been done for you.

   1          1          1          1
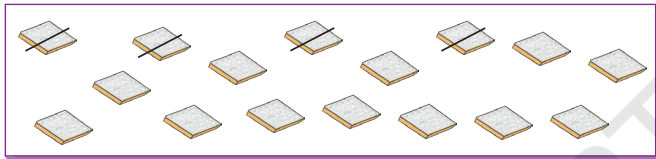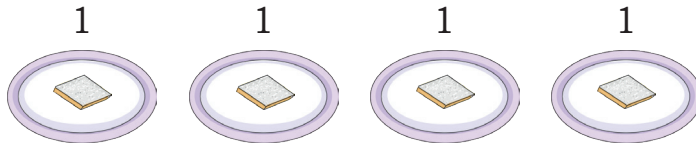
   | | 1 | 6 |
   |---|---|---|
   | − | | 4 |

   Items left: _____

   | | 1 | 2 |
   |---|---|---|
   | − | | |

   Items left: _____

   | | | 8 |
   |---|---|---|
   | − | | |

   Items left: _____
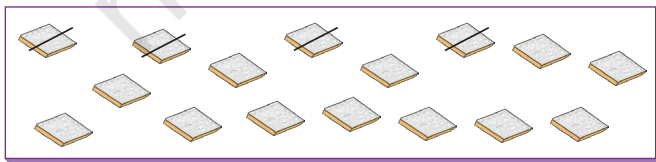
   | | | 4 |
   |---|---|---|
   | − | | |

   Items left: _____

   Each will get ........ *kaju katlis*.

   16 ÷ 4 = ........

2. Distribute all the 15 *pedas* in plates equally among 5 people. How many *pedas* will each get?

Total *pedas*:

|   | 1 | 5 |
|---|---|---|
| − |   | 5 |
|   |   |   |
| − |   |   |
|   |   |   |
| − |   |   |
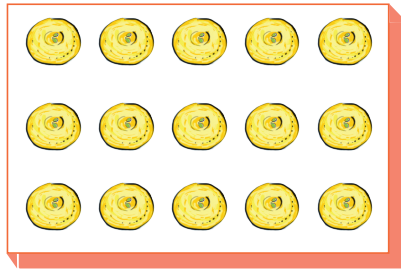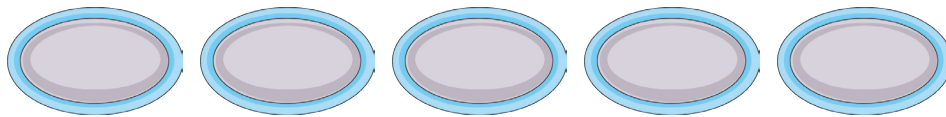
15 equally shared by 5 is ........ each.

$$15 \div 5 = \text{........} .$$

## Let us Think

1. Each cycle needs 2 wheels. How many cycles can be fitted with 12 wheels?
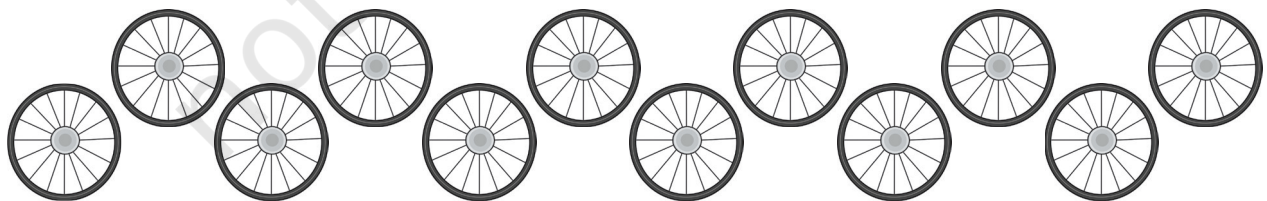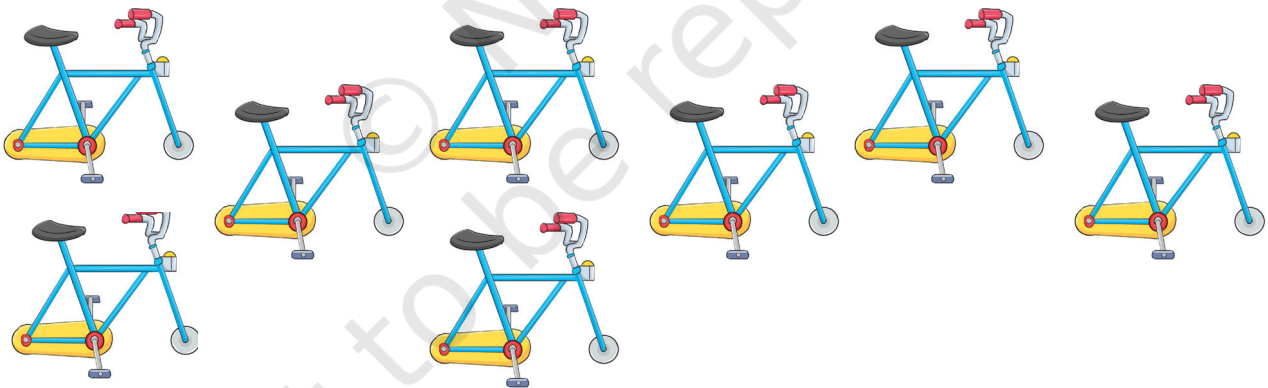
12 equally divided by 2 is ........ .

$$12 \div 2 = \text{........} .$$

Raksha Bandhan

2.  Look at the picture carefully. Count the number of jalebis.

There are ........ jalebis.

