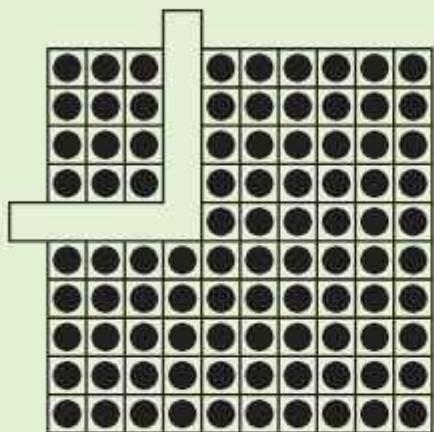


Elementary Mathematics

Class Two

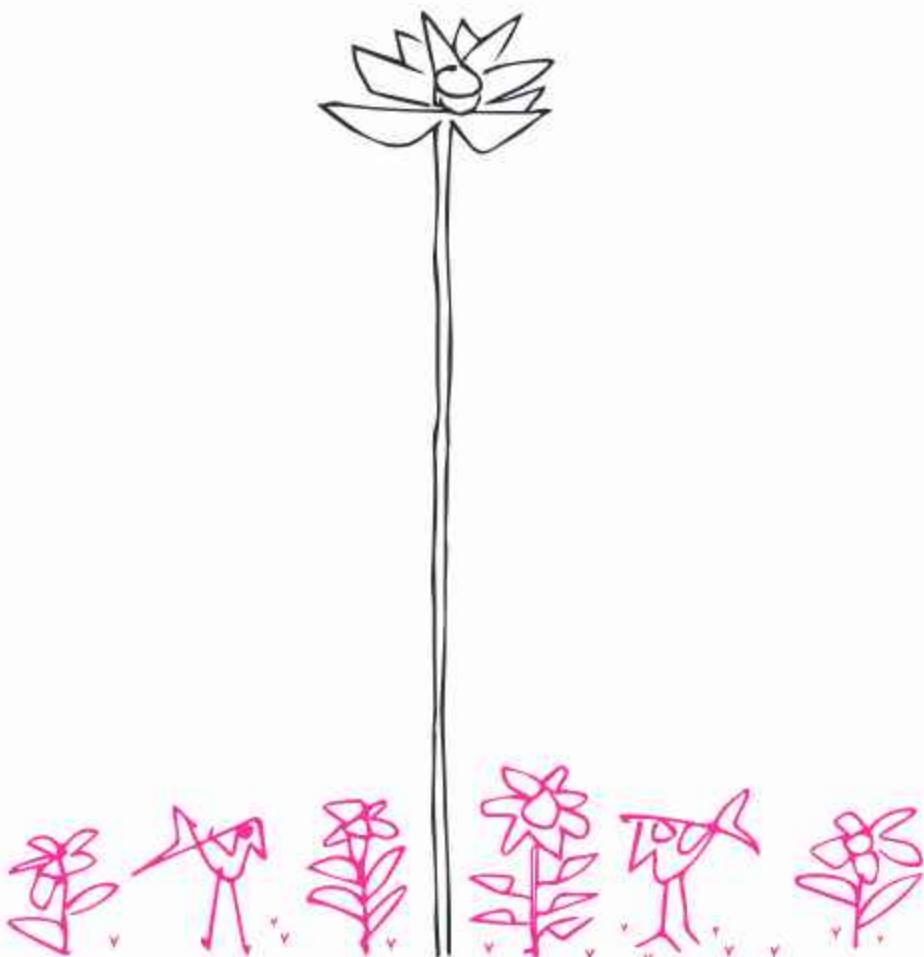


National Curriculum and Textbook Board, Bangladesh

Prescribed by the National Curriculum and Textbook Board
as a textbook for class two from the academic year 2024

Elementary Mathematics

CLASS TWO



National Curriculum and Textbook Board, Bangladesh

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Preface

Primary level constructs the foundation of education. A set of well-defined targets and properly planned primary education provide strengths to the entire education system. Keeping this in mind, the primary level has been given supreme importance in the Education Policy 2010. Increasing the span and inclusiveness of the primary level, as the developed countries of the world, have been emphasised. Special attention has been given to ensure that no child's access to education is hindered by social and economic status, religion, ethnicity, or gender identity.

The National Curriculum and Textbook Board (NCTB) has implemented an integrated curriculum to update primary education. While this curriculum trails the pedagogy and the curriculum of developed countries, it also adopts traditional teaching-learning values of Bangladesh at the same time. This has enabled the education to be more life-oriented and productive. In the context of globalisation, the mental health of the children has also been specially considered in this curriculum.

Textbook is the most important component of curriculum implementation. NCTB has always borne that in mind while designing textbooks for all levels and classes including primary level. Curriculum goals and objectives have been prioritised in the writing and editing of each book. A keen eye has been kept on the diverse curiosity and capacity of the child's mind. Special importance has been given in designing the curriculum and the textbooks to make teaching-learning interactive and enjoyable. It is hoped that each book will help in the balanced psycho-physical development of children through educational activities. It will support in acquiring the required skills, adaptability, patriotism and moral values at the same time.

Elementary mathematics is a compulsory subject. Explanation, examples and pictures are used to present the content in an easy and simple way for the children. The "Let us do" activities have been incorporated along with examples to create interest among learners and make learning easier. Moreover, the contents of the textbook have been rearranged following the order of easy to hard. There is enough scope for practice in this textbook.

Special thanks to the specialists and teachers who worked intensively in writing, editing and revising the textbook. Thanks to those also who have made the textbook attractive to children through its design and illustration. This textbook has been revised to address the need in the changed context of 2024. Due to time constraints, some errors may still exist. Any constructive advice and guidance from the audience will be considered with due importance.

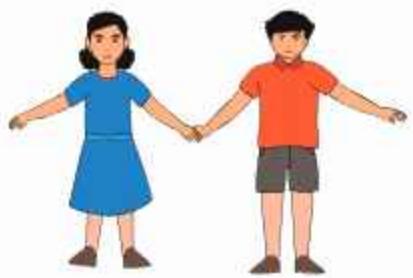
At the end, I wish every success of the learners for whom the book has been produced.

October 2024

Professor Dr. A K M Reazul Hassan

Chairman

National Curriculum & Textbook Board, Bangladesh



Explanation of symbol for characters

1. Characters: In the textbook two young learners Tuli and Rafi are making conversation with each other. Through their discussions and opinions the concept of Mathematics has been made clear.



2. In the lessons a few symbols are used to show the steps.



Key question: Let us solve the problem together.



Activity: Let us discuss with friends and teachers and solve the problem.



Exercise: Let us think logically and solve. If needed, let us discuss with friends and take help from the teacher.

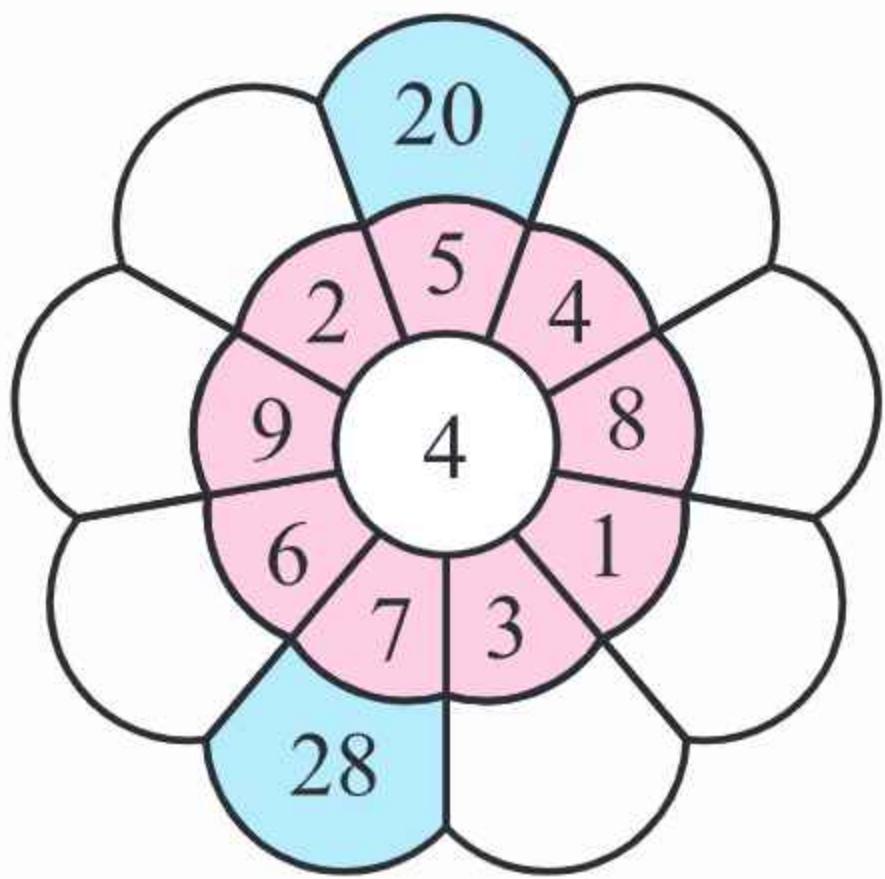


Let us do: Let us solve it by ourselves.



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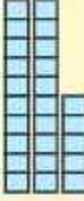
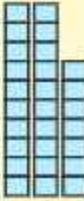
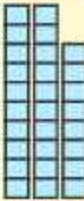
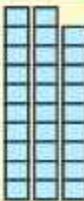
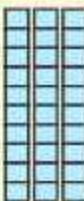


Chapter One

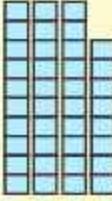
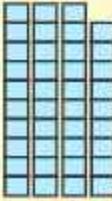
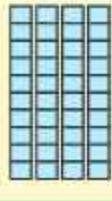
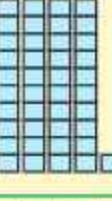
Numbers and Place Values**Read numbers and write in words (21 to 100)**

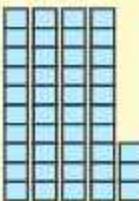
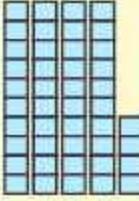
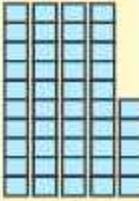
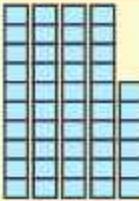
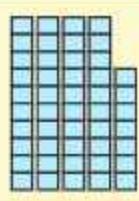
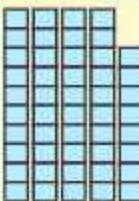
Let us count the blocks and read the number and write them in words.

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	21	twenty one	twenty one
	22	twenty two	
	23	twenty three	
	24	twenty four	

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	25	twenty five	
	26	twenty six	
	27	twenty seven	
	28	twenty eight	
	29	twenty nine	
	30	thirty	

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	31	thirty one	
	32	thirty two	
	33	thirty three	
	34	thirty four	
	35	thirty five	
	36	thirty six	

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	37	thirty seven	
	38	thirty eight	
	39	thirty nine	
	40	forty	
	41	forty one	
	42	forty two	

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	43	forty three	
	44	forty four	
	45	forty five	
	46	forty six	
	47	forty seven	
	48	forty eight	

Let's count	Let's read (in numbers)	Let's read (in words)	Let's write (in words)
	49	forty nine	
	50	fifty	

Read the numbers from 51 to 100 and write them in words.

51	Fifty one	61	Sixty one	71	Seventy one	81	Eighty one	91	Ninety one
52	Fifty two	62	Sixty two	72	Seventy two	82	Eighty two	92	Ninety two
53	Fifty three	63	Sixty three	73	Seventy three	83	Eighty three	93	Ninety three
54	Fifty four	64	Sixty four	74	Seventy four	84	Eighty four	94	Ninety four
55	Fifty five	65	Sixty five	75	Seventy five	85	Eighty five	95	Ninety five
56	Fifty six	66	Sixty six	76	Seventy six	86	Eighty six	96	Ninety six
57	Fifty seven	67	Sixty seven	77	Seventy seven	87	Eighty seven	97	Ninety seven
58	Fifty eight	68	Sixty eight	78	Seventy eight	88	Eighty eight	98	Ninety eight
59	Fifty nine	69	Sixty nine	79	Seventy nine	89	Eighty nine	99	Ninety nine
60	Sixty	70	Seventy	80	Eighty	90	Ninety	100	One hundred

Let us do

- Let us read and write the following numbers in words.
24, 47, 32, 59, 87, 75, 93, 89, 86, 99, 100
- Let us write the number of members of 5 joint families in a village numerically in the table below.

Family-1	Family-2	Family-3	Family-4	Family-5
16

- Let us count the number of different types of fruit trees in a house and write the numbers in the table below

Mango tree	Jackfruit Tree	Guava tree	Coconut tree	Black-berry tree	Betel nut Tree
...

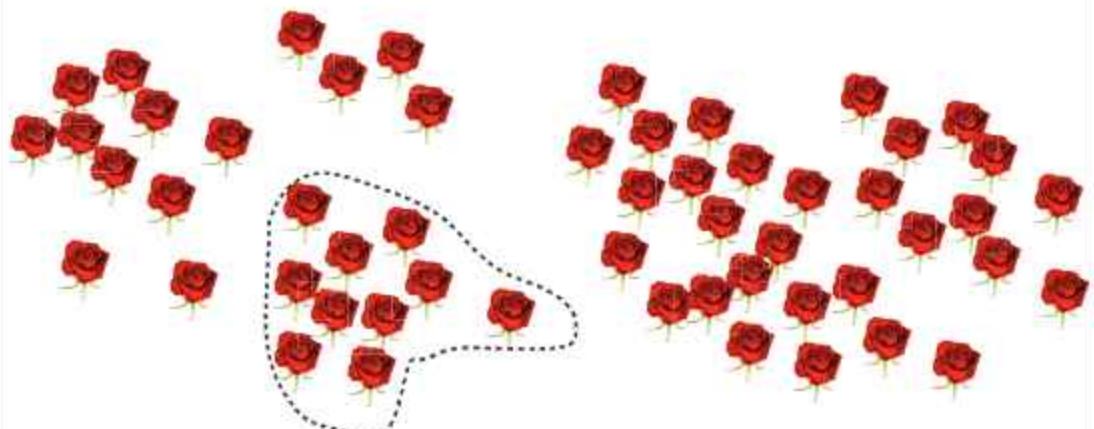
- Let us count the number of boys and girls in a school from class one to class five and write in words in the following table.

Class	Boys	Girls
One
Two
Three
Four
Five

Counting



How many flowers are there in the picture?



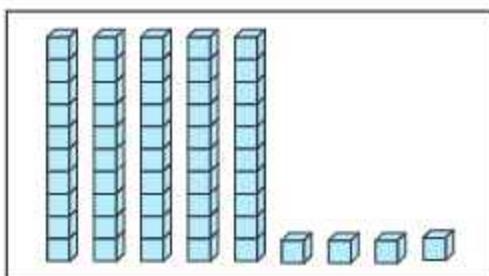
How can you easily count so many flowers?

Do you remember how we formed groups of 10 and counted in the 1st grade?

Let us form groups of 10 and count.



Let us count using blocks instead of flowers

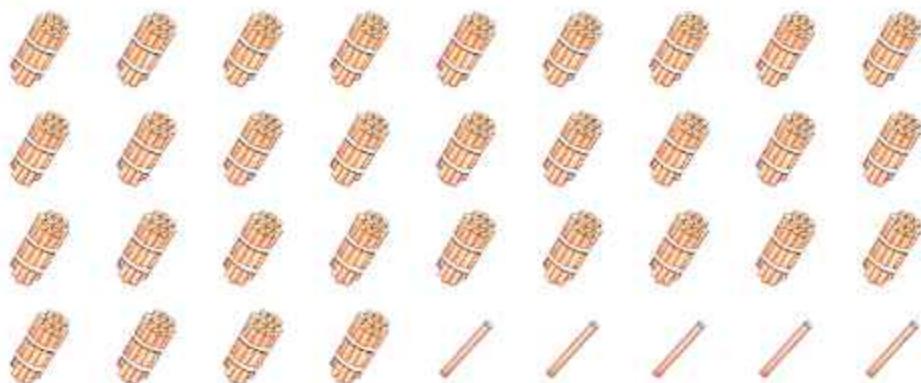


There are 5 groups of 10 blocks and 4 blocks of 1.

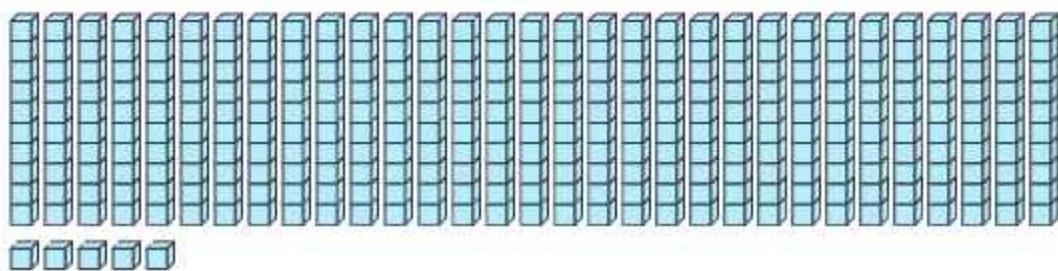
The number is fifty-four and we can write 54 in digits.



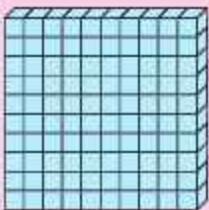
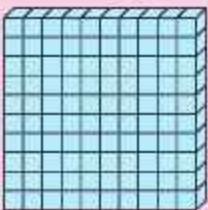
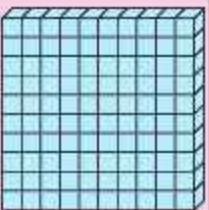
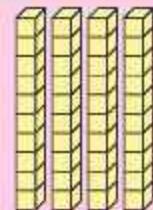
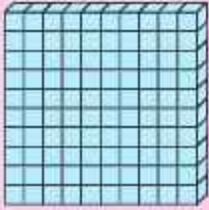
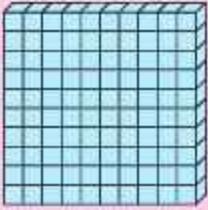
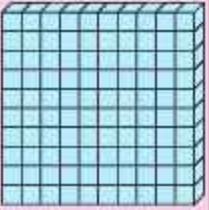
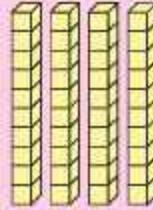
How many sticks are there in the box below?



Let us count with blocks instead of sticks.



Let us count by creating groups of 100 and 10.

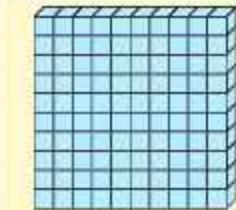
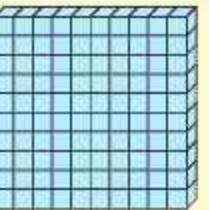
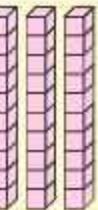
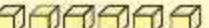
				
Three groups of hundreds. three hundred		Four groups of tens. forty		Five blocks of 1 five
				
hundreds		tens	ones	
3		4	5	

The number is three hundred and forty five.

The number is 345 in digits.

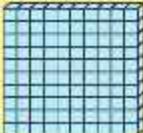
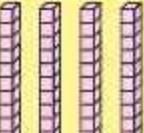
Let us write the total number of sticks in digits:

- Let us count the number of blocks and write them in digits.

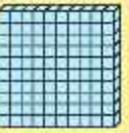
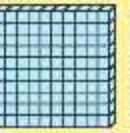
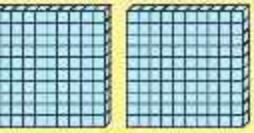
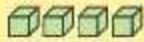
			
hundreds	tens	ones	
The number is: _____			

Let us do

Let us count the number of blocks and write in digits.

1.			
	hundreds	tens	ones

The number is: _____

2.					
	hundreds		tens		ones

The number is: _____

3.			
	hundreds	tens	ones

The number is: _____

What is the number?

how many (hundred)	how many (ten)	how many (one)
100	10	1
100	10	1
100	10	1
100	10	1
100	10	1
100		
hundreds	tens	ones

The number is: _____

Let us do

1. Let us count the number of cards of 100, 10 and 1 in the following box.

100	10	1	100	10
10	1	100	10	100
100	10	1	100	
100	1	10	1	

Let us sort the number cards and write in digits.

100	10	1
100	10	1
100	10	1
100	100	10
100	100	10

2. Let us write in digits:



Let us write the total amount in digits =

Let us read the following numbers and write the numbers from 101 to 500 and from 501 to 1000 separately.