How did you count? Discuss with your friends.

Counting in groups, we see there are six groups of four jalebis each,

or,     4    +    4    +    4    +    4    +    4    +    4    = .......

or     ........ × 4 = ........ jalebis.

Bappa, we have bought 24 jalebis.

At home we are 9 members. Can we have 4 jalebis each?

Are there enough jalebis for everyone in Dhara's family to have four each? Share your thoughts in the class.

How many jalebis should Dhara buy so that everyone can get four each?

## Plants in the garden

Dhara and Gopal see a flower bed on their way home.

Dhara:   The number of plants is

$6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = \ldots$

8 times 6 =

= 8 × 6 =

Gopal:   No, it is 8 + 8 + 8 + 8 + 8 + 8

= 6 × 8

Who do you think is correct?
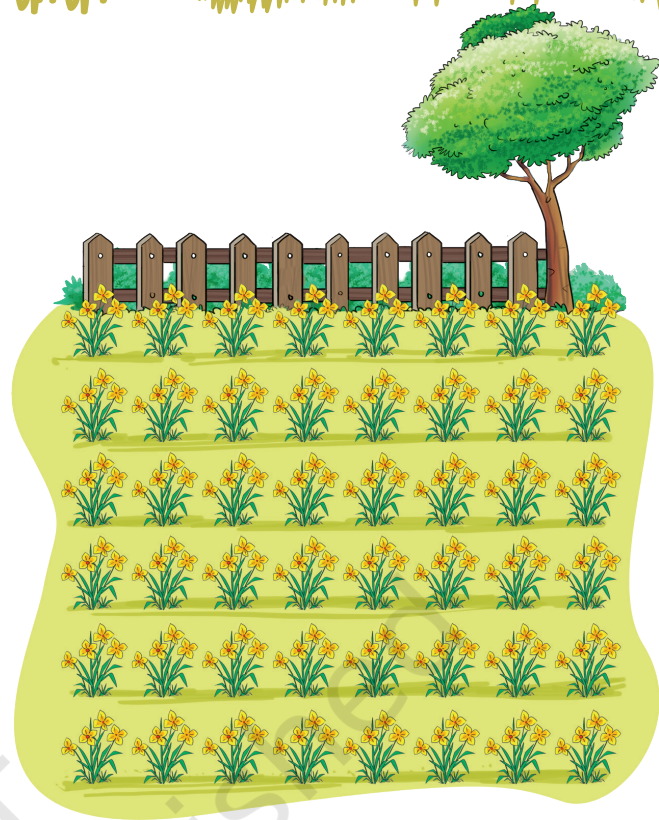
**Different ways of grouping.**
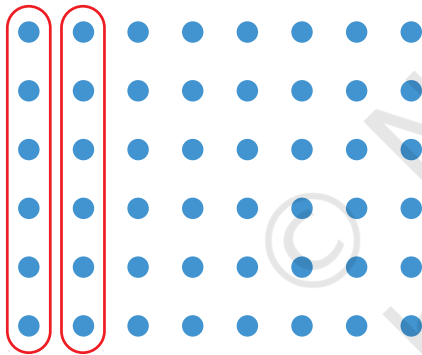
Dhara
8 × 6
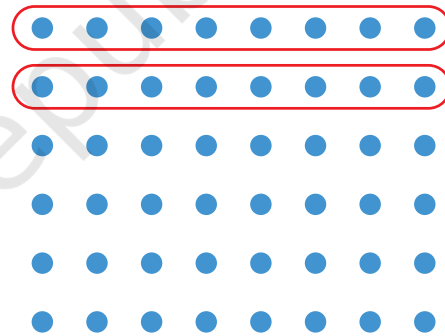
Dhara
6 × 8

Can you complete this equal grouping and write it as multiplication?

Can you find more equal groups of different sizes? Draw them and write as multiplication.

Raksha Bandhan
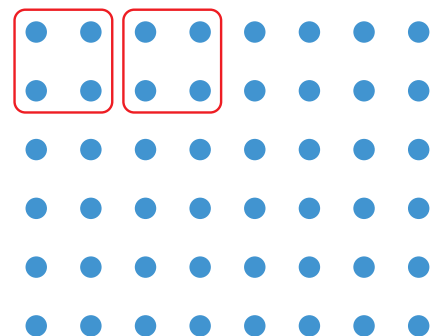
## Visit to a Farm

The next day the children take their Appa and cousins to the farm. They see a lot of chickens there. Let us count chickens in the farm!
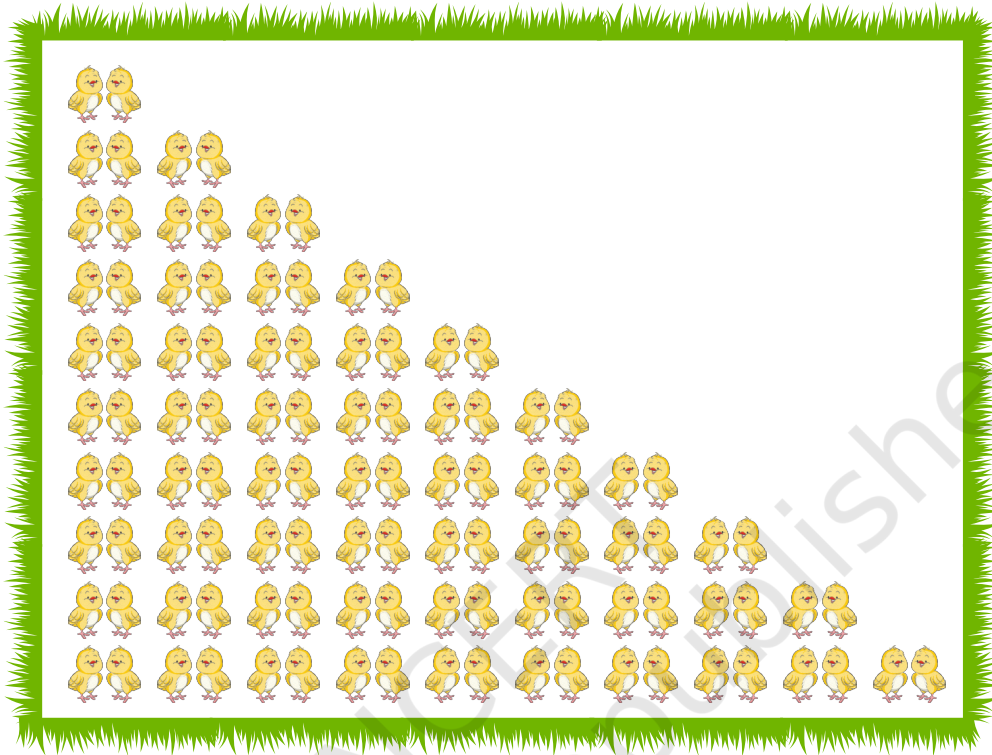


| | | | |
|---|---|---|---|
| 1 times 2 | is 2 | or 1 × 2 | = 2 |
| 2 times 2 | is 4 | or 2 × 2 | = 4 |
| 3 times 2 | is 6 | or 3 × 2 | = 6 |
| 4 times 2 | is ....... | or 4 × 2 | = ....... |
| 5 times 2 | is ....... | or 5 × 2 | = ....... |
| 6 times 2 | is ....... | or 6 × 2 | = ....... |
| ....... times 2 | is ....... | or ....... × 2 | = ....... |
| ....... times ....... | is ....... | or 8 × 2 | = ....... |
| ....... times ....... | is ....... | or 9 × 2 | = ....... |
| ....... times ....... | is ....... | or 10 × 2 | = ....... |

## Skip Jumping Game

In the evening, the family goes to the playing field.

Let's play a game.

Atya draws a curvy number track on the ground with a stick. She asks Dhara to write numbers starting from 0.

Now, I need a jumper. Who wants to jump?

I will jump

Number 3

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
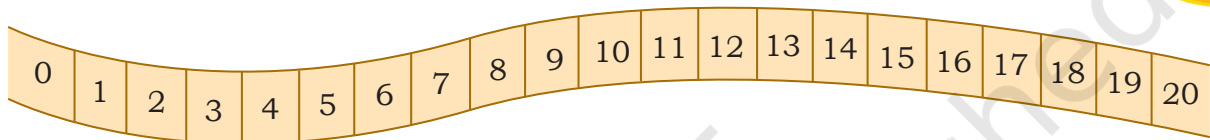
Starting from 0, Dhara jumps to 3. From 3 she goes to 6. From 6 she goes to 9. Now continue to see how Dhara jumps after 9.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
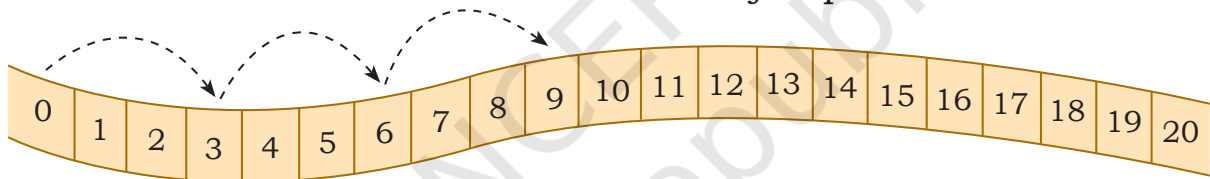
**Dhara is SKIP JUMPING BY 3.**

Number of jumps      Number reached

1  jump    →    3

2  jumps    →    3 + 3 = 6 = 2 x 3

3  jumps    →    3 + 3 + 3 = 9 = 3 x 3

4  jumps    →    .........................................................................

5  jumps    →    .........................................................................

6  jumps    →    .........................................................................