112, 898, 304, 505, 712, 925, 134, 198, 1000, 444, 382, 750, 600, 333,
101, 590

Numbers from 101 to 500:

Numbers from 101 to 500:

Let us read and write in digits.

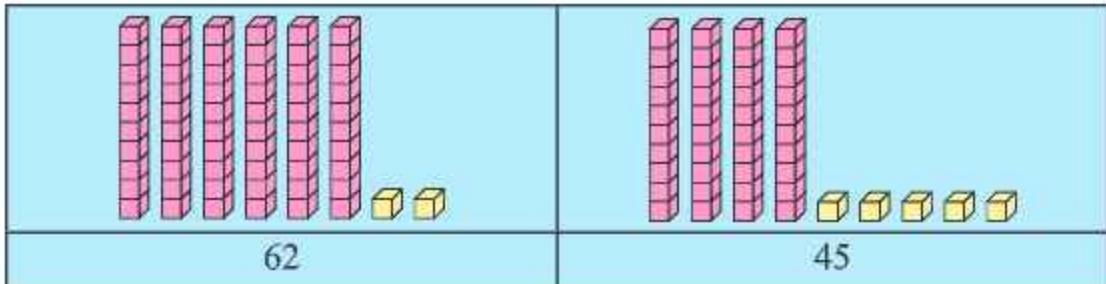
Read	Write in digit
(1) One hundred and ten	
(2) Three hundred and fifty nine	
(3) Five hundred and eighty five	
(4) Six hundred and seventy two	
(5) Eight hundred and fifty	
(6) Nine hundred and eight	

Comparison of Numbers



Which number is greater, 62 or 45?

Let us sort the two numbers in blocks of tens and ones



Let us first compare the groups of ten.

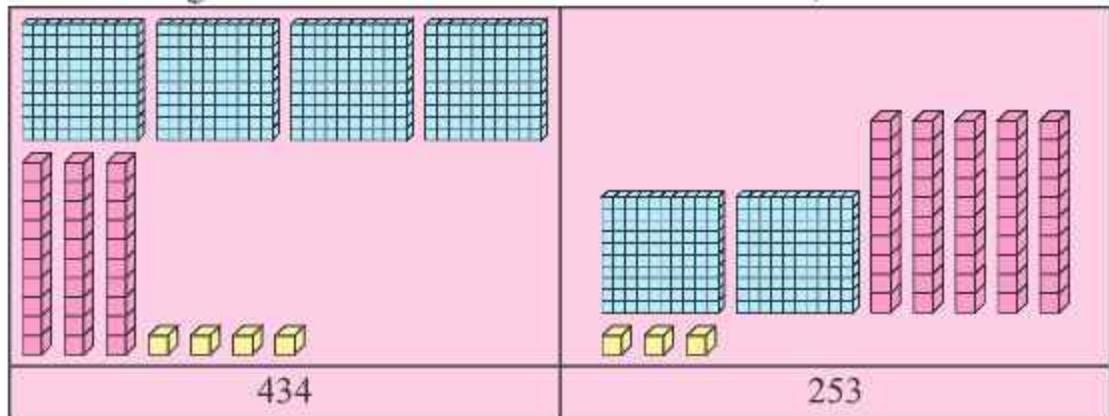
In 62 there are 6 groups of tens and in 45 there are 4 groups of tens. So, 62 is greater.





Which number is smaller, 434 or 253?

Let us arrange the two numbers in blocks of hundreds, tens and ones.



Let us first compare the groups of hundreds.

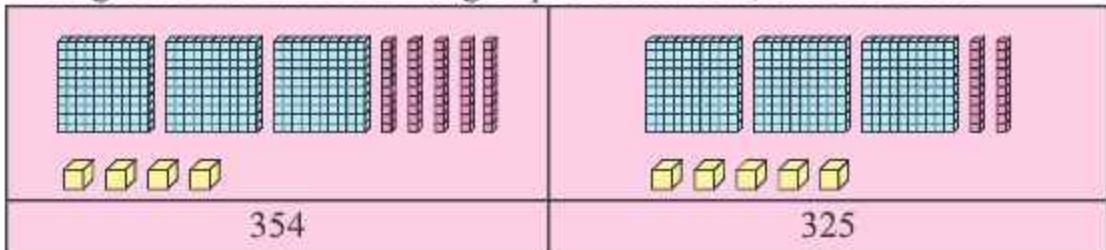
There are 4 groups of hundreds in 434 and 2 groups of hundreds in 253. So, 253 is smaller.





Let us know which number is larger, 354 or 325.

Arrange the two numbers into groups of hundreds, tens and ones.



If the number of groups of hundreds is the same, let us compare the groups of tens.



Again if the number of groups of tens is the same, let us compare the blocks of ones.



Since the number of groups of hundreds is the same, let us compare the number of groups of tens. Between 354 and 325 there are 3 groups of tens more in 354.



So the larger number is 354.

Let us do

1. Let us circle the larger number in the box.

85	57	524	348	634	670
423	428	823	540	901	972

2. Let us circle the small number in the box.

75	65	423	337	557	642
876	706	678	948	785	639

Place Value



How many sticks are there in the picture?

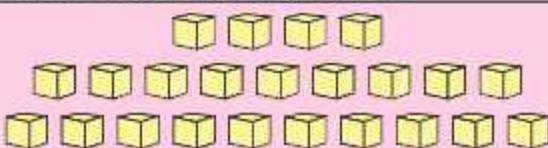


Let's count 10 sticks and make a bundle.

 bundle 1 ten	 loose sticks 4 ones
--	--

Let us write in place value [1 ten and 4 ones]

How many blocks are there in the picture?



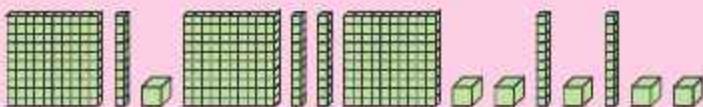
 2 tens	 3 one
---	---

2 tens 3

Let us write in place value [2 tens and 3 ones]



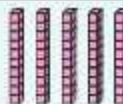
How many groups of hundreds, tens and ones are there in the picture?



$$3 \text{ groups of hundreds} = 300$$



$$5 \text{ groups of tens} = 50$$



$$6 \text{ blocks of one} = 6$$

The number is: 3 hundreds 5 tens and 6 ones.

= Three hundred and fifty-six

= 356

▲ How many thousands, hundreds, tens and ones are there below?

1000

100

100

1000

100

100

10

10

1

1

10

10

thousand

hundred

ten

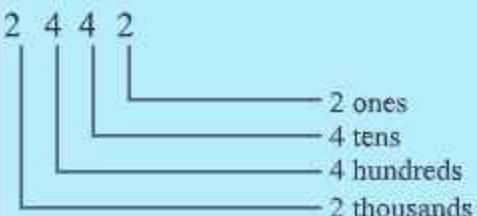
one

The number is



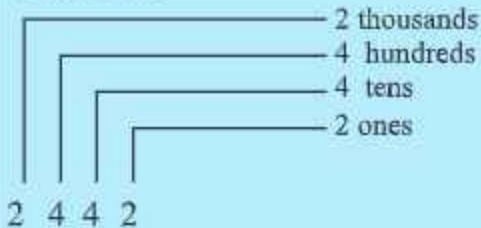
Let's explain the place value of each digit of 2442.

Place value



2 thousands 4 hundreds 4 tens and 2 ones = 2 thousand 4 hundred and 42

Place value



2 thousands 4 hundreds 4 tens and 2 ones = 2 thousand 4 hundred and 42

1. Let us write the place value from the picture.

3 tens	5 ones
place value	place value

.....tens ones
place value	place value

2. Let us write the place value in digits and numbers from the picture.

.... tensones
the number	

.... tens ones
the number	

.... tensones
the number	

- 3 Let us write the place value of each digit of the numbers 47, 352 and 1000

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	1 thousand = 1000																				
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Let us do

- 1 Fill in the blanks.

$$(1) \boxed{56} = \boxed{5} \text{ tens } \quad \boxed{6} \text{ ones}$$

$$(2) \boxed{83} = \boxed{} \text{ tens } \quad \boxed{} \text{ ones}$$

$$(3) \boxed{120} = \boxed{} \text{ hundreds } \quad \boxed{} \text{ tens } \quad \boxed{} \text{ ones}$$

$$(4) \boxed{467} = \boxed{} \text{ hundreds } \quad \boxed{} \text{ tens } \quad \boxed{} \text{ ones}$$

$$(5) \boxed{976} = \boxed{} \text{ hundreds } \quad \boxed{} \text{ tens } \quad \boxed{} \text{ ones}$$

$$(6) \boxed{1000} = \boxed{} \text{ thousands } \quad \boxed{} \text{ hundreds } \quad \boxed{} \text{ tens } \quad \boxed{} \text{ ones}$$

2 Let us fill in the blanks.

(1) =

(2) =

(3) =

(4) =

(5) =

(6) =

3. Let us write the place value of each digit of the following numbers.

24, 56, 73, 98, 105, 328, 639, 840, 957, 1000

Comparison of Numbers (Using Place Values)

Comparison of Two Numbers



Which one is larger, 460 or 630?



How do we compare?



Earlier we learnt to compare numbers using blocks of hundreds or tens. Now, we will compare using place value.



Here, we will compare the place value of hundreds in two numbers.

1 Let us compare the following numbers 460 and 630



Here, 6 is larger than 4 in hundreds place. So, 630 is larger than 460.



So 460 is smaller and 630 is larger.

Let us compare the following two numbers 562 and 548



Here we will first compare the place values of the digit in hundreds, tens, and ones respectively.



Here the hundreds digits of the two numbers are the same (562 and 548).



Let us compare the tens digits.
6 is larger than 4.



So, 562 is larger than 548.



So 562 is larger and 548 is smaller.

Let us do

1. Let's compare the numbers below.

- (1) 128, 235
- (2) 248, 226
- (3) 496, 469
- (4) 692, 594
- (5) 872, 858
- (6) 1000, 998

2. Let us compare the following numbers and sort them in ascending and descending order.

Number	Ascending order	Descending order
(1) 430, 428		
(2) 678, 675		
(3) 827, 948		
(4) 985, 950		
(5) 744, 722		

- ▲ Let us arrange the following numbers in ascending order.
232, 223, 239

Let us compare the digits in the hundreds place. The digits in hundreds place are equal. Now let us compare the digits in the tens place. The digits of the tens place of 232 and 239 are the same.

The place value of tens in 223 is 2. Therefore, 223 is smaller than the other two numbers 232, 239.

Now, let us compare 232 and 239.

Here 9 is in the ones place of 239. 2 is in the ones place of 232. Since 9 is greater than 2, 239 is the greater number. So, 239 is the largest number.

So, 239 is the largest number.

Then from smallest to largest: 223, 232, 239.

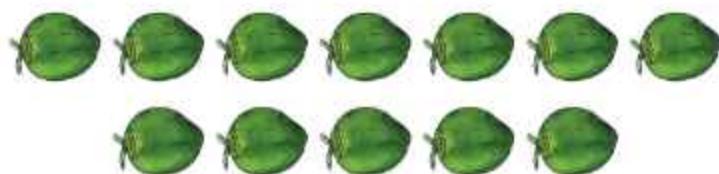
- Let us compare the following numbers and arrange them in ascending and descending order.

Number	Ascending order	Descending order
(1) 432, 328, 540		
(2) 529, 517, 549		
(3) 407, 603, 330		
(4) 729, 720, 726		
(5) 1000, 780, 949		

Even-odd Numbers and Number Patterns



Let us take 2 items at a time and circle them.

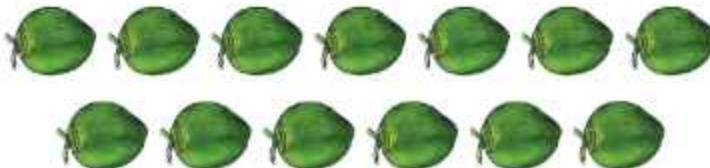


What do we call a group of twos?

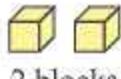


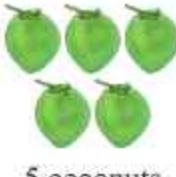
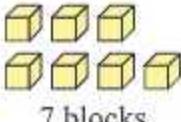
I think we can call it a pair.

▲ Let us take 2 items at a time and circle them in the following picture.

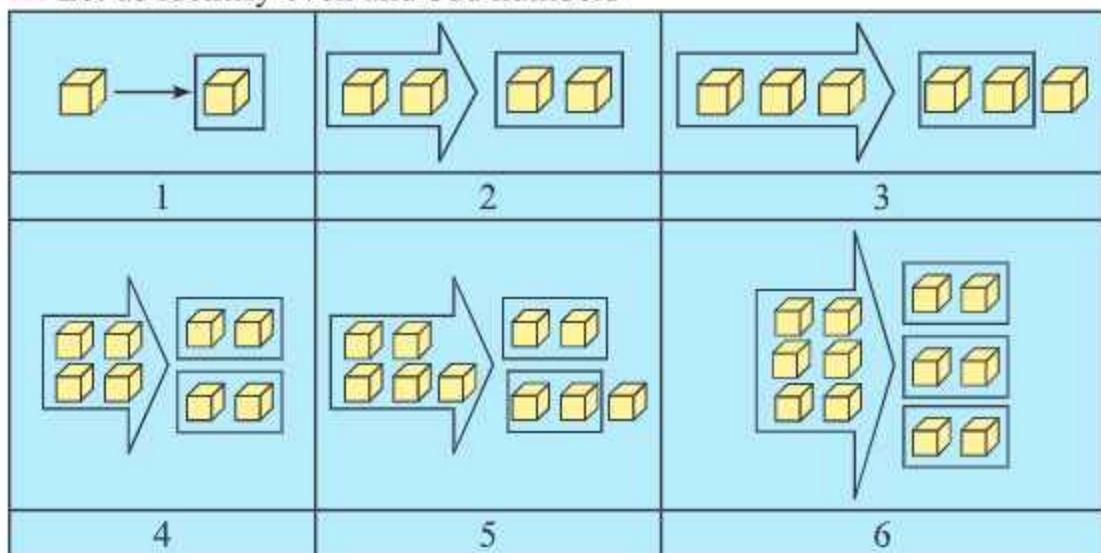


Concept of Even and Odd Number

picture	how much	
 2 ear rings	1 pair of ear rings	even
 2 pigeons	1 pair of pigeons	even
 2 coconuts	1 pair of coconuts	even
 2 socks	1 pair of socks	even
 2 blocks	1 pair of blocks	even

picture	how much	
 3 ear rings	1 pair and 1 ear rings	odd
 4 pigeons	2 pairs of pigeons	even
 5 coconuts	2 pairs and 1 coconuts	odd
 6 socks	3 pairs of socks	even
 7 blocks	3 pairs and 1 block	odd

Let us identify even and odd numbers



I have seen up to 6. 2, 4 and 6 can be paired. But 1, 3 and 5 cannot be paired.



In this way which other numbers can be paired?

Which other numbers can form pairs and which cannot? Let us write in the following table.

Numbers that form pairs	2, 4, 6, 8,
Numbers that do not form pairs	1, 3, 5, 7,

In the table above 2, 4, 6, 8..... are even numbers and this is the pattern of even numbers and 1, 3, 5, 7 are odd numbers and this is the pattern of odd numbers.

Let us identify even and odd numbers from 1 to 50.

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)



Circled numbers in the table above are the even numbers.



So, the uncircled numbers will be odd numbers.

So, what about even and odd numbers?



Even numbers end with 2, 4, 6, 8 or 0.



And odd numbers have 1, 3, 5, 7 or 9 at the end.

Therefore, we can say,

	The number ending with 2, 4, 6, 8 or 0 is an even number or even number pattern.
	The number ending with 1, 3, 5, 7 or 9 is an odd number or odd number pattern.

Let us do

1. Let us write even and odd numbers from the following numbers.
8, 13, 20, 11, 24, 9, 18, 7, 21, 16

Even numbers	:	
Odd numbers	:	

2. Let us write even and odd numbers from the following numbers.
6, 15, 12, 25, 23, 32, 39, 43, 48, 50

Even numbers	:	
Odd numbers	:	

3. Let us write the even numbers larger than 20 and smaller than 40.

4. Let us write the odd numbers larger than 25 and smaller than 50.

Number pattern

What will be the next numbers?

$$(1) \quad 2, 4, 6, 8, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$$



Here the number starts with 2 and increases by 2 in each case.

$$2, \begin{array}{c} 4, \\ \swarrow \\ 2 \end{array}, \begin{array}{c} 6, \\ \swarrow \\ 2 \end{array}, \begin{array}{c} 8, \\ \swarrow \\ 2 \end{array}, 10, \quad 12, \quad 14, \quad \underline{\hspace{1cm}}$$



Here the difference of two consecutive numbers is always 2.

Here, the number pattern is: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, $\underline{\hspace{1cm}}$

$$(2) \quad 15, 20, 25, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$$



Here the number starts with 15 and increases by 5 in each case.

$$15, \begin{array}{c} 20, \\ \swarrow \\ 5 \end{array}, \begin{array}{c} 25, \\ \swarrow \\ 5 \end{array}, \begin{array}{c} 30, \\ \swarrow \\ 5 \end{array}, 35, \quad 40, \quad \underline{\hspace{1cm}}$$



Here the difference of two consecutive numbers is always 5.

Here the number pattern is: 15, 20, 25, 30, 35, 40, 45, 50, 55, $\underline{\hspace{1cm}}$

$$(3) \quad 21, 19, 17, 15, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$$



Here the number starts with 21 and decreases by 2 in each case.

$$21, \begin{array}{c} 19, \\ \swarrow \\ 2 \end{array}, \begin{array}{c} 17, \\ \swarrow \\ 2 \end{array}, \begin{array}{c} 15, \\ \swarrow \\ 2 \end{array}, 13, \quad 11, \quad 9, \quad \underline{\hspace{1cm}}$$



Here the difference of two consecutive numbers is always 2. Here the number pattern is:

Here is the number pattern: 21, 19, 17, 15, 13, 11, 9, $\underline{\hspace{1cm}}$

(4) What is the pattern of the following numbers? Let us write the next numbers.

(1) 1, 3, 5, 7,



Here the number starts with 1 and increases by 2 in each case.

1, $\underbrace{3}_{2}$, $\underbrace{5}_{2}$, $\underbrace{7}_{2}$, 9, 11, 13,



This is an odd number pattern.

(2) 4, 6, 8, 10,



Here the number starts with 4 and increases by 2 each time.

4, $\underbrace{6}_{2}$, $\underbrace{8}_{2}$, $\underbrace{10}_{2}$, 12, 14,



This is an even number pattern.

(5) Let us create a pattern of odd numbers starting with 3 and increasing by 4 in each case.



Here the number starts with 3 and let us add 4 in each case.

3, 7, 11, 15, 19, , , ,

- (6) Let us write the next three digits of the following number pattern and explain the rules of the pattern.

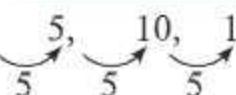
0, 5, 10, 15, 20, ..., ..., ...



Here the pattern starts with 0 and increases by 5 in each case.



Then 5 has been added in each case.

0,  5, 10, 15, 20, 25, 30, 35, _____

The number pattern is: 0, 5, 10, 15, 20, 25, 30, 35

- (7) Let us find the pattern of the following numbers and circle them.

- From 5 to 10 increasing by 1 (done as an example)
- From 48 to 38 decreasing by 2
- From 9 to 24 increasing by 3
- From 50 to 40 decreasing by 5

86	87	9	12	15	18	21	24	45	46
16	18	20	24	65	60	55	50	45	40
36	38	40	42	44	46	48	50	52	54
5	10	48	46	44	42	40	38	20	40
45	50	60	30	35	40	45	50	55	95
10	20	30	5	6	7	8	9	10	12
45	50	12	14	16	18	20	22	80	90
4	25	31	37	40	49	55	10	20	30

Let us do

1. What will be the next numbers?
 - (1) 1, 3, 5, 7, —, —, —
 - (2) 2, 3, 5, 8, 12, —, —, —
 - (3) 40, 42, —, 46, —, 50, —
2. Identify the even-odd pattern of the following numbers and write the next numbers.
 - (i) 16, 18, 20,
 - (ii) 37, 39, 41,
3. Create a pattern of ten odd numbers starting with 47 and decreasing by 2 in each case.
4. Create a pattern of ten even numbers starting with 24 and increasing by 4 in each case.
5. Write the next four digits of the following number pattern and explain the rules of the pattern
 - (1) 3, 6, 9,,,,
 - (2) 15, 13, 11,,,,

Ordinal Number

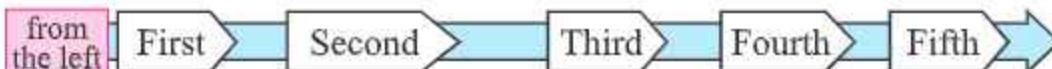
Ordinal Numbers (1st-5th)



How can the position of the following animals be expressed?