7  jumps    →    .........................................................................

8  jumps    →    .........................................................................

9  jumps    →    .........................................................................

10  jumps    →    .........................................................................

1. Guess and write the next number she will jump onto.

   .............................................................................................................

2. Is there a pattern in these numbers: 3, 6, 9, ...?

3. How many steps forward is Dhara jumping each time?

4. Continue skip jumping by 6 by drawing the jumps on the number track.
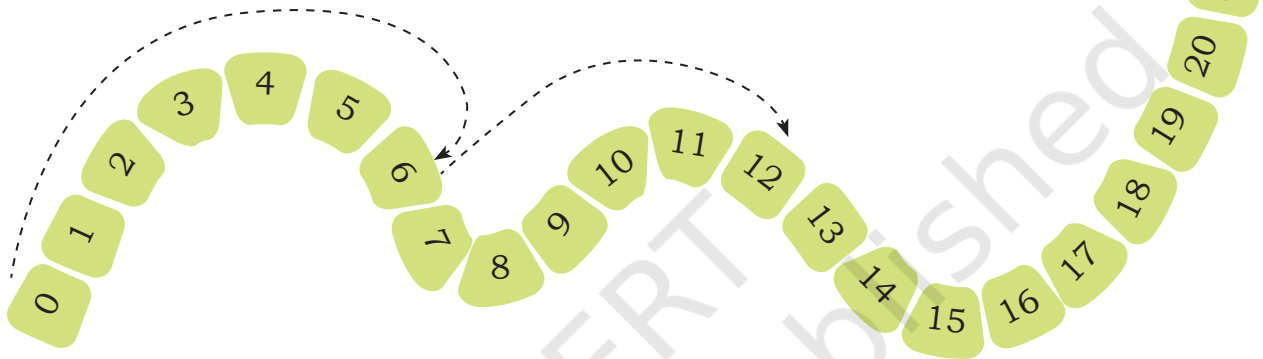


5. Can this skip jumping be used to form times-6 table? Write times-6 table in your notebook.

6. Is there repeated addition happening? Make times-4 table using repeated addition in the picture given below.



| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|

1 × 4          2 × 4

| | | | | | | | | | | | | | | | 16 |

| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |

| 33 |

| 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |

| | | | | | | | | | | | | | | | 50 |
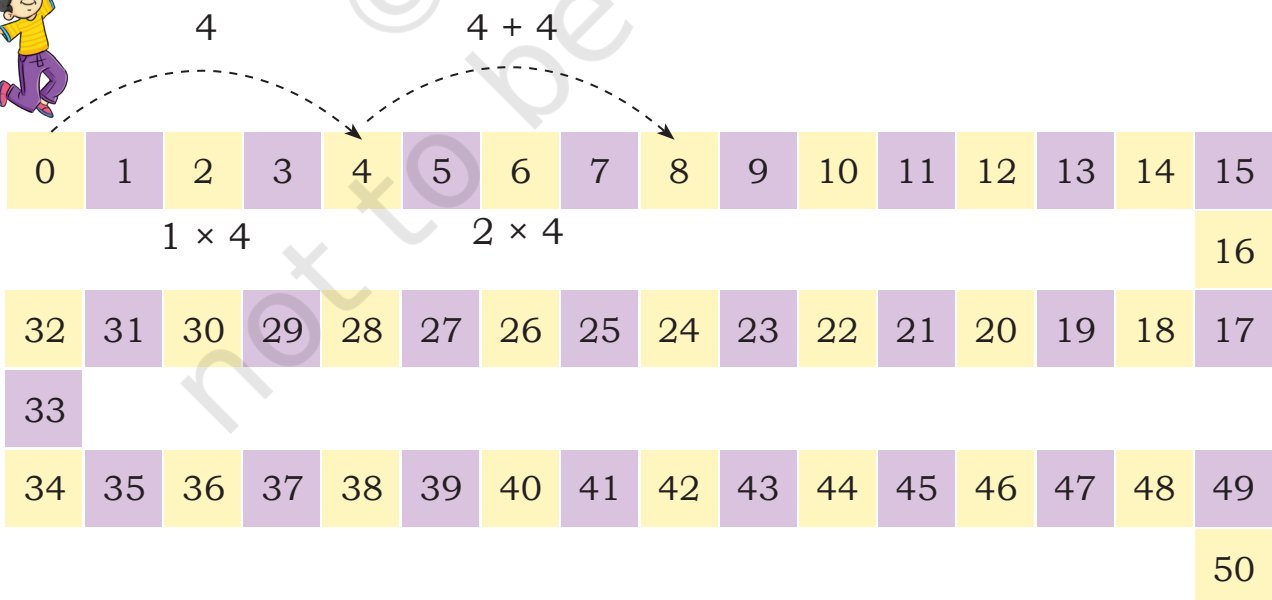
**7.**
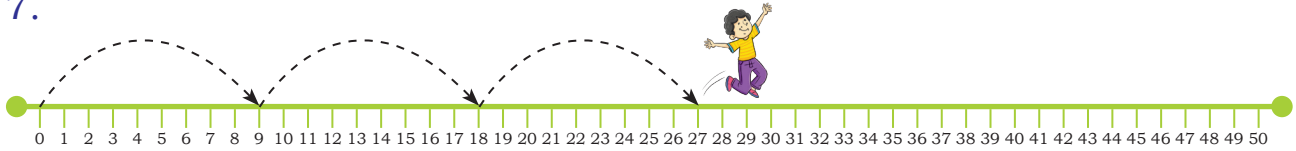


Gopal is doing skip jumping of ............. steps.

After 27 he will jump on ............., .............

**8.** What times table can you construct from Gopal's jumps? Make it in your notebook.

**9.** Dhara also skip jumps. Gopal notes down the jumps but he misses the first few numbers.

⬜ ⬜ ⬜    32, 40, 48, 56

By what numbers was Dhara skip jumping? Construct the times table of this number in your notebook.

## Let us Play

Atya places a flower on 12.

Skip jump with equal steps to reach the flower.

No direct jumping to the flower is allowed.

The one who reaches the flower in the smallest number of jumps wins.

What skip jumping number will you choose? ..........



Play this game with your friends by putting the flower on different numbers on the track. See who is able to reach in the minimum number of jumps.

Are there numbers that can be reached only through skip jumping by 1? Find 3 such numbers.

# Fun Way of Writing Tables

Mithu figures out another way of writing multiplication tables by drawing sticks! Do you see repeated addition in this?

Mithu had some sticks. He arranged them like this:

He counted the red dots showing the intersection of sticks.
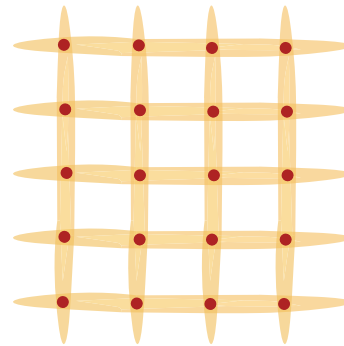
Let's try making a 5 times table with sticks.

1 times 5 = 5
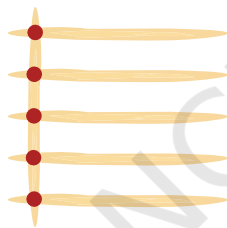
2 times 5 = 10
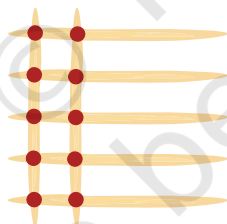
3 times 5 = 15
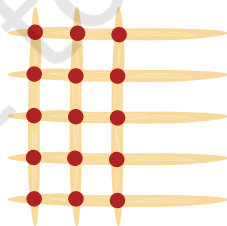
| | | | | |
|---|---|---|---|---|
| 1 | × | 5 | = | 5 |
| 2 | × | 5 | = | 10 |
| 3 | × | 5 | = | 15 |
| 4 | × | 5 | = | |
| 5 | × | 5 | = | |
| 6 | × | 5 | = | |
| 7 | × | 5 | = | |
| 8 | × | 5 | = | |
| 9 | × | 5 | = | |

Complete the times-5 table using sticks

Make times-6 to times-10 tables using the sticks method shown above.

## Multiplication Tables

| | | | | |
|---|---|---|---|---|
| 1 × 1 = 1 | 1 × 2 = 2 | 1 × 3 = 3 | 1 × 4 = 4 | 1 × 5 = 5 |
| 2 × 1 = 2 | 2 × 2 = 4 | 2 × 3 = 6 | 2 × 4 = 8 | 2 × 5 = 10 |
| 3 × 1 = 3 | 3 × 2 = 6 | 3 × 3 = 9 | 3 × 4 = 12 | 3 × 5 = 15 |
| 4 × 1 = 4 | 4 × 2 = 8 | 4 × 3 = 12 | 4 × 4 = 16 | 4 × 5 = 20 |
| 5 × 1 = 5 | 5 × 2 = 10 | 5 × 3 = 15 | 5 × 4 = 20 | 5 × 5 = 25 |
| 6 × 1 = 6 | 6 × 2 = 12 | 6 × 3 = 18 | 6 × 4 = 24 | 6 × 5 = 30 |
| 7 × 1 = 7 | 7 × 2 = 14 | 7 × 3 = 21 | 7 × 4 = 28 | 7 × 5 = 35 |
| 8 × 1 = 8 | 8 × 2 = 16 | 8 × 3 = 24 | 8 × 4 = 32 | 8 × 5 = 40 |
| 9 × 1 = 9 | 9 × 2 = 18 | 9 × 3 = 27 | 9 × 4 = 36 | 9 × 5 = 45 |
| 10 × 1 = 10 | 10 × 2 = 20 | 10 × 3 = 30 | 10 × 4 = 40 | 10 × 5 = 50 |