Numbers 1, 2, 3 etc. are used to convey the idea of groups of objects. But ordinal numbers are used to indicate relative positions of objects.

Number	1	2	3	4	5
Ordinal Number	First	Second	Third	Fourth	Fifth



1 Let us find the position of the animals using ordinal number.

- Which is the second from the left?
- Which is the first from the right?
- Which is the fifth from the right?
- Which is the fourth from the left?
- Which is the third from the right?



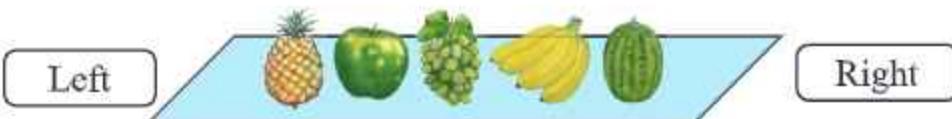
Tuli, where do you sit on the bench in the classroom?

I sit on the 2nd position from the left of the 3rd bench from the front.



1 Now tell, where do you sit on the bench in the classroom?

- 2 Let us say the position of each fruit from the left and from the right.



- 2 Five students are holding their hands.



- (1) Circle four students from the left.
(2) Circle the fourth person from the left.



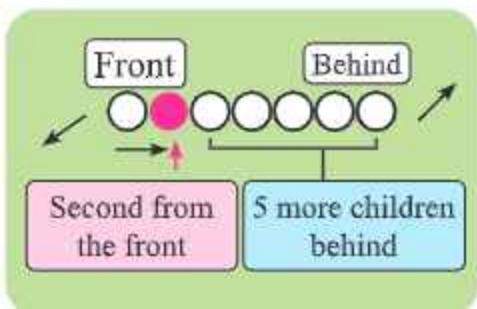
- 3 You have to find Ali from the following 5 children. His friend said, "Ali is at the second seat". Another friend said, "3 children are seated to his right".



- 3 Some children are standing in a line. Savita is second from the front and there are 5 more children behind her. How many children are there in the line?



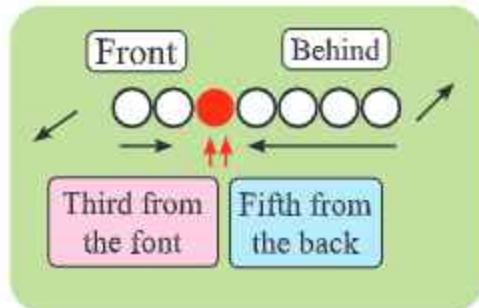
We can solve this easily by drawing a picture.



How do you calculate the number of children?

$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$

- 4 Some children are standing in a line. Raju is third from the front and fifth from the back. How many children are there in the line?



How do you calculate the number of children?

$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$

- 4 Tamim is the third youngest and fourth oldest member in his family. How many members are there in the family?

Ordinal Number (1st-10th)

Number	1	2	3	4	5
Ordinal Number	First	Second	Third	Fourth	Fifth
Short Form	1st	2nd	3rd	4th	5th

Number	6	7	8	9	10
Ordinal Number	Sixth	Seventh	Eighth	Ninth	Tenth
Short Form	6th	7th	8th	9th	10th

5. Ten children are standing in a line. Nasima is at the front and Shanti is at the end. Let us say the positions of these children using ordinal numbers.

Let us say the position of the children using ordinal numbers.

- Who is sixth from the front?
- Who is seventh from the end?
- Who is ninth from the front?
- What is the position of Aleya?

From the front

From the end.....



Each child's position can be expressed in two ways. What is the position of David?

Behind	Shanti
	Raton
	Aleya
	Abdul Karim
	Abdur Rahim
	Tamim
	David
	Sabita
	Ali
Front	



Place seven people from the right in a circle.

Place the seventh person from the right in a circle.



Remember, seven persons and the seventh person are different.

Seven from the right

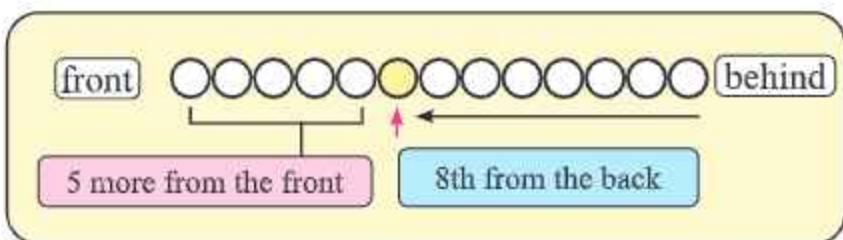


Seventh from the right





In a line Shanti is eighth from the back and 5 more students are in front of Shanti. How many students are there in the line?



Number of students: + =

3

In a line Raju is sixth from the front and third from the back. How many children are there? Solve the problem by drawing.

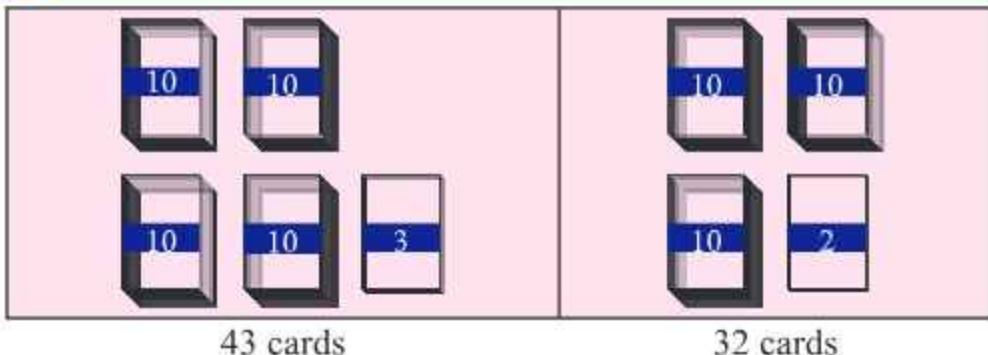
Chapter Two

Addition and Subtraction

Addition (1)



Rafi has 43 cards. Tuli has 32 cards. If they put their cards together, how many cards are there in total?



Let us think about how to put them together. If we put the cards together, can the total number of them be more?

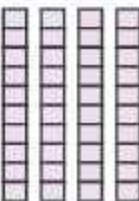
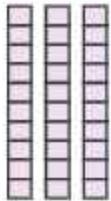
How do we write the calculation of the total number of cards in a mathematical sentence?



The mathematical sentence is

$$43 + 32 = \boxed{}$$



Tens	Ones
	
	
	

The mathematical sentence of the sum of the digits in the ones place is $3+2=5$.

The mathematical sentence of the sum of the digits in the tens place is $4+3=7$

Tens	Ones
4	3
+	2

7	5

Addition starts from the ones place.



How do we add $32+16$?



Have you arranged the numbers according to their place value?

$$\begin{array}{r}
 & 3 & | & 2 \\
 & + & 1 & 6 \\
 \hline
 & 4 & | & 8
 \end{array}$$

Have you added the digits in the ones place first?



 **Let us add**

1. (1)
$$\begin{array}{r} 32 \\ + 30 \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 51 \\ + 14 \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 32 \\ + 22 \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 50 \\ + 20 \\ \hline \end{array}$$

(5)
$$\begin{array}{r} 65 \\ + 13 \\ \hline \end{array}$$

 **2 Let us do the following additions.**

(1) $22 + 36$ (2) $72 + 15$ (3) $71 + 5$

(4) $8 + 60$ (5) $35 + 10$



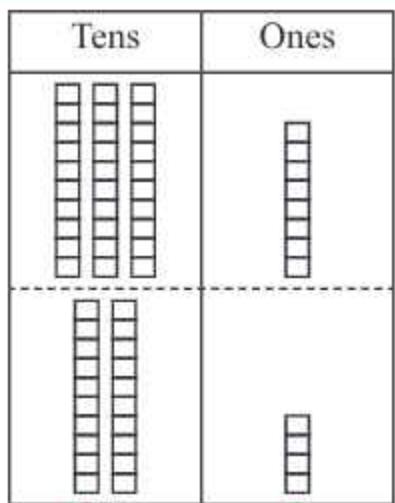
Raju has a bundle of 38 colourful cards. Mina has a bundle of 24 colourful cards. How many colourful cards do they have in total?



- How can we calculate the total number of cards?
- The mathematical sentence of the calculation is

$38 + 24 = \boxed{}$

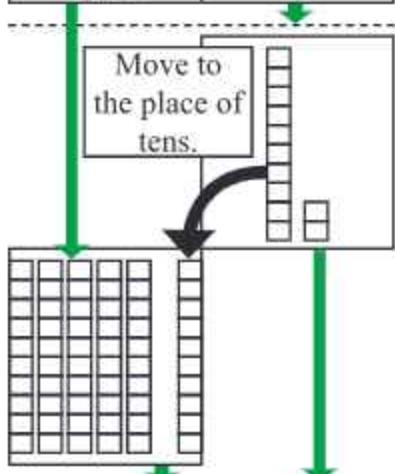
Let us arrange the bundles of cards using blocks.



Let us arrange the two numbers according to their place values.

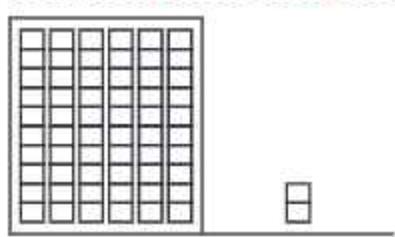


$$\begin{array}{r}
 3 & 8 \\
 + & 2 & 4 \\
 \hline
 \end{array}$$



$$\begin{array}{r}
 3 & 8 \\
 + & 2 & 4 \\
 \hline
 \end{array}$$

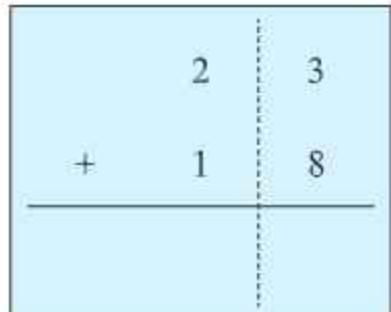
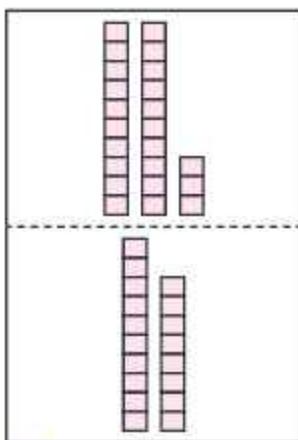
The mathematical sentence of the sum of the two digits in the ones place is $8 + 4 = 12$. 12 means 1 ten and 2 ones. Let us write 2 in the ones place and add 1 with the numbers in the tens place. Let us write $3 + 2 + 1 = 6$ in the tens place.



$$\begin{array}{r}
 +1 \\
 3 & 8 \\
 + & 2 & 4 \\
 \hline
 6 & 2
 \end{array}$$

$$38 + 24 = 62$$

1 How do we add $23 + 18$?



1 Let us add.

$$1) \quad \begin{array}{r} 23 \\ + 18 \\ \hline \end{array}$$

$$2) \quad \begin{array}{r} 45 \\ + 27 \\ \hline \end{array}$$

$$3) \quad \begin{array}{r} 52 \\ + 38 \\ \hline \end{array}$$

$$4) \quad \begin{array}{r} 78 \\ + 08 \\ \hline \end{array}$$

$$5) \quad \begin{array}{r} 26 \\ + 37 \\ \hline \end{array}$$

$$6) \quad 37 \quad + \quad 53$$

$$7) \quad 45 \quad + \quad 45$$

$$8) \quad 47 \quad + \quad 18$$

$$9) \quad 65 \quad + \quad 5$$

$$10) \quad 42 \quad + \quad 29$$

2 $38+52=\boxed{}$

*Is this addition
different from
others?*



*How
can we do the
addition?*

$$\begin{array}{r} 3 & 8 \\ 5 & 2 \\ \hline \end{array}$$



- 3 How can we do the following addition?

$$\begin{array}{r} 35 \\ + \quad 6 \\ \hline \end{array}$$

3	5
+	6
<hr/>	

$$\begin{array}{r} 7 \\ + \quad 36 \\ \hline \end{array}$$

+ 3	6
7	
<hr/>	

- 2 Let us do the following addition.

1)
$$\begin{array}{r} 26 \\ + \quad 37 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 38 \\ + \quad 22 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 56 \\ + \quad 14 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 36 \\ + \quad 17 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 75 \\ + \quad 15 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 42 \\ + \quad 28 \\ \hline \end{array}$$

7)
$$\begin{array}{r} 78 \\ + \quad 13 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 62 \\ + \quad 28 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 6 \\ + \quad 57 \\ \hline \end{array}$$

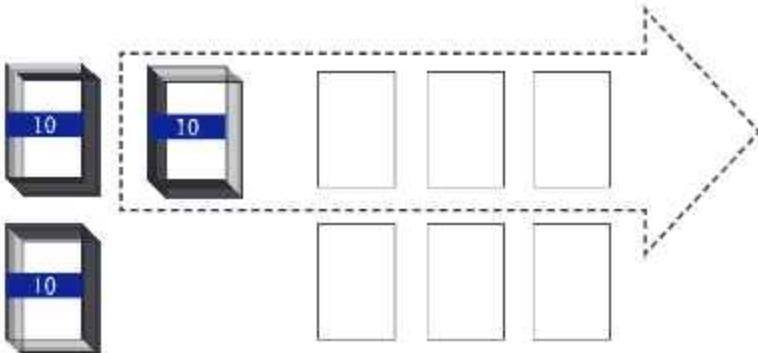
10)
$$\begin{array}{r} 72 \\ + \quad 9 \\ \hline \end{array}$$

- 3 Dilip bought fish for Tk.45 and vegetables for Tk.38 from the market. How much did he spend in total?
- 4 Mahdi and his friends went to the Probhate Feri on February 21 in two groups. In one group, there are 35 people and in the other group, there are 27 people. How many people were there in total in the two groups?
- 5 Manha's family library has 54 story books and 38 books on other subjects. In total, how many books are there in the library?

Subtraction (1)



Mina had 36 sheets of paper. She gave Raju 13 sheets of paper. How many sheets of paper does Mina have now?



Mathematical sentence:

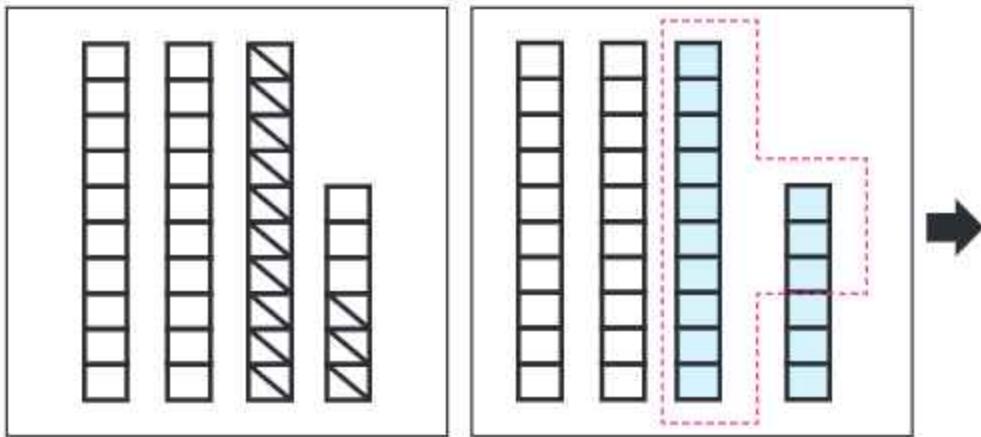
▲ Let us think about how to calculate.



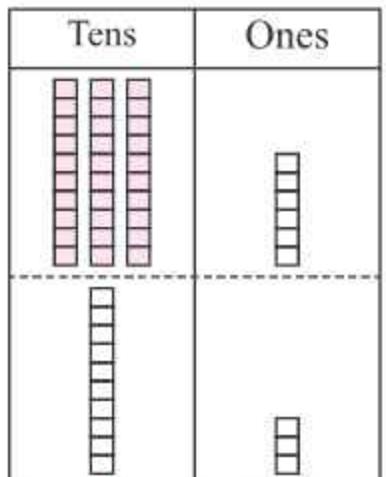
Let us count and remove 13 sheets of paper one by one.



13 means 1 ten and 3 ones. Let us take away 1 ten and 3 ones from 3 tens and 6 ones.

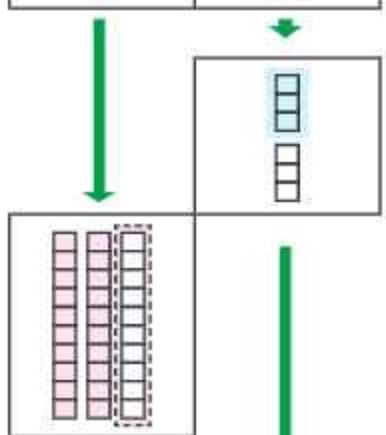


How do we subtract 13 from 36 by using their place value?



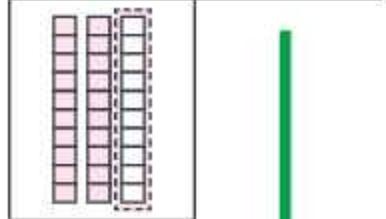
$$\begin{array}{r} 3 \ 6 \\ - 1 \ 3 \\ \hline \end{array}$$

Let us arrange the numbers according to their place value.



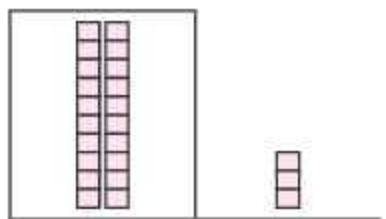
$$\begin{array}{r} 3 \ 6 \\ - 1 \ 3 \\ \hline 3 \end{array}$$

At the ones place, $6 - 3 = 3$



$$\begin{array}{r} 3 \ 6 \\ - 1 \ 3 \\ \hline 2 \ 3 \end{array}$$

At the tens place, $3 - 1 = 2$



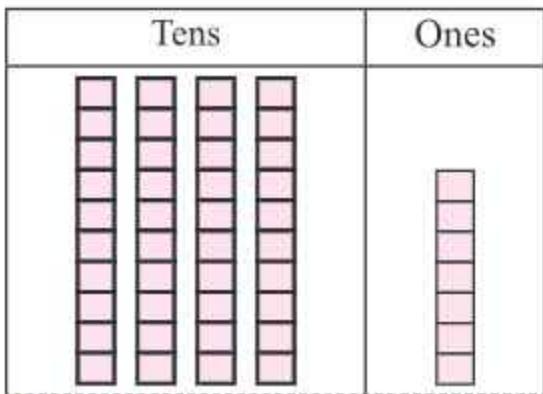
$$\begin{array}{r} 3 \ 6 \\ - 1 \ 3 \\ \hline 2 \ 3 \end{array}$$

$36 - 13 = 23$

1 Let us subtract.

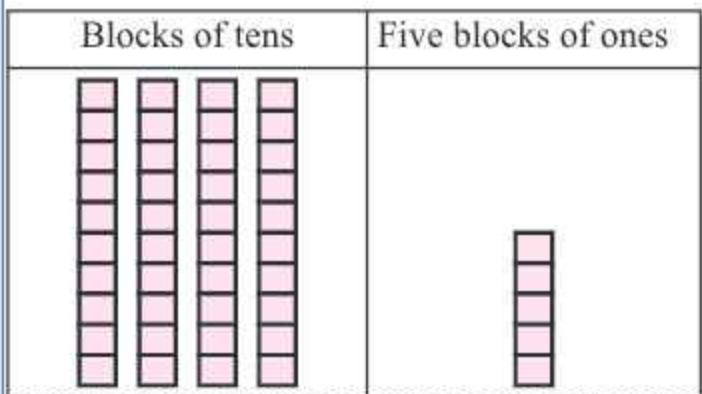
- 1) 45 - 23 2) 56 - 12 3) 86 - 31 4) 75 - 23

2 Let us think about how to subtract 10 from 47.



4	7
-	1
	0

3 Let us think about how to subtract 25 from 45.



4	5
-	2
	5

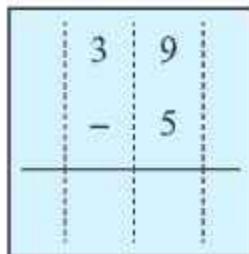
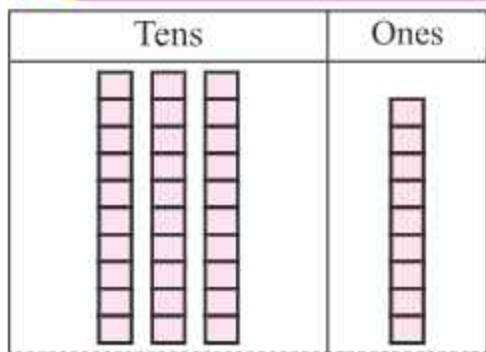
4 Let us subtract.

$$\begin{array}{r} 1) \quad 45 \\ - 23 \\ \hline \end{array} \quad \begin{array}{r} 2) \quad 32 \\ - 11 \\ \hline \end{array} \quad \begin{array}{r} 3) \quad 68 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 4) \quad 79 \\ - 50 \\ \hline \end{array} \quad \begin{array}{r} 5) \quad 98 \\ - 67 \\ \hline \end{array}$$

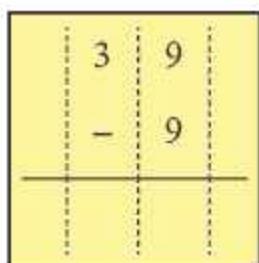
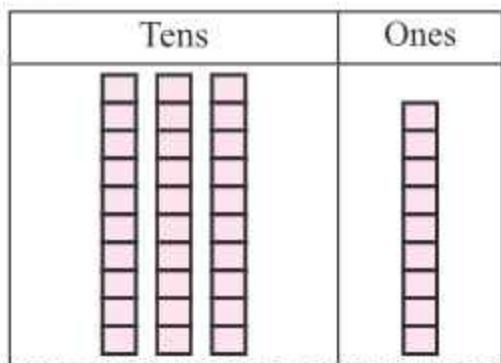
$$\begin{array}{r} 6) \quad 49 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 7) \quad 66 \\ - 40 \\ \hline \end{array} \quad \begin{array}{r} 8) \quad 58 \\ - 18 \\ \hline \end{array} \quad \begin{array}{r} 9) \quad 70 \\ - 30 \\ \hline \end{array} \quad \begin{array}{r} 10) \quad 38 \\ - 34 \\ \hline \end{array}$$



How do we subtract 5 from 39?