| | | | | |
|---|---|---|---|---|
| 1 × 6 = 6 | 1 × 7 = 7 | 1 × 8 = 8 | 1 × 9 = 9 | 1 × 10 = 10 |
| 2 × 6 = 12 | 2 × 7 = 14 | 2 × 8 = 16 | 2 × 9 = 18 | 2 × 10 = 20 |
| 3 × 6 = 18 | 3 × 7 = 21 | 3 × 8 = 24 | 3 × 9 = 27 | 3 × 10 = 30 |
| 4 × 6 = 24 | 4 × 7 = 28 | 4 × 8 = 32 | 4 × 9 = 36 | 4 × 10 = 40 |
| 5 × 6 = 30 | 5 × 7 = 35 | 5 × 8 = 40 | 5 × 9 = 45 | 5 × 10 = 50 |
| 6 × 6 = 36 | 6 × 7 = 42 | 6 × 8 = 48 | 6 × 9 = 54 | 6 × 10 = 60 |
| 7 × 6 = 42 | 7 × 7 = 49 | 7 × 8 = 56 | 7 × 9 = 63 | 7 × 10 = 70 |
| 8 × 6 = 48 | 8 × 7 = 56 | 8 × 8 = 64 | 8 × 9 = 72 | 8 × 10 = 80 |
| 9 × 6 = 54 | 9 × 7 = 63 | 9 × 8 = 72 | 9 × 9 = 81 | 9 × 10 = 90 |
| 10 × 6 = 60 | 10 × 7 = 70 | 10 × 8 = 80 | 10 × 9 = 90 | 10 × 10 = 100 |

## Seeing Patterns in Multiplication Tables

Look at the times-5 table. What patterns do you see?

Guess what will be the last digits of 11 × 5 and 12 × 5.

Give 3 examples of numbers that when taken 5 times gives an answer ending with

 (i) 0 ........  ........  ........

(ii) 5 ........  ........  ........

Without finding the answer, can you tell the last digits of 18 × 5, 23 × 5, 32 × 5, 50 × 5.

Look at the times tables of 2, 3, 5. They have a relation between them. Can you see it?

| | | |
|---|---|---|
| 1 × 2 = ②  | 1 × 3 = ③ | 1 × 5 = 5 |
| 2 × 2 = 4 | 2 × 3 = 6 | 2 × 5 = 10 |
| 3 × 2 = 6 | 3 × 3 = 9 | 3 × 5 = 15 |
| 4 × 2 = 8 | 4 × 3 = 12 | 4 × 5 = 20 |

Is there a relation between the two circled numbers and the boxed number? Does this happen for the next rows also?

Can you find other examples of two tables adding up to a third table?

## Let us Do

1. Draw pictures for each of the following problems in your notebook. Use counting, number line jumps or any other method to solve the problems.

   a. There are 5 jars with 4 cookies in each jar. How many cookies are there?

   b. An *idli* vessel contains 6 *idli* plates. In each plate we can make 4 idlis. How many *idlis* can be cooked in one go?

   c. 30 cookies are to be distributed among 5 children equally. How many cookies will each child get?

   d. Roro starts from 0 and takes 6 jumps to reach 18. All his jumps are of the same size. What is the size of Roro's jump?

   e. Toto does not take jumps of the same size and still reaches 18 in 6 jumps. How did Toto jump?

   f. Suma saves ₹ 8 every day. After how many days will she have ₹ 56?

   g. Mary has 63 sea shells. She gives 7 sea shells to each of her 5 friends. How many does she have left?

2. Solve the following problems. Try constructing a word problem.

   a. 4 × 9          b. 32 ÷ 8          c. 6 × 7          d. 45 ÷ 5

> Bappa, I am making a cardboard rath. I need to make spokes for 20 wheels of the rath. Each wheel needs 5 spokes.
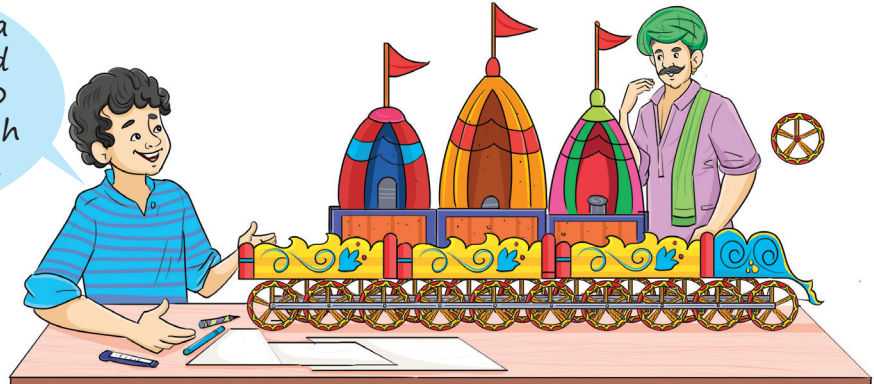
Help Bhim! Bhim will need ........ spokes.

Think and share with your friends how you found the answer.

Let us see how Bhim did it.

10 wheels will need:
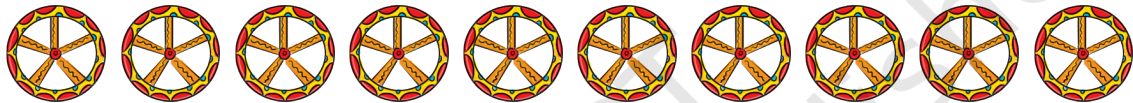


5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5

= 10 × 5 = ........ spokes.

Another 10 wheels will need ........ × ........ = ........ spokes.

So, the total number of spokes needed is  ........ + ........ = ........ spokes.

## Try these

30 × 5 = ..........

(Hint: You can find this by counting the spokes in 30 wheels.)

First 10 wheels will have ........ spokes

Next 10 wheels will have ........ spokes

Next 10 wheels will have ........ spokes

Total     = ........ spokes

30 × 5   = ........ spokes

**Describe the patterns you see here**

Complete the following

| | | |
|---|---|---|
| 40 × 5 = .......... | 70 × 5 = .......... | 100 × 5 = .......... |
| 50 × 5 = .......... | 80 × 5 = .......... | |
| 60 × 5 = .......... | 90 × 5 = .......... | |

Raksha Bandhan

Dhara collected 45 spokes. How many wheels can she make?

With 10 spokes, I can make 2 wheels, 45 – 10 = 35. With another 10 spokes, I can make 2 more wheels, 35 – 10 = 25.

Does Dhara have enough spokes to make 10 wheels?

How many wheels can you make with 60 spokes?

## Let us Do

1. A spider has 8 legs.

   5 spiders will have ........ legs.

   10 spiders will have ........ legs.

   15 spiders will have ........ legs.

2. How many legs will 23 spiders have?

3. A group of spiders have 32 legs. How many spiders are there in the group?

4. Here is a 3-wheeled auto rickshaw. How many wheels are there in

   a. 18 auto rickshaws?
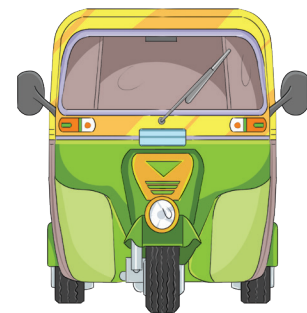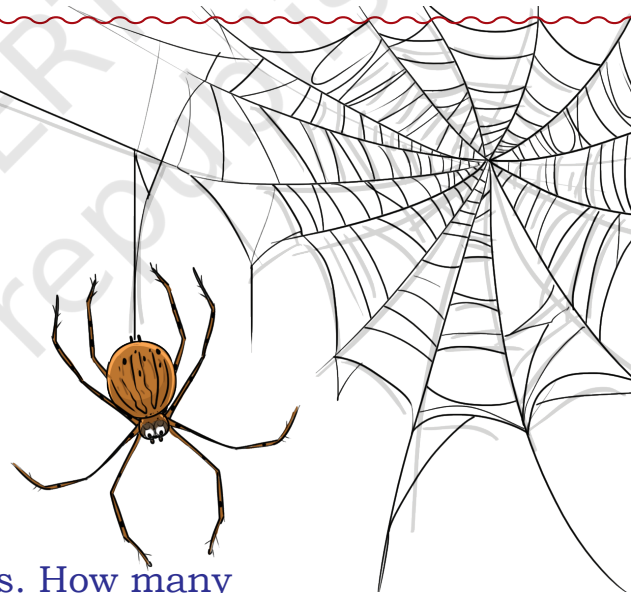
   b. 34 auto rickshaws?

5. Auto rickshaws in a garage have a total of 36 wheels. How many auto rickshaws are there in the garage?

6. There is a line of 55 ants (one ant has 6 legs). What is the total number of legs in the line?

7. Micky, the mouse, can see 48 legs of cows in the shed. How many cows are there in the shed?

8. Karry, the crow, can see 24 horns of cows in the shed. What is the total number of legs in the shed?

## Let us Think

1. A frog is at 0. It takes jumps of only 7. What would be the largest number that the frog will reach before crossing 50?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

2. A frog wants to jump backwards from 50. It continues to take jumps of 7. What is the number after which it is not possible for the frog to make a jump of 7?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

3. What numbers should the frog start from to reach 0, taking jumps of 7 each time? What do you observe?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

Raksha Bandhan

## Puri Beach

1. One wall-hanging costs ₹ 42. How much do two wall hangings cost?
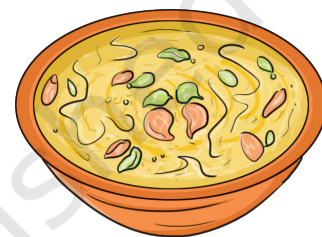
   Two wall hangings cost ₹ 42 + ₹ 42 = 2 × ₹ 42

   The cost of the two wall hangings: ..........

2. One *Rabdi* cup costs ₹ 75. Preeti buys 5 cups of *Rabdi*. She has her mother's purse which has only ₹ 100 notes.

   How many ₹ 100 notes should she give the shopkeeper? How much will the shopkeeper then return to Preeti?

   What is the total cost of 5 cups of *Rabdi*?

## Sea Shells

Dhruv lives near the sea. He thought of making a necklace for each of his three friends. He looked for sea-shells the whole day. He collected 112 sea-shells by the evening. Now, he has many different coloured and shiny shells.

I will make a necklace of 28 shells. Will these shells be enough to make necklaces for my three friends?

He took 28 shells for one necklace.

$$112 - 28 = 84$$

Now he was left with 84 shells. Again he took 28 more shells for the second necklace.