1 How do we subtract 9 from 39?



1 Let us subtract.

$$\begin{array}{r} 64 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 94 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 57 \\ - 7 \\ \hline \end{array}$$

2 Let us subtract.

$$1) 85 - 13$$

$$2) 79 - 44$$

$$3) 61 - 50$$

$$4) 75 - 25$$

$$5) 90 - 50$$

$$6) 49 - 42$$

$$7) 97 - 5$$

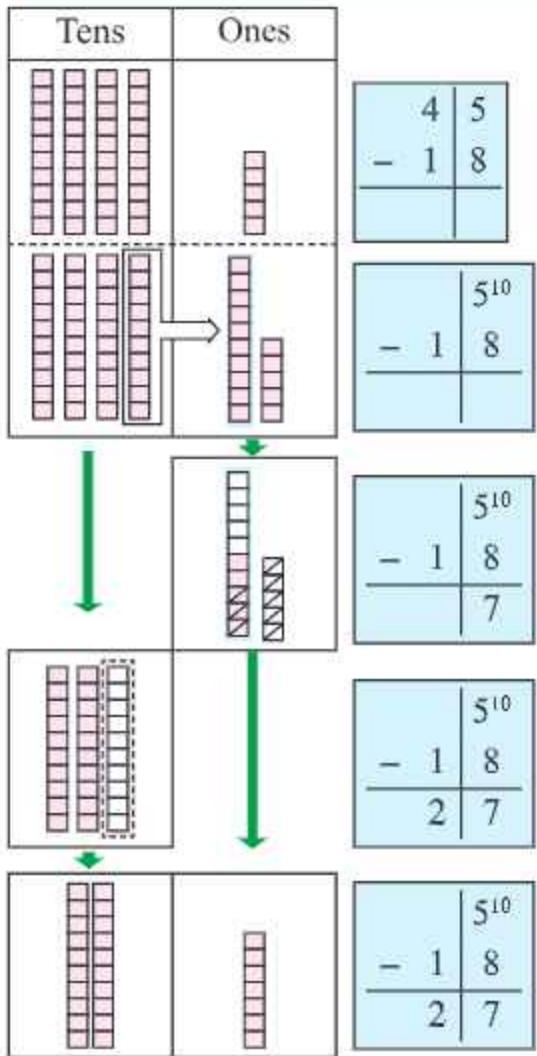
$$8) 53 - 3$$



Raju had 45 colour pencils. He gave 18 colour pencils to Tuli. How many colour pencils does Raju have?

The mathematical sentence of the calculation is $45 - 18 =$

How will you give me 18 colour pencils?



Let us arrange the numbers according to their place value.

As the digit 5 in the ones place is less than 8, we cannot subtract 8 from 5. So, we can take 1 ten from the tens place and move it to the ones place. Adding this 1 ten to the digits of the ones place, we get $10 + 5 = 15$

At the ones place, $15 - 8 = 7$

At the tens place, $3 - 1 = 2$

$$45 - 18 = 27$$

1 Let us subtract.

$$\begin{array}{r} 97 \\ - 59 \\ \hline \end{array}$$

$$\begin{array}{r} 71 \\ - 44 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ - 47 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ - 53 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ - 22 \\ \hline \end{array}$$

2 Let us subtract.

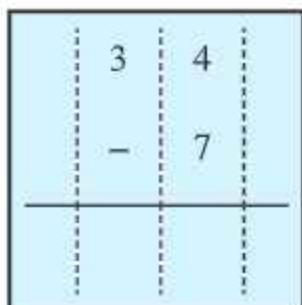
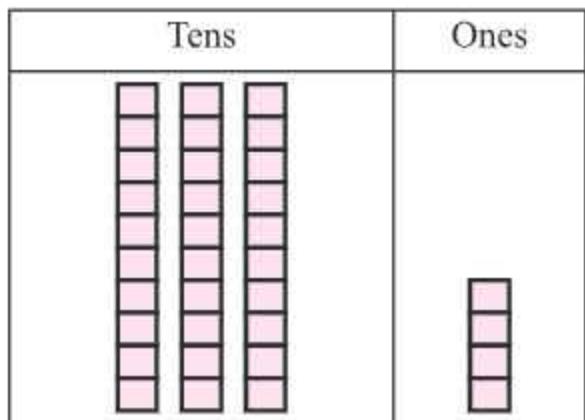
$$1) 32 - 15$$

$$2) 85 - 47$$

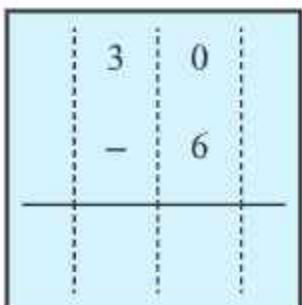
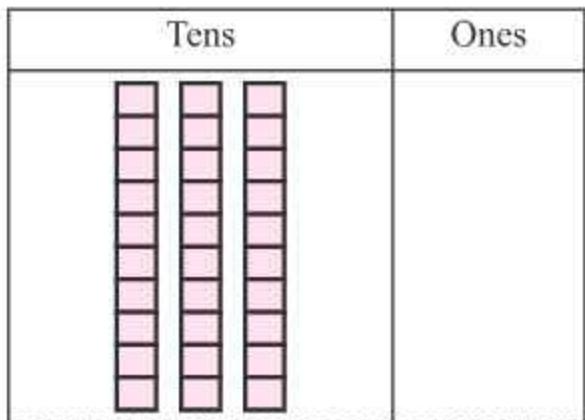
$$3) 64 - 27$$

$$4) 92 - 23$$

1 How do we subtract 7 from 34?



2 How do we subtract 6 from 30?



3 Let us subtract.

1)
$$\begin{array}{r} 25 \\ - 8 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 43 \\ - 5 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 30 \\ - 7 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 60 \\ - 6 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 80 \\ - 9 \\ \hline \end{array}$$

4 Let us subtract.

1) $82 - 13$

2) $71 - 44$

3) $97 - 59$

4) $60 - 35$

5) $74 - 68$

6) $40 - 34$

7) $93 - 5$

8) $50 - 3$

5 Problems related to subtraction

- Rumi has 75 marbles, and Raju has 49 marbles. How many more or fewer marbles does Raju have than Rumi?
- The sum of the ages of mother and daughter is 70. The daughter is 22 years old. How old is the mother?
- Jhumu is 8 years older than Rumu. Jhumu is 24 years old. How old is Rumu?

Mathematical Relation (Addition and Subtraction)



There were some mangoes in a bag. 5 mangoes were sold. Now, there are 6 mangoes in the bag. How many mangoes were there in the bag at first?



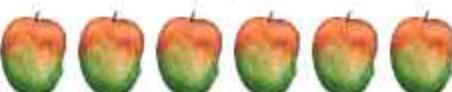
After selling, 5 mangoes decreased in the bag.



We need to exclude five mangoes.



Let us draw a picture of the above problem below.

The number of mangoes we had at first.	<input type="text"/>	5 mangoes were sold.
		 

Now, there are 6 mangoes in the bag.



How do we find the number of mangoes we had at first?

There were 6 mangoes after selling 5 mangoes. In the picture, we can see there were 11 mangoes in the bag. In a mathematical sentence:

$$\square - 5 = 6 \rightarrow 6 + 5 = \square \text{ mangoes were there}$$



The first number of subtraction is the sum of other two numbers.

$$\begin{array}{r}
 & 11 & \\
 & \swarrow & \searrow \\
 - & 5 & +5 \\
 \hline
 & 6 &
 \end{array}$$

1 Let us fill in the blanks.

1) $9 + \square = 16$ 2) $39 - \square = 31$

9	?		
16	?		

3) $\square + 23 = 34$ 4) $\square + 19 = 45$

5) $14 + \square = 35$ 6) $29 - \square = 17$

7) $\square + 27 = 75$ 8) $\square - 39 = 45$

9) $12 + 9 - \square = 13$ 10) $22 + 8 - \square = 23$

- 2** Bijoy was going to the market to sell his mangoes. His uncle gave him 15 more mangoes to sell. After selling 33 mangoes, he had 12 mangoes left. How many mangoes did he have at first?
- 3** Mr. Jalil bought 100 litchis from the market. After coming home, he gave 25 litchis to his daughter and 23 litchis to his son. How many litchis does he have now?
- 4** There were 25 chocolates in a box. From those, some chocolates were given to Mitu. 17 chocolates were left in the box. How many chocolates were given to Mitu?
What will be the mathematical sentence?

Addition (2)



Tuli had 70 story books. She bought another 50 story books from the book fair. How many story books does Tuli have now?



Mathematical sentence:



How do we write a mathematical sentence?

$$70 + 50 = 120$$

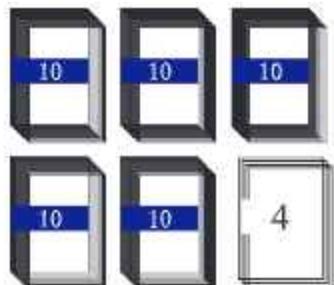
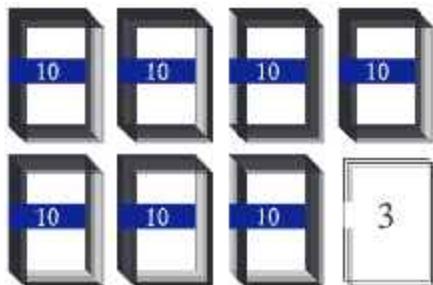


Let us add.

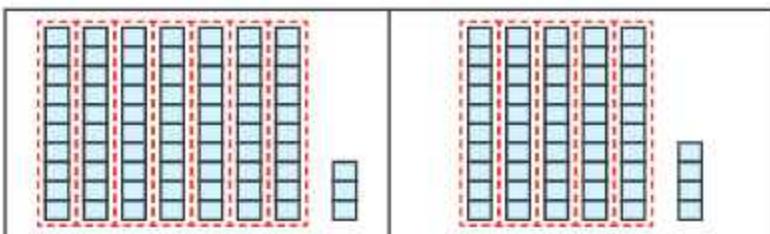
- | | | | |
|----------------|----------------|---------------|---------------|
| 1) $80 + 50$ | 2) $60 + 60$ | 3) $50 + 90$ | 4) $80 + 70$ |
| 5) $100 + 300$ | 6) $500 + 200$ | 7) $140 + 20$ | 8) $30 + 130$ |
| 9) $160 + 30$ | 10) $50 + 220$ | | |



Dilip has 73 sheets of paper. His sister, Deepa gave him 54 sheets more. How many sheets of paper does he have now?



Let us think about how to calculate.



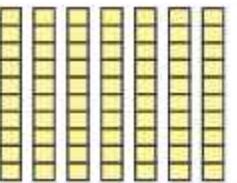
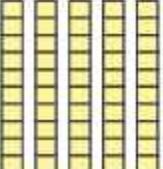
Here, the blocks of tens are more than 10.



The answer seems to be more than 100.

How do we add $74+54$?

Mathematical sentence

Hundreds	Tens	Ones
		
		

$$\begin{array}{r}
 7\ 3 \\
 + 5\ 4 \\
 \hline
 \end{array}$$

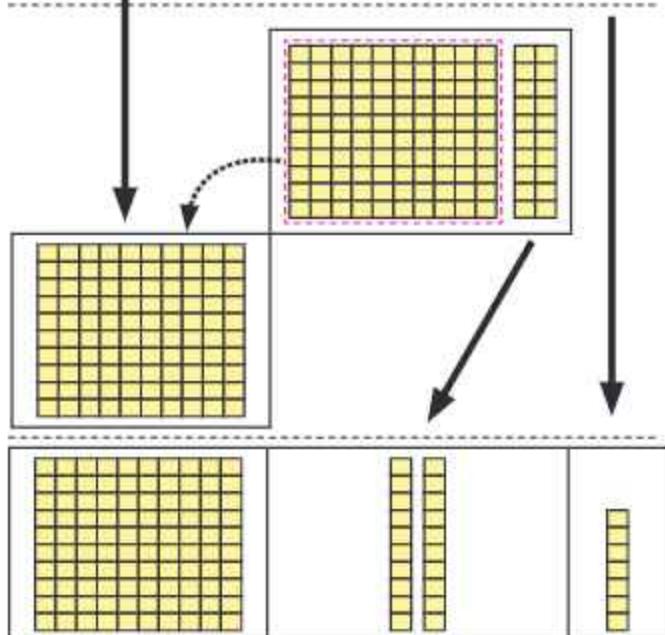
Let us arrange these two numbers according to their place values.

$$\begin{array}{r}
 7\ 3 \\
 + 5\ 4 \\
 \hline
 7
 \end{array}$$

The sum of digits in the ones place is $3 + 4 = 7$

$$\begin{array}{r}
 7\ 3 \\
 + 5\ 4 \\
 \hline
 1\ 2\ 7
 \end{array}$$

The sum of digits in the tens place is $7 + 5 = 12$ tens. 12 tens mean 1 hundred and 2 tens. Write 2 in the tens place and 1 in the hundreds place.



$$\begin{array}{r}
 7\ 3 \\
 + 5\ 4 \\
 \hline
 1\ 2\ 7
 \end{array}$$

$$73 + 54 = 127$$

Let us add.

- 1) $86 + 43$
- 2) $68 + 35$
- 3) $74 + 65$
- 4) $55 + 45$
- 5) $93 + 9$



$216 + 142 = \boxed{\hspace{1cm}}$; How do we do the addition?



Using their place values, we can add them.

Hundreds	Tens	Ones
2	1	6

H	T	O
1	4	2

H	T	O
		8

Sum of the digits in the ones place is $6 + 2 = 8$.

Hundreds	Tens	Ones
2	1	6

H	T	O
1	4	2

H	T	O
	5	8

Sum of the digits in the tens place is $1 + 4 = 5$.

Hundreds	Tens	Ones
2	1	6

H	T	O
1	4	2

H	T	O
3	5	8

Sum of the digits in the hundreds place is $2 + 1 = 3$.



To decorate the classroom, Raju made 134 paper flowers, and Meena made 145 flowers. How many flowers did they make in total?



How can we calculate the total number of paper flowers?



$$134 + 145 = \boxed{\hspace{1cm}}$$

We can calculate by using place values.

H	T	O
1	3	4
+	1	4
	4	5

1	3	4
+	1	4
	4	5

The sum of the digits in the ones place is $4 + 5 = 9$.

1	3	4
+	1	4
	4	5

The sum of the digits in the tens place is $3 + 4 = 7$.

1	3	4
+	1	4
	7	9

The sum of the digits in the hundreds place is $1 + 1 = 2$.

1 Let us add.

$$(1) 526 + 253 = \square$$

$$(2) 552 + 436 = \square$$

$$(3) 523 + 614 = \square$$

$$(4) 872 + 127 = \square$$

$$(5) 672 + 326 = \square$$

$$(6) 438 + 31 = \square$$

2 Let us add.

$$\begin{array}{r} 4 \\ + 6 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 9 \\ + 5 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 6 \\ + 2 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 2 \\ + 3 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 4 \\ + 3 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 2 \\ + 3 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 4 \\ + 2 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 5 \\ + 5 \\ \hline 5 \end{array}$$

- 1 On a certain Eid day, Rafi received Eid salami of Tk. 250 from his father and Tk. 120 from his mother. How much money did he get in total?

3 Let us find the missing digits.

1. $4 \square 5 + 21 \square = 639$

2. $51 \square + 3 \square 5 = 876$

3.

21 27	33 39	50 <input type="text"/>
6	6	6

4.

1	6	11	16	<input type="text"/> ?
5	5	5	5	

5.

--	--	--

Let us find the missing digits.

$$3 \square \square 5 + 12 \square \square = 457$$

$$\begin{array}{r}
 3 \quad \square \quad 5 \\
 + \quad 1 \quad 2 \quad \square \square \\
 \hline
 4 \quad 5 \quad 7
 \end{array}$$

At the place of ones, $5 + 2 = 7$.
 At the place of tens, $3 + 2 = 5$.
 At the place of hundreds, $3+1=4$.



How do we add?

$$468 + 394 = \boxed{}$$

H	T	O
4 ⁺¹	6 ⁺¹	8

+

H	T	O
3	9 ⁺¹	4

=

H	T	O
8	6	2

$$468 + 394 = 862$$

The sum of digits in the ones place is $8 + 4 = 12$. 12 means 1 ten and 2 ones. Let us write 2 in the ones place and add 1 with the digits in the tens place.

The sum of the digits in the tens place is $6 + 9 + 1 = 16$. 16 means 1 hundred and 6 tens. Let us write 6 in the tens place and add 1 with the digits in the hundreds place.

In the hundreds place, let us write $4 + 3 + 1 = 8$.

- 1 An exercise book of Raju has 267 pages. Another exercise book has 145 pages. How many pages are there in the two exercise books? The mathematical sentence of the calculation is:

$$267 + 145 = \boxed{}$$



How do we add?

2	6 ⁺¹	7
+	1	4
		5
		2

The sum of the digits in the ones place is $7 + 5 = 12$. 12 means 1 ten and 2 ones. Let us write 2 in the ones place and add 1 with the digits of tens place.

$$\begin{array}{r}
 & 2+1 & 6+1 & 7 \\
 + & 1 & 4 & 5 \\
 \hline
 & 1 & 2
 \end{array}$$

The sum of the digits in the tens place is $6 + 4 + 1 = 11$. 11 tens means 1 hundred and 1 ten. Let us write 1 in the tens place and add 1 with the digits in the hundreds place.

$$\begin{array}{r}
 & 2+1 & 6+1 & 7 \\
 + & 1 & 4 & 5 \\
 \hline
 & 4 & 1 & 2
 \end{array}$$

The sum of digits in the hundreds place, is $2+1+1=4$.

$$\begin{array}{r}
 & 2 & 6 & 7 \\
 + & 1 & 4 & 5 \\
 \hline
 & 4 & 1 & 2
 \end{array}$$

412 pages of paper

- 1** Each pair of students will write two numbers with at most three digits, and pass them to another pair of students. They will add the numbers. The pair that successfully adds the numbers first will be the winner.

2 **Let us add.**

1. (1) $596 + 312 =$ (2) $649 + 161 =$

(3) $427 + 185 =$ (4) $381 + 269 =$

(5)
$$\begin{array}{r}
 2 & 8 & 4 \\
 + & 5 & 8 & 1 \\
 \hline
 \end{array}$$
 (6)
$$\begin{array}{r}
 2 & 9 & 4 \\
 + & 6 & 4 & 7 \\
 \hline
 \end{array}$$

(7)
$$\begin{array}{r}
 5 & 6 & 8 \\
 + & 4 & 3 & 2 \\
 \hline
 \end{array}$$
 (8)
$$\begin{array}{r}
 4 & 0 & 9 \\
 + & 3 & 8 & 4 \\
 \hline
 \end{array}$$

3 Let us add.

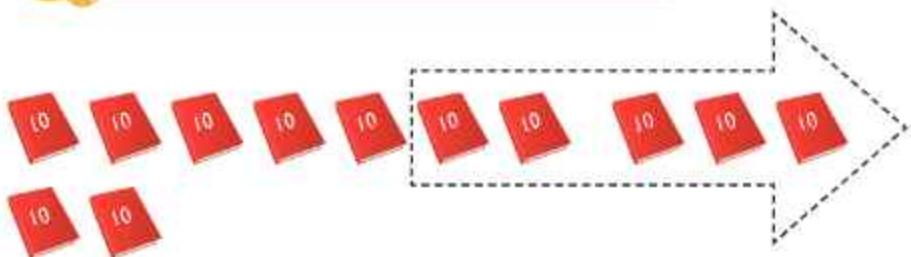
Problems related to addition

- Shimu reads 154 pages of a storybook in a month. In the next month, she reads 275 pages. How many pages has she read in total?
- In a school, there are 136 boys and 120 girls in class two. How many students are there in class two?
- 123 books were distributed among the students in Section A of class two. In Section B, 131 books were distributed. How many books were distributed in total?
- There are 120 rose plants and 127 marigold plants in a nursery. How many flower plants are there in total?
- In a pond, 125 catfish and 250 walking catfish fries were released. How many fish fries were released in total in that pond?
- A fruit seller sold mangoes for Tk. 360 on the first day. On the second day, he sold mangoes for Tk. 475. How much money did he get from his selling in two days?
- 400 people live in a village and 320 live in another village. How many people live in the two villages altogether?
- Make a story for ' $975 + 325$ '.

Subtraction (2)



How can we subtract 50 from 120?



Let us write in a mathematical sentence.

$$120 - 50 = 70$$

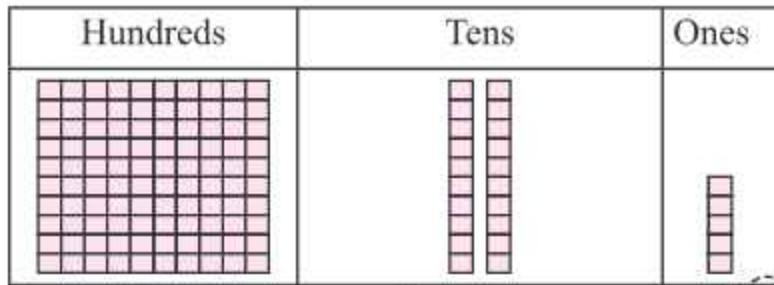


Let us subtract.

- | | | |
|----------------|----------------|----------------|
| 1) $170 - 40$ | 2) $180 - 20$ | 3) $160 - 40$ |
| 4) $190 - 20$ | 5) $500 - 200$ | 6) $700 - 500$ |
| 7) $900 - 220$ | 8) $380 - 30$ | 9) $390 - 70$ |
| 10) $460 - 60$ | 11) $520 - 30$ | 12) $220 - 50$ |

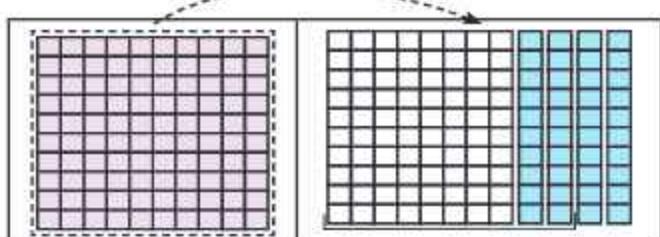
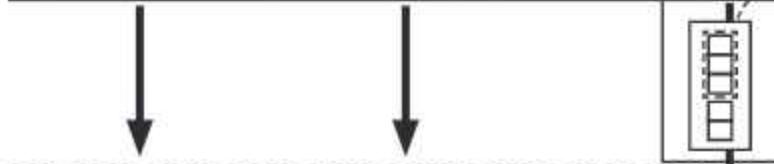


How can we subtract $125 - 43$?



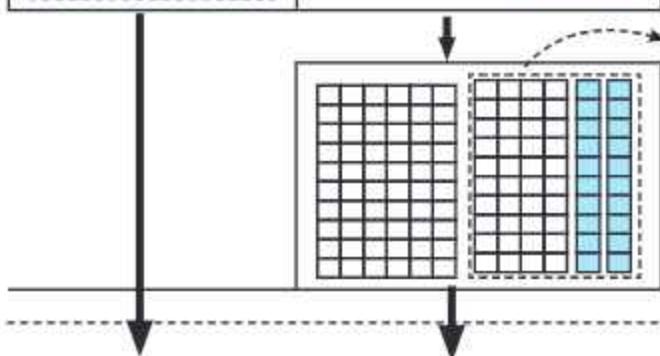
$$\begin{array}{r} 125 \\ - 43 \\ \hline \end{array}$$

Let us arrange the two numbers according to their place value.



$$\begin{array}{r} 12^{\text{10}} 5 \\ - 43 \\ \hline \end{array}$$

As the digit 2 in the tens place is less than 4, we cannot subtract 4 from 2. We can take 1 hundred from the hundreds place. 1 hundred means 10 tens. Now we can add 10 tens with 2 of the tens place and get $10 + 2 = 12$ tens. In the tens place, we can write $12 - 4 = 8$.



$$\begin{array}{r} 12^{\text{10}} 5 \\ - 43 \\ \hline 82 \end{array}$$

$$125 - 43 = 82$$

1 Let us subtract.

- 1) $325 - 13$ 2) $527 - 28$ 3) $735 - 48$
 4) $474 - 81$ 5) $829 - 75$ 6) $930 - 40$

2 Let us subtract.

$$\begin{array}{r} 509 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 729 \\ - 56 \\ \hline \end{array}$$

$$\begin{array}{r} 845 \\ - 58 \\ \hline \end{array}$$



Let us subtract $785 - 421$.

$$\begin{array}{r} 785 \\ 421 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 785 \\ 421 \\ \hline 64 \end{array}$$

$$\begin{array}{r} 785 \\ 421 \\ \hline 364 \end{array}$$

At the ones place

$$5 - 1 = 4$$

At the tens place

$$8 - 2 = 6$$

At the hundreds place

$$7 - 4 = 3$$



Mina has Tk.241 and Raju has Tk.115 . How much more money does Mina have than Raju?



How can we calculate?

$$\begin{array}{r} 241 \\ -115 \\ \hline \end{array}$$

$$241 - 115 = \boxed{}$$

$$\begin{array}{r} 241 \\ -115 \\ \hline \end{array} \rightarrow \begin{array}{r} 311 \\ 2\cancel{4}\cancel{1} \\ 115 \\ \hline \end{array}$$

The digit 5 in the ones place is greater than 1. So, we cannot subtract 5 from 1. Now, move 1 ten from the tens place to the ones place, and add this 1 ten to the number in the ones place.

$$10 + 1 = 11$$

Let us write in the ones place $11 - 5 = 6$.

$$\begin{array}{r} 3 \\ 2\cancel{4}1 \\ 115 \\ \hline 26 \end{array}$$

Let us write in the tens place $3 - 1 = 2$.

$$\begin{array}{r} 241 \\ 115 \\ \hline 126 \end{array}$$

Let us write in the hundreds place $2 - 1 = 1$.

Let us do.

$$241 - 115 = 126$$

1 Let us subtract.

$$(1) 231 - 48 = \boxed{}$$

$$(2) 230 - 90 = \boxed{}$$

$$(3) 320 - 280 = \boxed{}$$

$$(4) 437 - 273 = \boxed{}$$

$$(5) 452 - 378 = \boxed{}$$

$$(6) 663 - 267 = \boxed{}$$

$$(7) \begin{array}{r} 4\ 9\ 0 \\ - 8\ 4 \\ \hline \end{array}$$

$$(8) \begin{array}{r} 3\ 2\ 1 \\ - 2\ 7\ 9 \\ \hline \end{array}$$

$$(9) \begin{array}{r} 9\ 4\ 1 \\ - 6\ 0\ 8 \\ \hline \end{array}$$

$$(10) \begin{array}{r} 7\ 9\ 2 \\ - 4\ 8\ 6 \\ \hline \end{array}$$

$$(11) \begin{array}{r} 3\ 4\ 1 \\ - 1\ 2\ 6 \\ \hline \end{array}$$

$$(12) \begin{array}{r} 5\ 4\ 0 \\ - 2\ 8\ 0 \\ \hline \end{array}$$

- 2 Shyamol went to the market with Tk. 385. He spent Tk. 253. How much money does he have now?
- 3 In a cricket match, Bangladesh team scored 358 runs and Sri Lankan team scored 312 runs. Which team scored more and how many runs did they score more?
- 4 There are 542 students in a school and 290 of them are girls. How many boys are there in that school?
- 5 There are 334 children in Bijoypur village. Of them, 315 children have been vaccinated. How many children have not been vaccinated?
- 6 There are 212 mango trees in a garden. 195 trees have produced mangoes. How many trees have not produced mangoes?
- 7 Rita had 255 marbles. From those, she gave her younger brother 150 marbles. How many marbles does Rita have now?
- 8 A nursery has 146 mahogany saplings and 120 neem saplings. How many more mahogany saplings are there in the nursery?
- 9 Which number is to be subtracted from 355 to get 245?
- 10 There were 200 telapia fish in a pond. 165 of them were sold. How many telapia fish were left in the pond?
- 11 Tuhin has Tk. 342, and Shakil has Tk. 315. Who has less money, and how much less does he have?
- 12 Shakib had three one-hundred-taka notes, from which he gave Mina Tk. 225. How much money does Shakib have now?

Problems Related to Addition and Subtraction



How many people?

There are 673 people in a village.

105 people have left the village.

117 new people have come to the Village

- a) What is the total number of people in the village now?



Let us think how to solve the problem.

There were 673 people

117 new people have come

As new people have come in, the total number of people will be more.

Total people will be

$$673 + 117 = 790$$



- (b) What is the number of people after some of them have left the village.

105 people have left the village



As some people have left the village, the total number of people will be less.

Total people will be $790 - 105 = 685$.



In mathematical sentence :

$$673 + 117 - 105$$

- (c) Let us solve the problem.

$$673 + 117 - 105$$

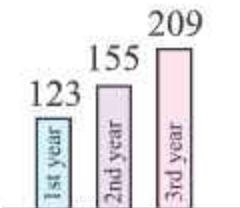
$$= 790 - 105$$

$$= 685$$

The number of people is 685.



- There were 625 students in a school. At the beginning of the year, 275 new students were admitted and 35 students left the schools. How many Students remained in the school? Solve the problem in mathematical sentence.
- Jhuma had Tk. 250. Her father gave her Tk.150 more. She bought a book for Tk. 230. How much money does she have now?
- The sum of two numbers is 840. If one of them is 527, what is the other?
- In a week a shopkeeper earns Tk. 920 and spends Tk. 675. How much money does he save at the end of the week?
- The following diagram describes the past three years admission of a school.



- (a) In which year were the highest number of students admitted?
(b) How many more students were admitted in the third year compared to the first year.
(c) What is the number of students in the school now?
- The Difference of two numbers is 87. If the greater number is 369,what is the smaller number?
- 7.

235 glasses of water 365 glasses of water



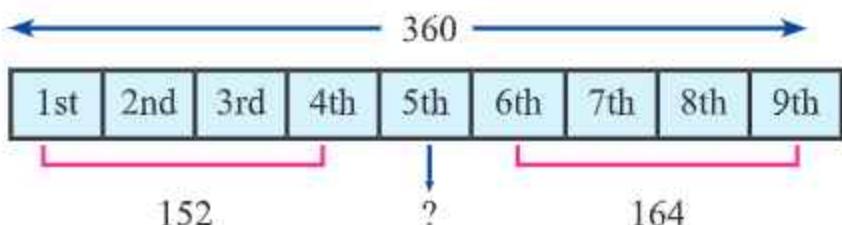
Two water pots are shown in the picture above.

- Which pot contains more water?
- How many glasses of water are more in the second pot?
- What is the total number of glasses of water in two pots ?

8. There are 425 mangoes in one basket, and 345 mangoes in another basket. 175 mangoes are sold from the total. How many mangoes are left?

 - What is the total number of mangoes in the two baskets?
 - In how many steps, the problem can be solved?
 - Express the problem in a mathematical sentence.
 - Solve the problem.

9. The sum of 9 numbers is 360. The sum of the first 4 numbers is 152. The sum of the 6th to 9th numbers is 164. What is the 5th number?



10. Nahid has Tk. 450. Sumon has Tk. 115 less than that of Nahid. If their money is put together, it becomes the same as Arif's money. How much money does Arif have?
 11. The age of the two sons together is 37 years and the age of their father is 63 years. After 10 years, what will be the total age of three of them?
 12. Sujon got Tk. 1000 as a stipend. He bought a dress for Tk. 350 and a school bag for Tk. 475. How much money does he have now?
 13. To buy a cricket bat and a ball Tk. 750 was needed. All the members gave a total of Tk. 330. The club gave them Tk. 250 as a grant. How much money did they need more?

14.

Sohag's fruit basket Geeta's fruit basket Tuli's fruit basket



150



248



475

- How many fruits are there in Sohag's fruit basket?
- How many more fruits does Tuli have than Geeta?
- How many fruits do Sohag and Tuli have in total?

15. The price list of a fruit shop.

Fruit	Mango	Apple	Orange
Price (Per Kg)	Tk. 100	Tk. 220	Tk. 160

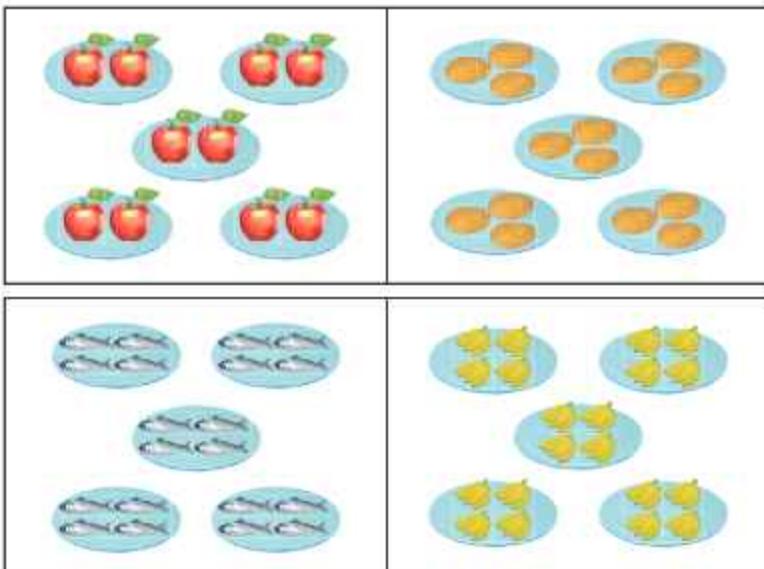
- How much more is the cost of apples than that of mangoes?
 - Express the total price of the fruits in a mathematical sentence.
 - What is the total price of the fruits.
16. A farmer got 326 bags of rice from his own land and 125 bags by cultivating other people's land. Calculate the total number of bags of rice he got and express it in mathematical sentence.
17. Bikash Borua went to the book fair with Tk. 1000. After buying some books, he had Tk. 200. How much money did he spend for buying books?
18. Mr. Nizam went to the market with Tk. 970. He bought beef for Tk. 550 and a hen for Tk. 370.
- What was the price of beef?
 - How much money did he spend?
 - How much money was left with Mr. Nizam?

Chapter Three

Multiplication

Concept of Multiplication

In the picture below apples, potatoes, fishes and bananas are arranged in some plates.



How many fishes and potatoes are there in each plate?



There are 4 fishes in each of 5 plates.



There are 3 potatoes in each of 5 plates.

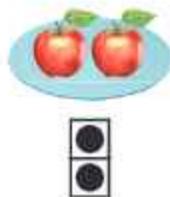
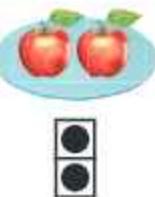
fishes $4+4+4+4+4=$ <input style="width: 40px; height: 20px; border: 1px solid black; margin-left: 10px;" type="text"/>	potatoes $3+3+3+3+3=$ <input style="width: 40px; height: 20px; border: 1px solid black; margin-left: 10px;" type="text"/>
_____ fishes	_____ potatoes

This is a mathematical sentence.

fishes $4+4+4+4+4=$ <input style="width: 40px; height: 20px; border: 1px solid black; margin-left: 10px;" type="text"/>	potatoes $3+3+3+3+3=$ <input style="width: 40px; height: 20px; border: 1px solid black; margin-left: 10px;" type="text"/>
_____ fishes	_____ potatoes

This is a mathematical sentence.

▲ How many apples and bananas are there?



There are 2 apples in each of the above 5 plates. How many apples are there?



There are 4 bunches of bananas. There are 4 bananas in each bunch. How many bananas are there?

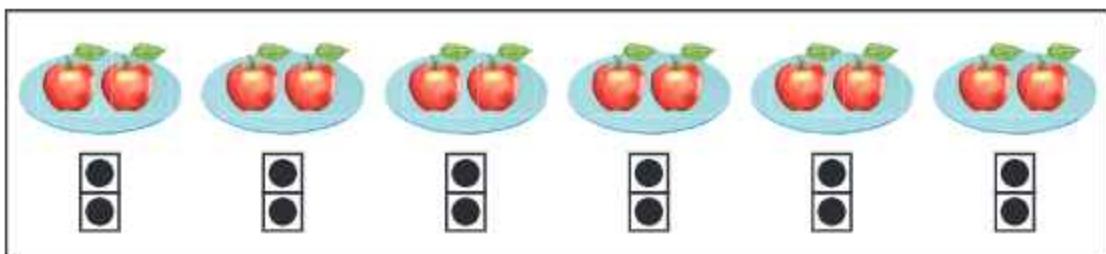
Let us write a mathematical sentence for counting apples.

apples

Let us write a mathematical sentence for counting bananas.

bananas

▲ How many apples will be there if we add one more plate?



Mathematical sentence

apples



There are 4 benches in a class. 3 students sit in each bench. How many students are there in the class?



There are 3 students in each of the 4 rows. The mathematical sentence for the number of students is—



The number of students: $3 + 3 + 3 + 3 = 12$

So, there are 12 students in the class.

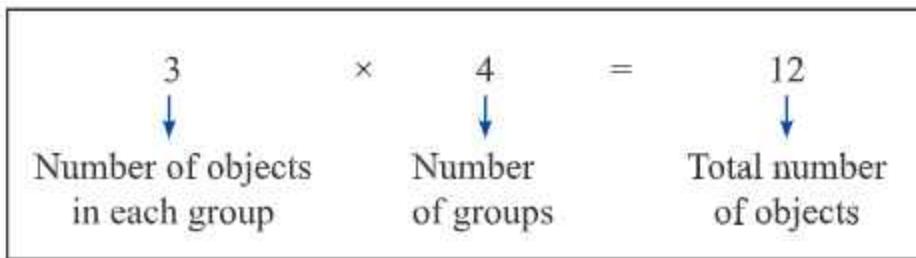
Here we add 3 for 4 times. We can also express/write this problem in the following mathematical sentence.

$$3 \times 4 = 12$$

How to read?

Three multiplied by four equals twelve.

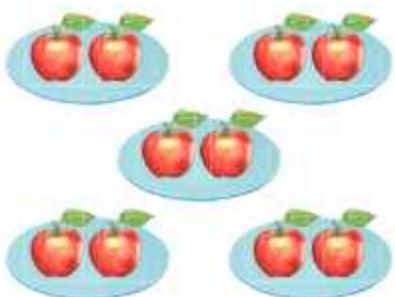
This type of calculation is called multiplication and the symbol \times is called multiplication sign.



(\times) is called the multiplication sign and $(+)$ is called the addition sign.

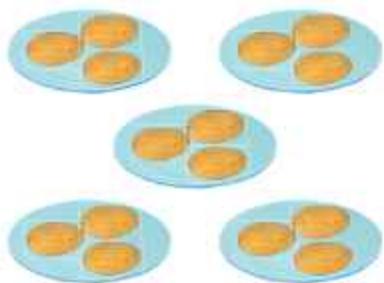


1 Let us calculate by using the multiplication sign.



$$2 \times 5 = 10$$

10 apples



$$3 \times \underline{\quad} = \underline{\quad}$$

potatoes



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

fishes



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

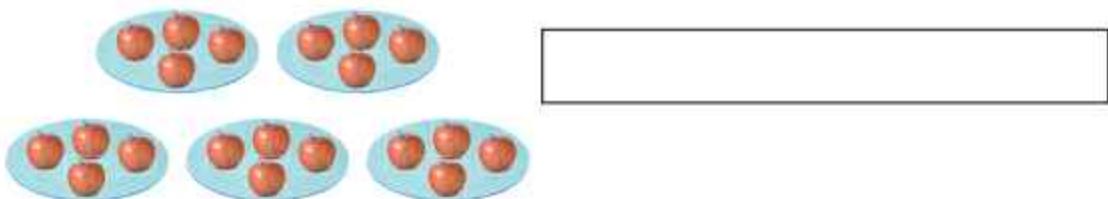
bananas

2. Let us write a mathematical sentence of multiplication for each of the pictures below and write the answer.

1.