- How many shells are left now?
- Then he took shells for the third necklace.
- So he was left with ........... shells.
- Are the shells enough for making necklaces for all his friends? ...........
- How many necklaces can Dhruv make from 112 shells? ...........

## Try these

1. Kannu makes a necklace of 17 sea-shells. How many such necklaces can be made using 100 sea-shells?

2. While searching for sea-shells, Dhruv also finds 127 shiny pebbles. He distributes them equally to his 3 friends. How many will each get?

3. Preeti has a ₹ 500 note and wants to exchange it for lower denomination notes. How many notes will she get if she wants—
   (i) All 50 rupees notes?
   (ii) All 20 rupees notes?
   (iii) All 10 rupees notes?
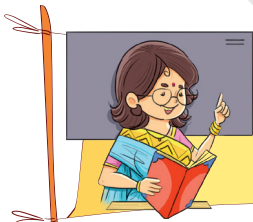
**Teacher's Note:** Encourage children to solve questions based on division with large numbers, for which they do not know multiplication tables, using repeated subtraction. More problems based on real life contexts can be given.

There are ten number cards from 1–10. There are five sealed envelopes. Each has two cards On the top of each envelope the multiplication of the numbers contained in it is written.

The 5th envelope contains the cards 5 and 9. The number 5 × 9 = 45 is written on the envelope.

| 1 | 2 | 3 | 4 | 5 |

| 6 | 7 | 8 | 9 | 10 |

7

18

32

20

5  9

45
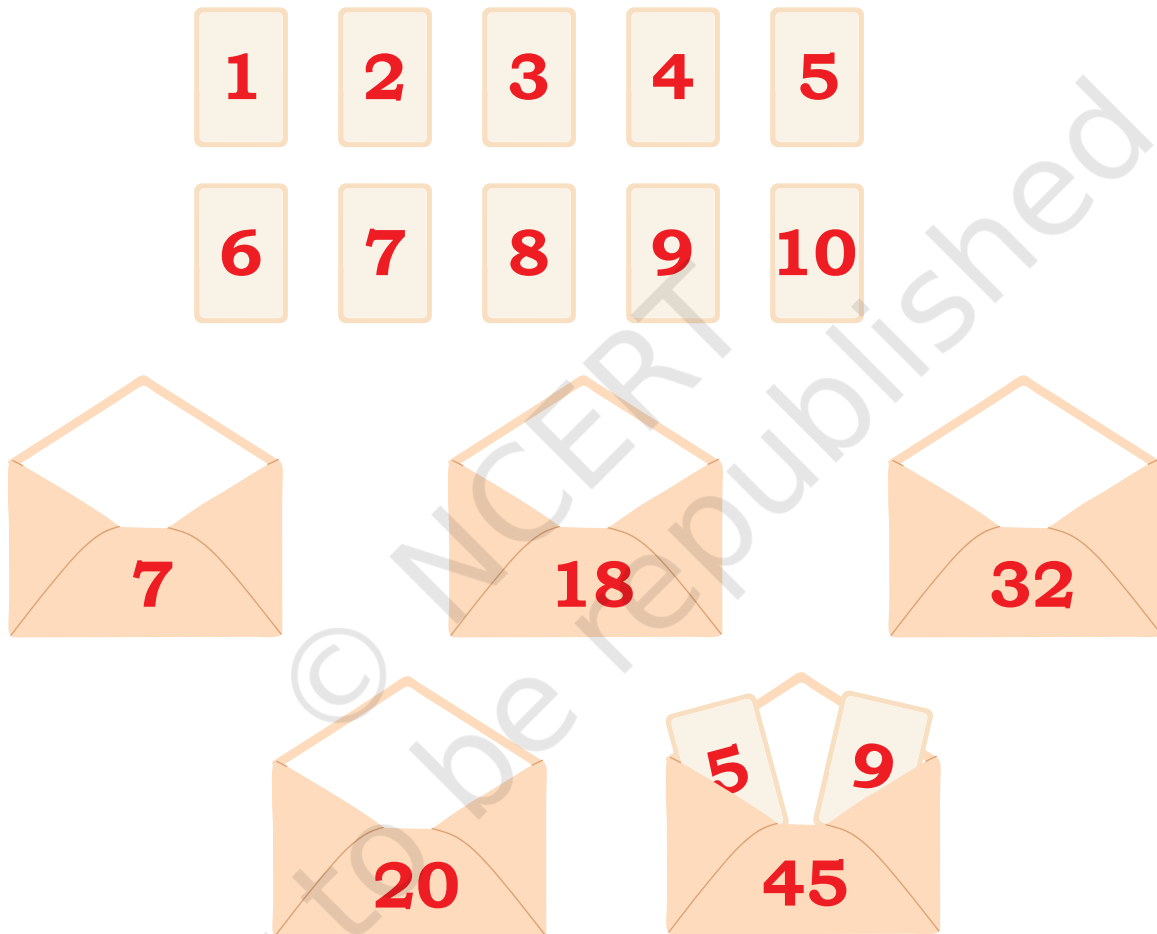
Identify the number cards inside each of the envelopes.