2.



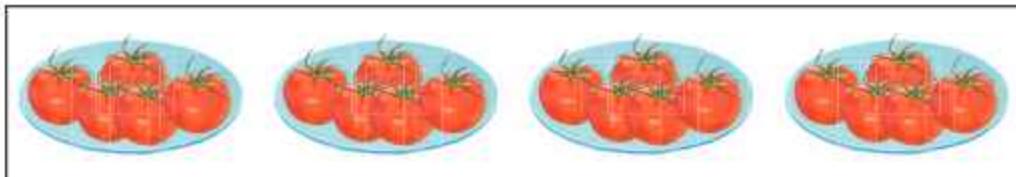
3.



Multiplication of 5.



There are 5 tomatoes in each of the 4 plates in the pictures.
How many tomatoes are there together?



- 1 Let us find how many tomatoes are there on 3 or 4 plates according to the picture below. First two are solved for you.



$$5 \times 1 = 5$$



$$5 \times 2 = 10$$



$$5 \times 3 = \boxed{}$$



$$5 \times 4 = \boxed{}$$

- 2 According to the above picture, how many tomatoes are there in any of the 5 plates?



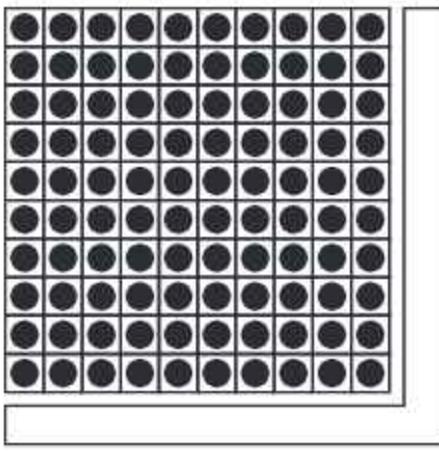
When the number of plates increases, how does the number of tomatoes increase?

I think there is a relation between the number of plates and the number of tomatoes.



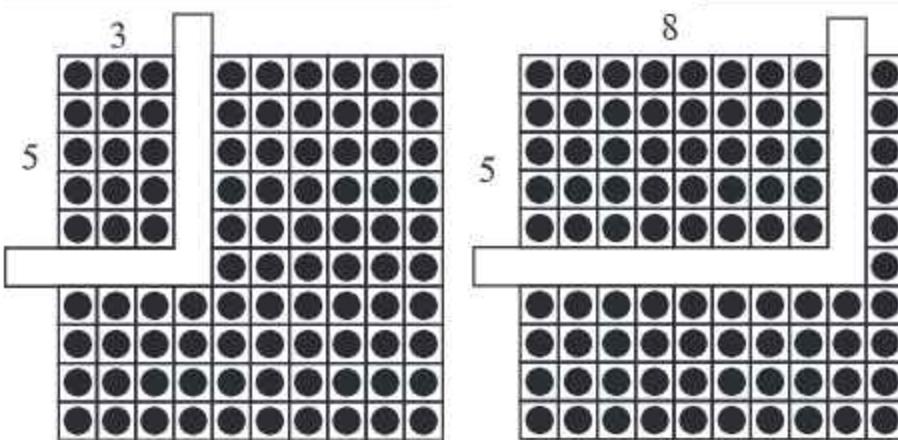
Let us learn the multiplication table of 5.

- 3 Let's use an L-shaped paper with 100 dots table and see how to express the multiplication.



Multiplication table of 5

$$\begin{aligned}5 \times 1 &= 5 \\5 \times 2 &= 10 \\5 \times 3 &= 15 \\5 \times 4 &= 20 \\5 \times 5 &= 25 \\5 \times 6 &= 30 \\5 \times 7 &= 35 \\5 \times 8 &= 40 \\5 \times 9 &= 45 \\5 \times 10 &= 50\end{aligned}$$



$$3 \times 5 = 15$$



$$5 \times 8 = 40$$

- There are 5 lychees on each of the 6 plates. How many lychees are there together?

Multiplication of 2

Four pairs of children are playing. How many children are playing in total?



According to the pictures below, let's find out how many children are there?



$$2 \times 1 = 2$$



$$2 \times 2 = 4$$



$$2 \times 3 = \boxed{}$$



$$2 \times 4 = \boxed{}$$

- 1 Similarly, how many children are there in 5, 6, 7, 8, 9 and 10 pairs?

$$2 \times 5 =$$

$$2 \times 6 =$$

$$2 \times 7 =$$

$$2 \times 8 =$$

$$2 \times 9 =$$

$$2 \times 10 =$$



Rafi: "If the number of pairs increases, how does the number of children increase?"

2 Let's play with the multiplication card.

Let's make a multiplication card as below.

Example,

Multiplication at the front



$$2 \times 4$$

$$5 \times 3$$

Answer at the back



$$8$$

$$15$$



Let's play.

Game-1: At first, mix the multiplication cards of 5 well. The multiplications remain on one side and the products remain on opposite side of the cards. Let's pick up one from the multiplication side. Let us find out the product without seeing the product given at the back. Now let us match the product given at the back. The game will continue in this way.

Game-2: Let's play the same game by picking the product first, then the multiplication.

Let us play in pairs/ with friends.

Game-3: One player will pick up a card and show the multiplication to the other player. Another player will answer by doing multiplication. In the same way one will show the product and the another one will say the multiplication.

Game-4: Let's place the cards on the desk, keeping the multiplication side down. Ask the multiplication to your friend showing the product.



It's a game of multiplication of 2. How does this result come?

$$18$$

It is 2×9 . Isn't it?

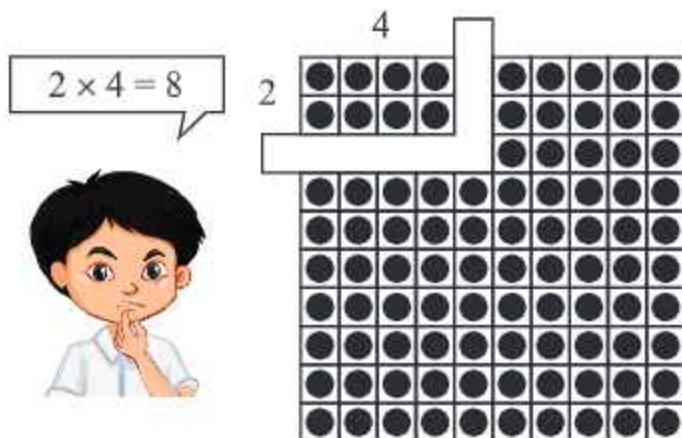
$$2 \times 9$$



Let us learn the multiplication table of 2.



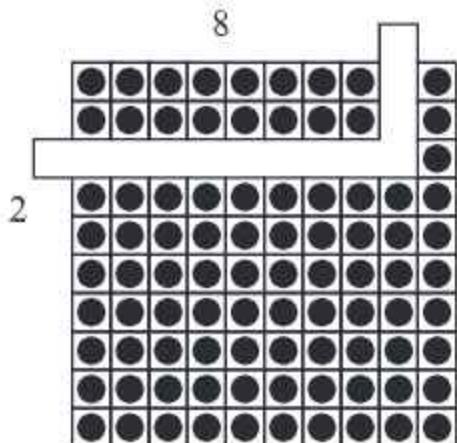
Let us use an L-shaped paper with 100 dots table and see how to express the multiplication.



Multiplication

Table of 2

- $2 \times 1 = 2$
- $2 \times 2 = 4$
- $2 \times 3 = 6$
- $2 \times 4 = 8$
- $2 \times 5 = 10$
- $2 \times 6 = 12$
- $2 \times 7 = 14$
- $2 \times 8 = 16$
- $2 \times 9 = 18$
- $2 \times 10 = 20$



- 1 Meena reads 2 pages of a book in a day. How many pages will she read in 7 days?
- 2 A chocolate costs Tk. 2. Raju bought 6 chocolates.
 1. How much taka do the chocolates cost?
 2. If he buys 7 more chocolates, how much taka will it cost?

Multiplication of 3

Let us make the multiplication table of 3.

- 1 According to the picture below, let us find how many balls are there.



$$3 \times 1 = 3$$



$$3 \times 2 = 6$$



$$3 \times 3 = \boxed{}$$



$$3 \times 4 = \boxed{}$$

- 2 How many balls are there in 5, 6, 7, 8, 9 and 10 trays in the above picture?

- 3 If the number by which we multiply increase by 1, how much does the product increase?

$3 \times 5 =$	<input type="text"/>
$3 \times 6 =$	<input type="text"/>
$3 \times 7 =$	<input type="text"/>
$3 \times 8 =$	<input type="text"/>
$3 \times 9 =$	<input type="text"/>
$3 \times 10 =$	<input type="text"/>

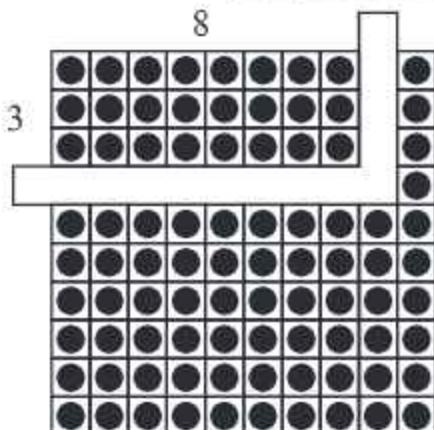
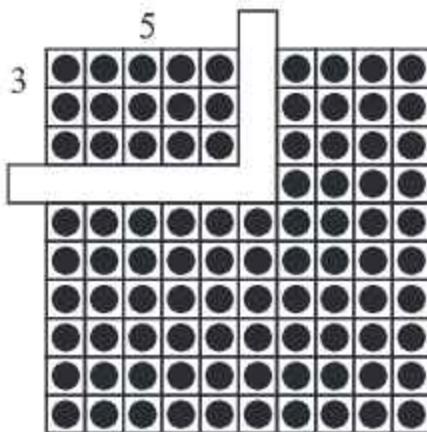
Let us learn the multiplication table of 3



Let's use an L-shaped paper with 100 dots table and find out the multiplication.



$$3 \times 5 = 15$$



Multiplication Table of 3

$$\begin{aligned}3 \times 1 &= 3 \\3 \times 2 &= 6 \\3 \times 3 &= 9 \\3 \times 4 &= 12 \\3 \times 5 &= 15 \\3 \times 6 &= 18 \\3 \times 7 &= 21 \\3 \times 8 &= 24 \\3 \times 9 &= 27 \\3 \times 10 &= 30\end{aligned}$$



- 1** There are 3 wheels in a rickshaw. How many wheels are there together in 4 rickshaws?
- 2** 3 guavas can be arranged on a plate. How many guavas are needed to arrange 7 plates?
- 3** There are 3 members in a family. How many members will be there in such 9 families?

Multiplication of 4

Let us make multiplication of 4

- 1 Let us find how many apples there are according to the pictures below.



$$4 \times 1 = 4$$



$$4 \times 2 = 8$$



$$4 \times 3 = \boxed{}$$



$$4 \times 4 = \boxed{}$$

- 2 How many apples are there in 5, 6, 7, 8, 9 and 10 plates in the above picture?

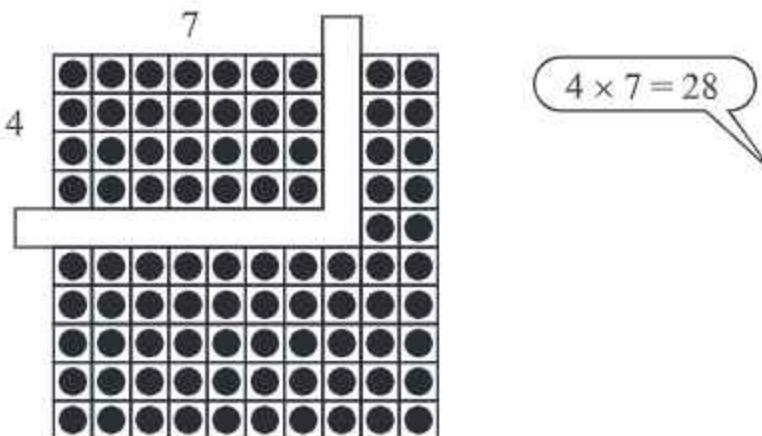
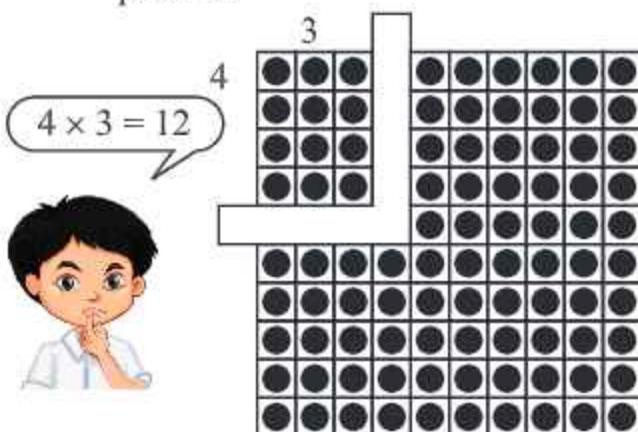
- 3 How does the product increase if the multiplying number increases by 1?

$4 \times 5 =$	<input type="text"/>
$4 \times 6 =$	<input type="text"/>
$4 \times 7 =$	<input type="text"/>
$4 \times 8 =$	<input type="text"/>
$4 \times 9 =$	<input type="text"/>
$4 \times 10 =$	<input type="text"/>

Multiplication of 4



We use an L shaped paper on the pattern of 100 dots and find out the product.



- 1** A cat has four legs. Then how many legs do 8 cats have?

- 2** A chair has 4 legs. Then how many legs do 6 chairs have?

- 3** If each sheep has 4 lambs, how many lambs do 9 sheep have?

Multiplication Table of 4

$$4 \times 1 = 4$$

$$4 \times 2 = 8$$

$$4 \times 3 = 12$$

$$4 \times 4 = 16$$

$$4 \times 5 = 20$$

$$4 \times 6 = 24$$

$$4 \times 7 = 28$$

$$4 \times 8 = 32$$

$$4 \times 9 = 36$$

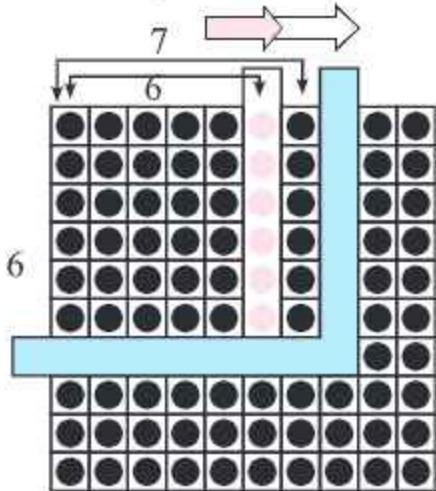
$$4 \times 10 = 40$$

Multiplication of 6



Let us learn the multiplication table of 6 based on what we have learnt so far.

- 1 If we place an L-shaped paper on the pattern of 100 dots, what will we get?



My idea is

$$6 \times 1 = 6$$

$$6 \times 2 = 6 + 6 = 12$$

$$6 \times 3 = 6 + 6 + 6 = 18$$

$$6 \times 4 = 6 + 6 + 6 + 6 = 24$$

$$6 \times 5 = 6 + 6 + 6 + 6 + 6 = 30$$

Multiplication Table of 6

$$6 \times 1 = 6$$

$$6 \times 2 = 12$$

$$6 \times 3 = \boxed{}$$

$$6 \times 4 = \boxed{}$$

$$6 \times 5 = \boxed{}$$

$$6 \times 6 = \boxed{}$$

$$6 \times 7 = \boxed{}$$

$$6 \times 8 = \boxed{}$$

$$6 \times 9 = \boxed{}$$

$$6 \times 10 = \boxed{}$$



My idea is

$$6 \times 1 = 6$$

$$6 \times 2 = 6 + 6 = 12$$

$$6 \times 3 = 12 + 6 = 18$$

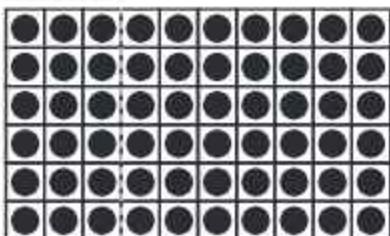
$$6 \times 4 = 18 + 6 = 24$$

$$6 \times 5 = 24 + 6 = 30$$

How would you calculate the multiplication table of 6?

- 2 Let us learn the multiplication table of 6.
- 3 Let us again see the multiplication of 6 attentively.

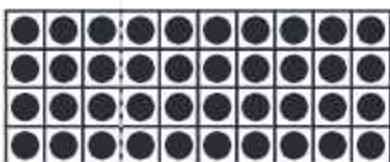
Multiplication
of 6



Multiplication
of 2

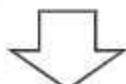


Multiplication
of 4



Multiplication Table of 6

$$\begin{aligned}6 \times 1 &= 6 \\6 \times 2 &= 12 \\6 \times 3 &= 18 \\6 \times 4 &= 24 \\6 \times 5 &= 30 \\6 \times 6 &= 36 \\6 \times 7 &= 42 \\6 \times 8 &= 48 \\6 \times 9 &= 54 \\6 \times 10 &= 60\end{aligned}$$



We can arrange the product of 6 as the product of 2 and 4. Is it correct?



It is interesting.

We know $6 \times 3 = 18$

Again, $2 \times 3 = 6$ and $4 \times 3 = 12$

Their sum is $6 + 12 = 18$



Using the above picture, let us think $6 \times 5 = 30$ which is the sum of the product of 2 and the product of 4.

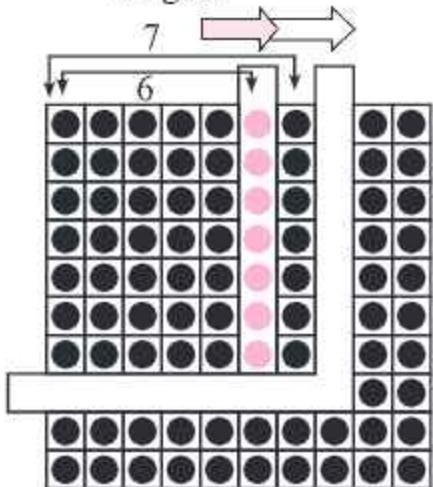
- 1 Badal's father works 5 days a week. How many days does he work in 6 weeks?

Multiplication of 7



Let us make the multiplication of 7 based on what we have learnt so far.

- 1 If we place an L-shaped paper on the pattern of 100 dots, what will we get?



My idea is

$$7 \times 1 = 7, 7 \times 2 = 7 + 7$$

$$7 \times 3 = 7 + 7 + 7 = 21$$

$$7 \times 4 = 7 + 7 + 7 + 7 = 28$$

$$7 \times 5 = 7 + 7 + 7 + 7 + 7 = 35$$

$$7 \times 6 = \dots$$

$$7 \times 1 = 7$$

$$7 \times 2 = 14$$

$$7 \times 3 =$$

$$7 \times 4 =$$

$$7 \times 5 =$$

$$7 \times 6 =$$

$$7 \times 7 =$$

$$7 \times 8 =$$

$$7 \times 9 =$$

$$7 \times 10 =$$



My idea is

$$7 \times 1 = 7, 7 \times 2 = 7 + 7 = 14$$

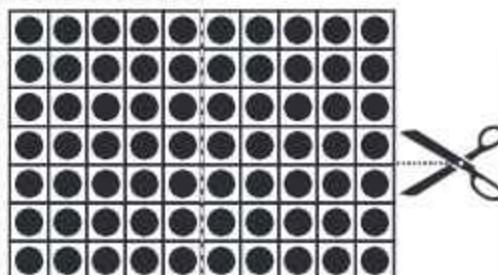
$$7 \times 3 = 14 + 7 = 21, 7 \times 4 = 21 + 7 = 28$$

$$7 \times 5 = 28 + 7 = 35$$

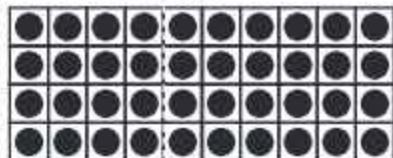
How would you calculate the multiplication of 7?

- 2 Let us learn the multiplication table of 7.
- 3 Let us observe the multiplication for 7 again with attention.

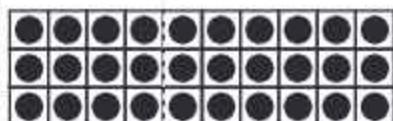
Multiplication
of 7



Multiplication
of 4



Multiplication
of 3



Multiplication

Table of 7

$$7 \times 1 = 7$$

$$7 \times 2 = 14$$

$$7 \times 3 = 21$$

$$7 \times 4 = 28$$

$$7 \times 5 = 35$$

$$7 \times 6 = 42$$

$$7 \times 7 = 49$$

$$7 \times 8 = 56$$

$$7 \times 9 = 63$$

$$7 \times 10 = 70$$

$7 \times 5 = 35$, can you show it by breaking it into the multiplication of 4 and 3 ?



Multiplication of 7 can be expressed as multiplication of 4 and 3. It is shown below:

$$4 \times 5 = 20$$

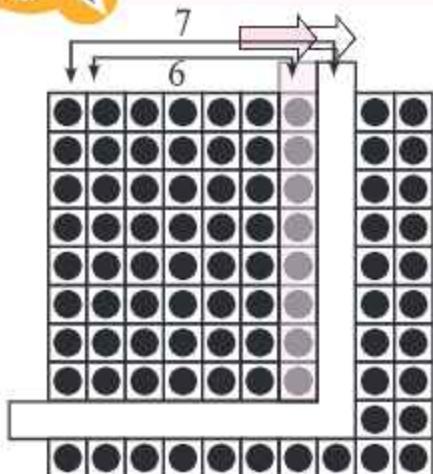
$$\begin{array}{r} 3 \times 5 = 15 \\ \hline 35 \end{array}$$

- 7 days make a week. How many days are there in 8 weeks?

Multiplication Table of 8



Let us make the multiplication table of 8 based on what we have learnt so far.



What is the possible expression of the multiplication $48 = 8 \times 6$? It has been broken into the multiplier of 3 and

$$5 : 3 \times 6 + 5 \times 6 = 18 + 30 = 48$$

Multiplication

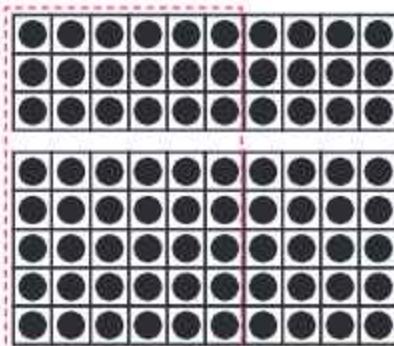
Table of 8

$$\begin{aligned}8 \times 1 &= 8 \\8 \times 2 &= 16 \\8 \times 3 &= 24 \\8 \times 4 &= 32 \\8 \times 5 &= 40 \\8 \times 6 &= 48 \\8 \times 7 &= 56 \\8 \times 8 &= 64 \\8 \times 9 &= 72 \\8 \times 10 &= 80\end{aligned}$$

$$3 \times 6 = 18$$

$$5 \times 6 = 30$$

$$18 + 30 = 48$$

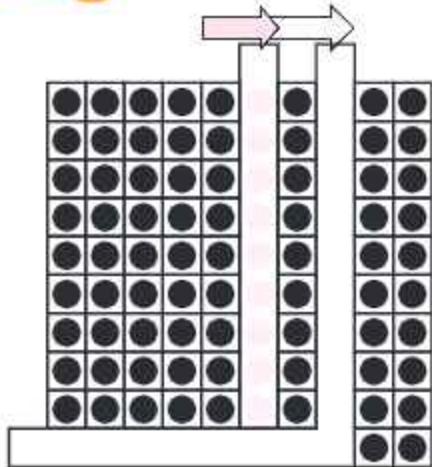


- There are 8 chocolates in 5 boxes. How many chocolates are there?
- There are 8 students in each group in a class. How many students will be there in such 9 groups?

Multiplication Table of 9



Let us make the multiplication table of 9 based on what we have learnt so far.



2. $9 \times 9 = 81$ This multiplication has been broken into multiplier of 2, 3 and 4.
3. $9 \times 2 = 18$, $9 \times 3 = 27$ and $9 \times 4 = 36$
Here, $18 + 27 + 36 = 81$

Multiplication Table of 9

$$9 \times 1 = 9$$

$$9 \times 2 = 18$$

$$9 \times 3 = 27$$

$$9 \times 4 = 36$$

$$9 \times 5 = 45$$

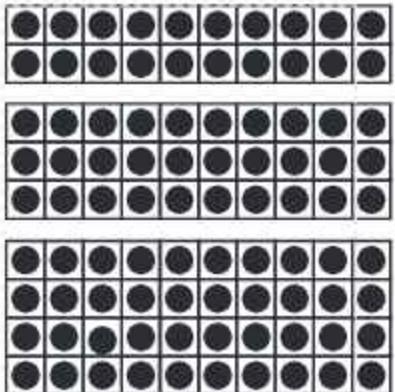
$$9 \times 6 = 54$$

$$9 \times 7 = 63$$

$$9 \times 8 = 72$$

$$9 \times 9 = 81$$

$$9 \times 10 = 90$$



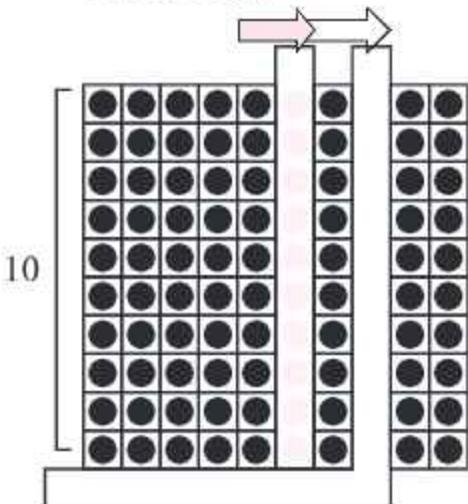
- 1 Each basket contains 9 pieces of bread. How many pieces of bread do 7 baskets contain?
- 2 Rafiq reads 9 pages in a day. How many pages does he read in 8 days?

Multiplication Table of 10



Let us make the multiplication table of 10, based on what we have learnt so far.

- 1 Let us make the multiplication table of 10, based on what we have learnt so far.



- 2 What are the possible alternatives to express multiplication of 10?

Multiplication Table of 10

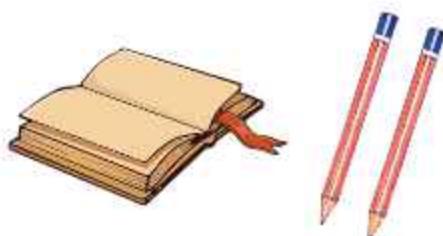
$10 \times 1 = 10$
$10 \times 2 = 20$
$10 \times 3 = 30$
$10 \times 4 = 40$
$10 \times 5 = 50$
$10 \times 6 = 60$
$10 \times 7 = 70$
$10 \times 8 = 80$
$10 \times 9 = 90$
$10 \times 10 = 100$

- There is a total of 10 fingers in the two hands of a person. How many fingers are there in the hands of 7 persons?
- How many books will be required if you give 5 books to each of 3 male students and 7 books to each of 4 female students?
- How much money do you need if you buy 7 litchis at a price of Tk. 4, 8 hog plums at Tk. 6 and 5 bananas at Tk. 9 each respectively?

Multiplication of 1



Each student of each class who stood first in the annual examination will be given 2 pencils and 1 notebook as a gift. How many things will be needed as gifts for 5 classes?



$$2 \times \boxed{\quad} = \text{_____ pencils}$$



$$\boxed{\quad} \times \boxed{\quad} = \text{___ notebook}$$

- 1 What can we find here?



I got the sum of 1×3 and 1×7 ,
as 1×10



Multiplication of 1

$$1 \times 1 = 1$$

$$1 \times 2 = 2$$

$$1 \times 3 = 3$$

$$1 \times 4 = 4$$

$$1 \times 5 = 5$$

$$1 \times 6 = 6$$

$$1 \times 7 = 7$$

$$1 \times 8 = 8$$

$$1 \times 9 = 9$$

$$1 \times 10 = 10$$

- 1 If we save Tk.1 everyday, how much will we save in 8 days?

- 2 There are 5 students in the first bench, 6 students in the second bench and 8 students in the third bench in a class. If you pay Tk.1 to each student, how much money will you need?

Multiplication of 0

We have two trays. If we keep 0 ball in each tray, how many balls will be there?

2 balls



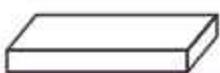
$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 2 & \times & 2 \\ & = & \boxed{} \end{array}$$

1 balls



$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 1 & \times & 2 \\ & = & \boxed{} \end{array}$$

0 balls



$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 0 & \times & 2 \\ & = & \boxed{} \end{array}$$



You can keep 3 balls in a tray. If there is no tray, how many balls can be there?

2 Trays



$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 3 & \times & 2 \\ & = & \boxed{} \end{array}$$

1 Tray



$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 3 & \times & 1 \\ & = & \boxed{} \end{array}$$

0 Tray

$$\begin{array}{ccc} \text{Ball} & \text{Tray} \\ 0 & \times & 0 \\ & = & \boxed{} \end{array}$$



The result of multiplication by 0 will always be 0. Isn't it?



Then, what is the result of the multiplication 0×0 ?

When a number is multiplied by 0, the result will also be 0. Again, if we multiply 0 by any number, the result will also be 0.

Multiplication Table**Multiplication Table**

\times	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100



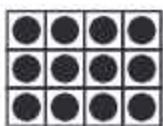
I have got a rule according to the order of multiplication.



I have got some rules for the place of ones

Let us find different types of patterns from the above table.

Interchange in Multiplication

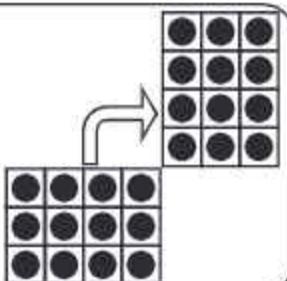


$$3 \times 4 = 12$$



$$4 \times 3 = 12$$

There are 4 marbles in 3 rows and 3 marbles in 4 rows. The total number of the marbles is the same.



1

Which numbers make the following products?

- a. 16
- b. 24
- c. 36
- d. 63
- e. 72

▲

Let us find another multiplication like this.

2

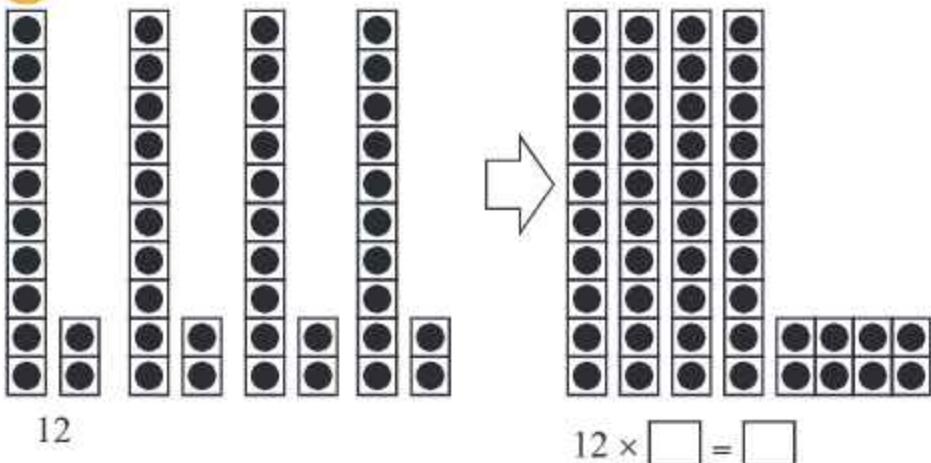
Let us fill in the blanks according to the picture below.

 $\boxed{} \times \boxed{} = \boxed{}$	 $\boxed{} \times \boxed{} = \boxed{}$
 $\boxed{} \times \boxed{} = \boxed{}$	 $\boxed{} \times \boxed{} = \boxed{}$
 $\boxed{} \times \boxed{} = \boxed{}$	 $\boxed{} \times \boxed{} = \boxed{}$

What do we see in all the cases above? The result of the multiplication does not change even if we interchange the numbers.

Multiplication

Mina can read 12 pages of a book in a day. How many pages can she read in 4 days?



We multiply ones digit first, then tens digit by 4.

$$\begin{array}{r} 1 \\ \times \\ 4 \\ \hline 4 \end{array}$$

$$12 \times 4 = 48$$

48 Pages

- 1** Let us multiply.
a. 14×2 b. 23×3 c. 11×7 d. 32×3 e. 34×2 f. 21×4

- 2** Raju's father works 8 hours in a day. If he works 3 days, then how many hours will he work?

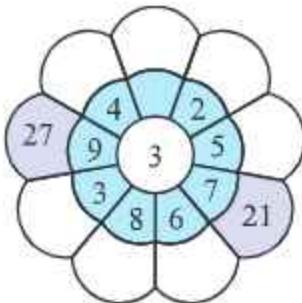
- 3** Abdul Karim wants to buy 3 story books. The price of each book is Tk.30. How much money will he need to buy the books?

Let us do.

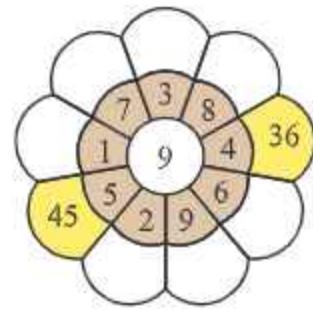
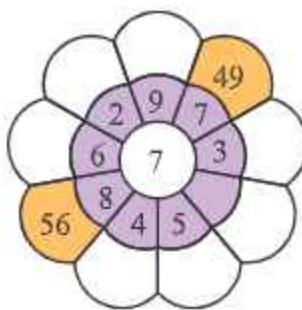
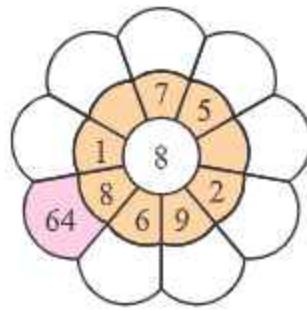
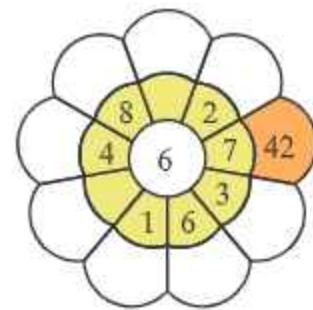
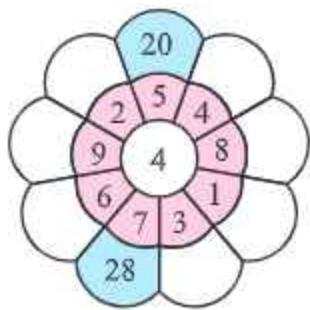
- 1 Let us fill in the blanks using multiplication table.



$$3 \times 9 = 27$$



$$3 \times 7 = 21$$



- 2 There are two chocolates in a packet. How many chocolates are there in 8 packets?

- 3 There are 10 benches in a classroom. 4 students can sit on each bench. How many students can sit in the classroom?
- 4 Your father walks 4 hours every day. How many hours does he walk in 7 days?
- 5 Ujjal wants to buy 4 books. Each book costs Tk. 22. How much money will he need to buy the books?
- 6 Multiply the numbers of the top row with the numbers of the left most column and fill in the blanks with the results:

Let us multiply: $4 \times 5 = 20$; let us write 20 in the blank.

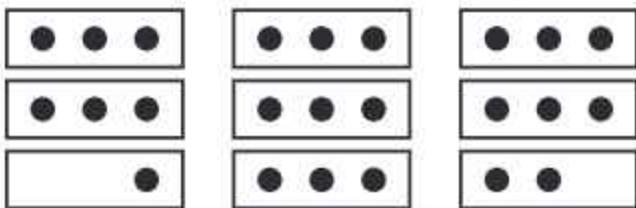
\times	3	5	2	7	4	1	8	10	9	6
1										
4		20								
7										
6										
8										
5										
2										
9										
3										
10										

Let us multiply

$$4 \times 5 = 20$$

Let us write 20 in the blank

- 7 The picture below is the seating arrangement of the students in a class. One dot (●) indicates one student. How many students are there in the classroom? Calculate the result in different approaches.

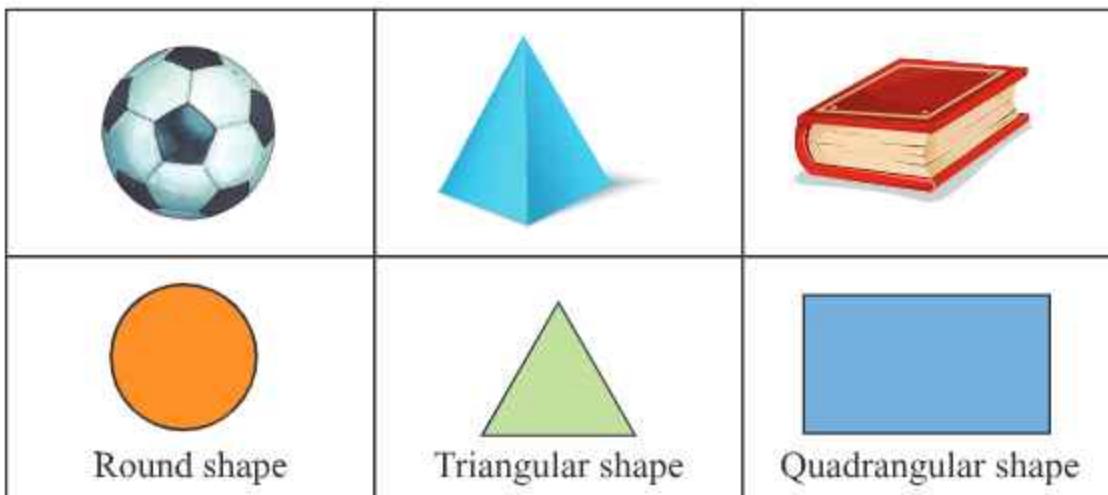


Chapter Four

Geometric Shapes and Patterns

Geometric Shapes

Geometric Shapes that we see around us.



Rafi and Tuli collected the following items. Together with them, let us identify the geometric shapes and arrange them separately.

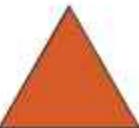


A one-taka coin is round-shaped.

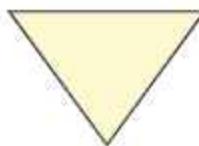
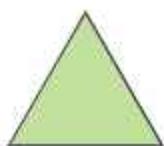
The surface of a matchbox is quadrangular shape.



1 Let us match the shapes with the objects by drawing lines.

	Ring	
	Samucha	
	Brick	

Triangular shape — Triangle



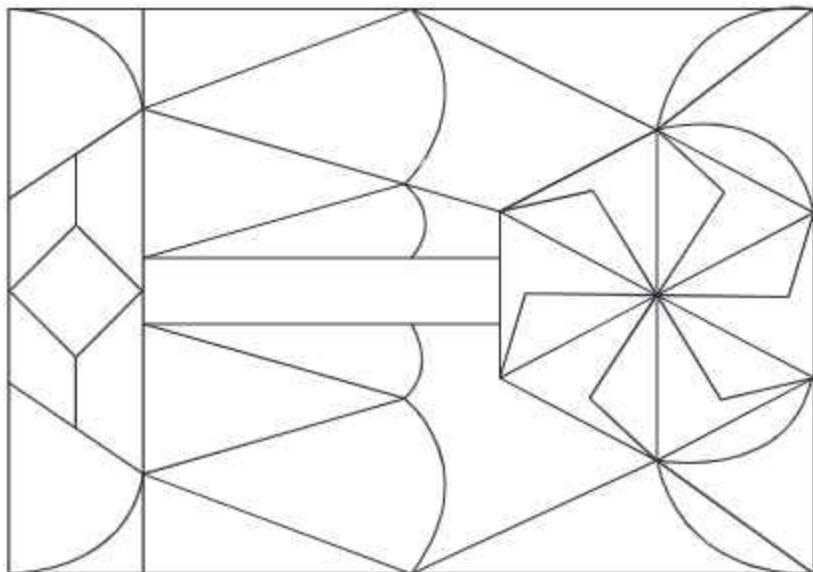
Quadrangular shape—Quadrangle/rectangle/square



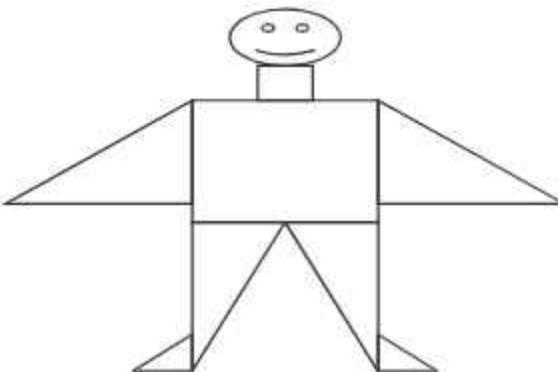
Round shape—Circular/Sphere/Cylinder



- 1** Let us identify the geometric shapes of the following delicious foods:
 - a) Samucha
 - b) Bread
 - c) Roshogolla
 - d) Biscuits
 - e) Moa
 - f) Sanar Swandesh
- 2** Let us use different colours to shade the triangular and quadrangular shapes.



- 2** A cartoon has been drawn using geometric shapes like quadrangles, triangles, and circles. How many triangles, quadrangles, and circles are there in it?



△..... □..... ○.....

Patterns



On the road, I saw a ‘zebra crossing’. It has a pattern. We use the zebra crossing to cross the roads.



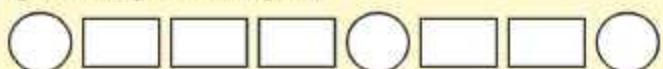
A zebra’s body has such a black and white pattern.



- 1 Let us find more patterns around us.



I have created a pattern using circular and quadrangular shapes.



I have created a pattern using triangular and quadrangular shapes.



- 1 Let us arrange the following pictures into any pattern as we like.



Chapter Five Measurement

Measurement of Length



How do we measure the length of an object?



Let us compare the length of your pencil and my pencil. Which one is shorter and which one is longer?



Yes! Your pencil is longer.
My pencil is shorter.



- 1 Compare by measuring with pencil. Measure the lengths of your mathematics book and your geometry box.



Measurement of length

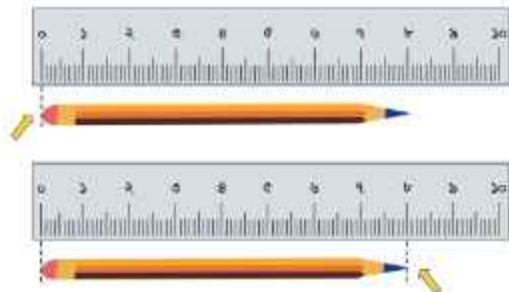
We use metre or centimetre for measuring length. We use metre to measure the long objects and centimetre to measure the short objects.

100 centimetres equals 1 metre.

Measuring tape or ruler scale is used to measure the length of an object.

Unit of length is metre.

$1 \text{ metre} = 100 \text{ centimetres}$.



How do we use ruler scale in measurement?



How is the length of a pencil measured using a ruler scale?

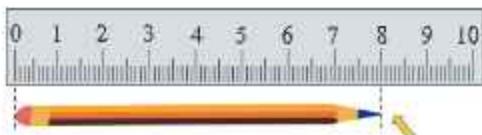
Place any end of the object on the zero mark of the ruler.



Place right at the zero mark.



Let us note the ruler's reading that marks the end of the object's other side.

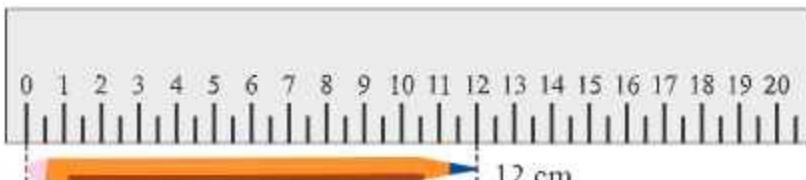


8 centimetres

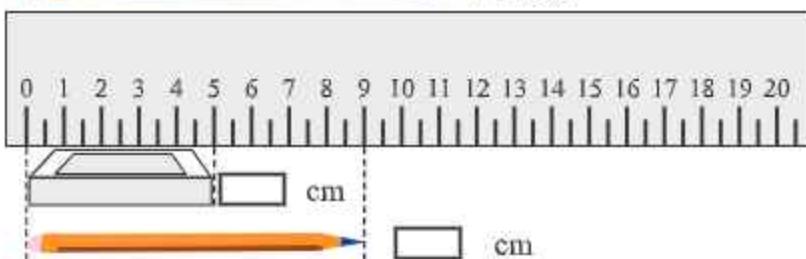
Therefore, the length of the pencil is 8 centimetres.

1. Any end of an object is placed at the zero end of the scale.
2. Let us note the ruler's reading that marks the end of the object's other side.

Fill in the blanks

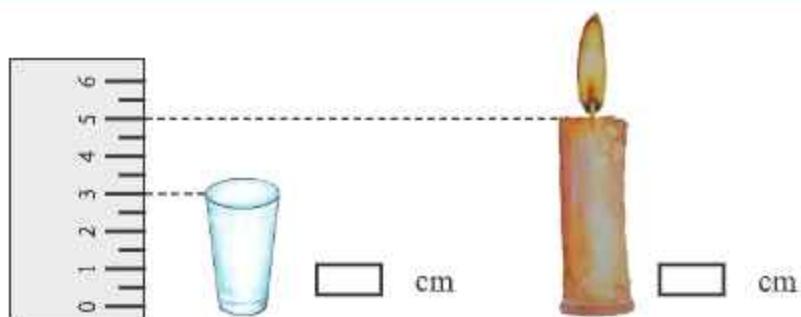


12 cm



cm

cm



- 1 Let us use ruler scale or measuring tape to measure the length and width of pen, pencil, note book, book, geometry box, blackboard, bench etc. and say to each other.

Length	Width
Note Book	Note Book
Elementary Mathematics Textbook	Elementary Mathematics Textbook
Geometry Box	Geometry Box
Blackboard	Blackboard
Bench	Bench

Measurement of Weight



Which object is heavier? A duster or a pen?



Let us compare the weight of a pen with that of a duster.



Let us take a duster in one hand and a pen in the other to compare their weight. I think the duster is heavier.



I also think so. It seems that a pen is heavier than a balloon. We may measure their weights on a balance/scale.

The unit of measuring mass is kilogram or kg. Gram, a smaller unit of mass, is used to measure objects of less weight. A balance or a scale or digital balance is used to measure the weight of an object.

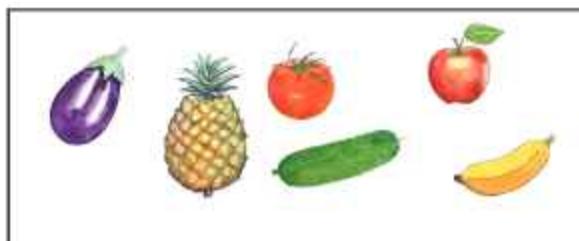
Unit of weight

Kilogram or Kg
1 Kg=1000 gram(gm)



1.

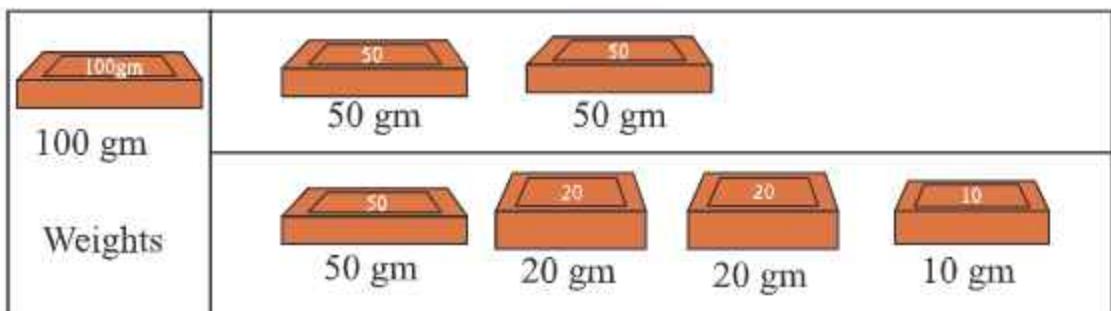
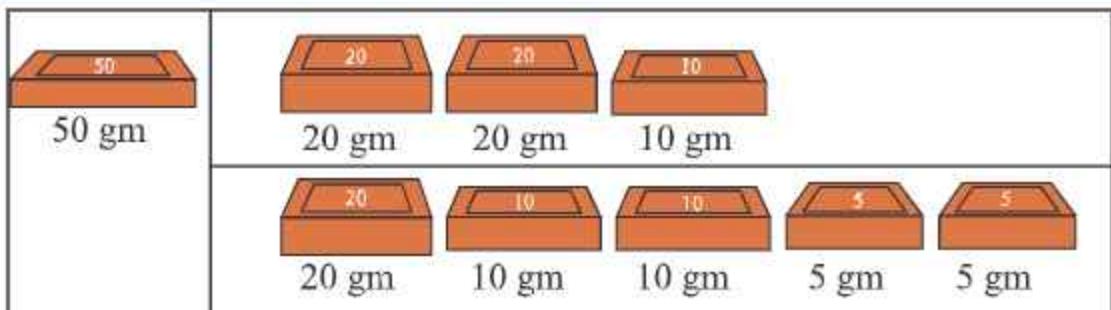
Let us compare the weight of the following objects. Which one is the heaviest? How are they compared?



5 gm	10 gm	20 gm	50 gm	100 gm

200 gm	500 gm	1000 gm/ 1 Kg

25 gm	10 gm 10 gm 5 gm		
Weights	 20 gm		
	 5 gm		



-  2 Let us measure the weight of 3 or 4 objects on a balance and on a digital balance to see if they give the same readings.

Measurement of the Volume of Liquid



Which bottle contains more water?

How can we compare the volume of water in these bottles?



1. Reza's method



Which bottle contains more water? How do you understand?

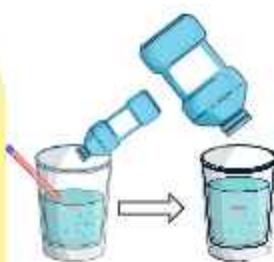
I have poured water from the first bottle to the second one.



2. Tuli's method



How will you understand which bottle contains more water?



I marked the water level on the pot.



3. Rafi's method:



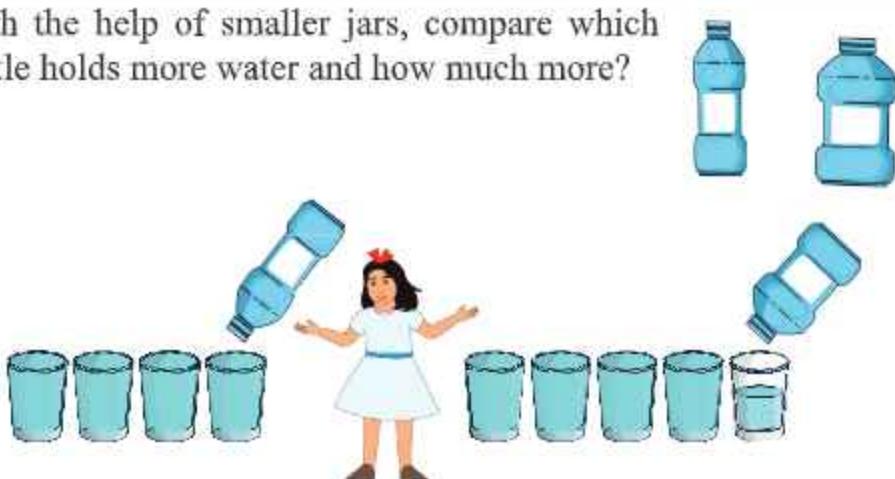
In which bottle have you got more water and why?



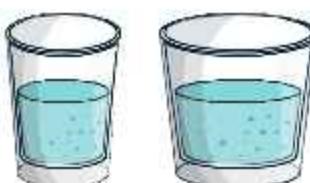
I have used two pots of the same shape.



- 1 With the help of smaller jars, compare which bottle holds more water and how much more?



- 2 Which one has more water and why?



- 3 Which container holds the most amount of water and which one contains the least?

(1)



(2)



(3)





Let us determine the volume of water that the bucket can hold.



For measuring the volume of liquid, we use the international unit Litre . English capital 'L' or small 'l' is used to mean litre.



(1) The bucket has been filled with ___ bottles of 1 litre of water. So, the bucket holds ___ litres of water.

2 How much water do the following containers hold?



1 Fill different containers using 1 litre water bottles and measure the water.

Measurement of Time



What time is it on the following clock?



Minute's
hand

Second's
hand

Hour's
hand

Unit of time

Second, minute, hour



The Hour's hand points at 3.



The Minute's hand points at 12

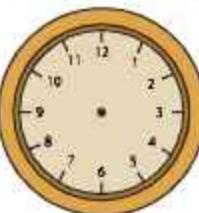
1 What time is it now?



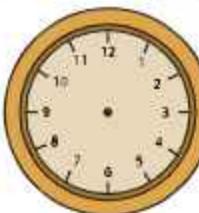
- 2 Set the clock according to the given time. (First one is done for example)



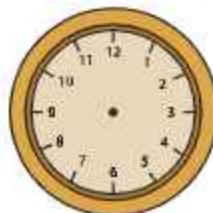
8 O'clock



2 O'clock



10 O'clock



3 O'clock

- 3 Digital watch: On a digital watch or mobile phone, the two digits on the left mean hours and the two digits on the right mean minutes.

It is 15 minutes past 11 O'clock.

11:15

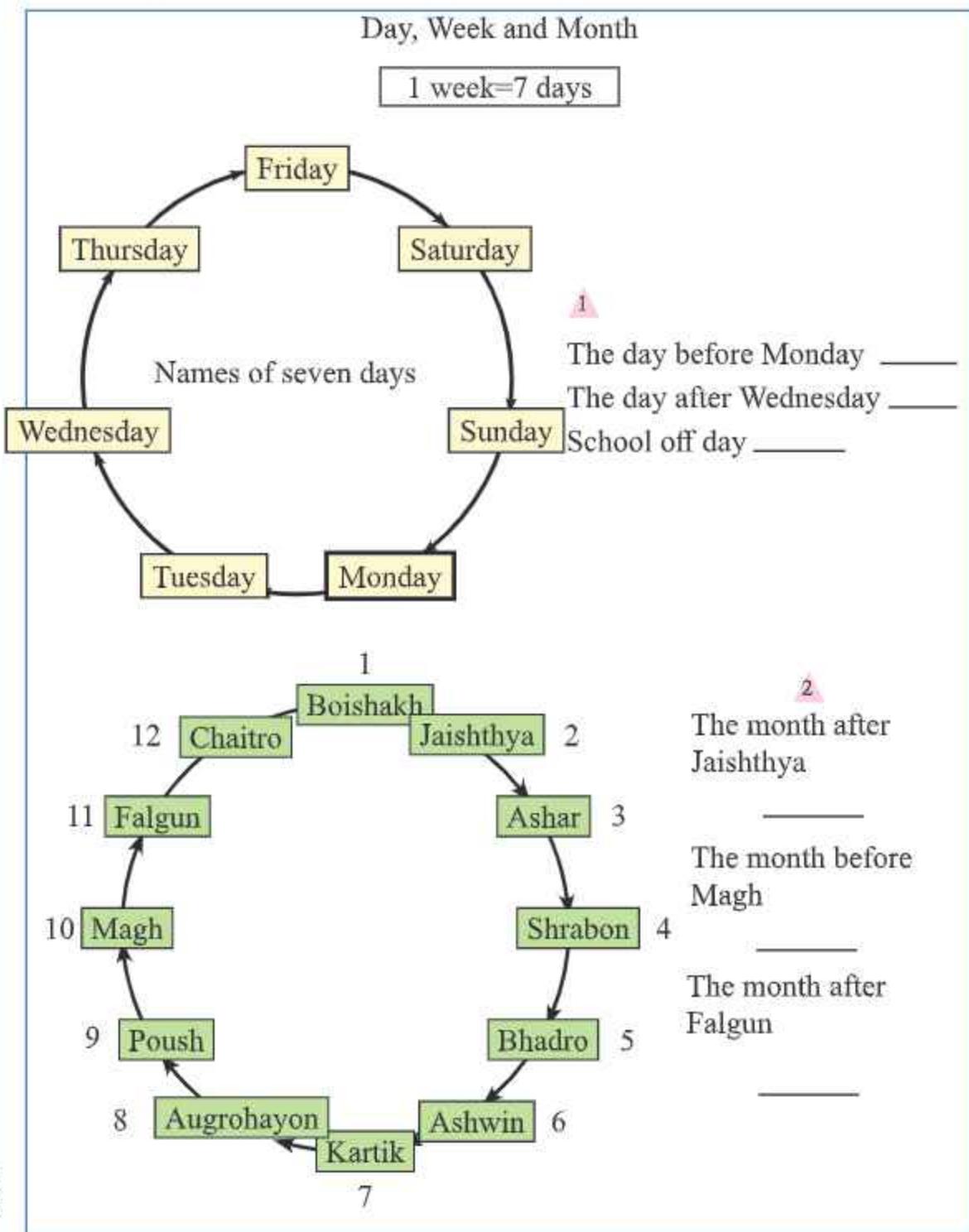
What time it is?

11:35

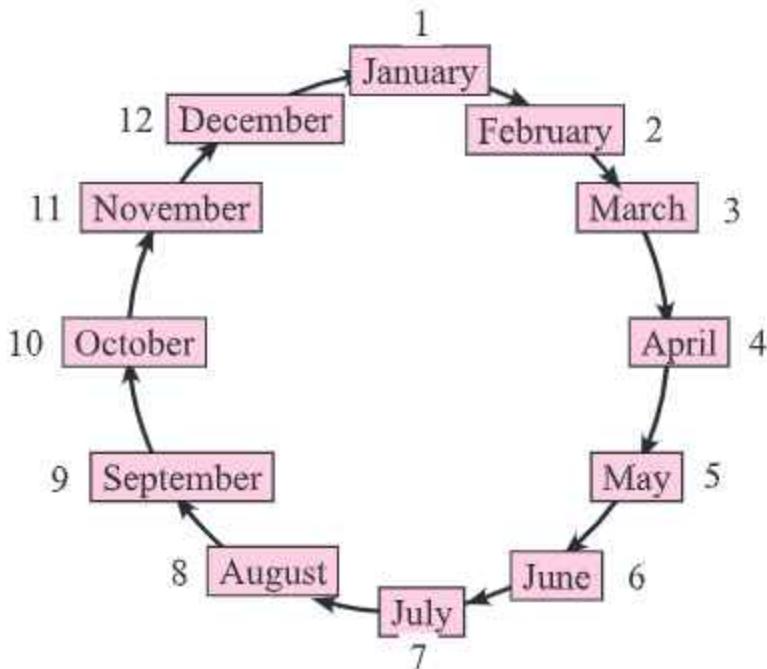
08:20

06:25

07:45



The Names of the Months in the English Calander



3 The month after March _____

The month before August _____

The month of your birth _____

- 1 Which month is before November?
- 2 What is the name of the month after two months of June?
- 3 What is the name of the month after five months of October?

Chapter Six

Currency

Bangladeshi currency

The name of the currency of Bangladesh is Taka (Tk) and its symbol is '৳'. There are two types of Bangladeshi currency: (a) Coin (b) Paper note

Coin/ Metal currency

One side of the coins	Taka	Other side of coins
	1	
	2	
	5	

Paper note

One side of the notes	Taka	The other side of the notes
	200	
	500	
	1000	

Exchange of Notes

	\leftrightarrow	 2 Tk. 100 notes
	\leftrightarrow	 5 Tk. 100 notes
	\leftrightarrow	 2 Tk. 500 notes



Let us try a different exchange.

We can exchange a note of Tk 200 with a Tk 100 note and two Tk 50 notes.



Besides, we can exchange Tk 200 in different ways. For example, two Tk. 50 notes and 5 Tk. 20 notes can be exchanged for a Tk. 200 note.



Similarly, we may exchange notes of Tk. 500 and Tk. 1000 in different ways.



Miraj bought a pen for Tk. 30. In how many different ways can Miraj pay using one taka, two taka, five taka and ten taka notes?



The cost may be paid in one of the following ways: using two Tk. 1, four Tk. 2, two Tk. 5 and one Tk. 10 notes.



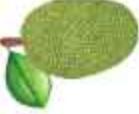
It can be paid in other combinations too.

Fill in the blanks

Taka				
1 count=TK.1	2 count=TK.4	1 count=TK.5	1 count=TK.10	
2 count = __	4 count = __	2 count = __	__ count = __	
10 count = __	5 count = __	__ count = __	0 count = __	
10 count = __	__ count = __	0 count = __	1 count = __	
__	__	__	__	
__	__	__	__	
__	__	__	__	

- 1 How can we exchange a 50 taka note using one taka, two taka, five taka, ten taka and twenty taka notes?

▲ The price of the fruits is given below. Let us pay the price using different notes and fill in the blanks.

 188 Taka	100 Taka	50 Taka	20 Taka	10 Taka	5 Taka	2 Taka	1 Taka
 60 Taka	-	50 Taka	-	10 Taka	-	-	-
 120 Taka							
 550 Taka							
 250 Taka							

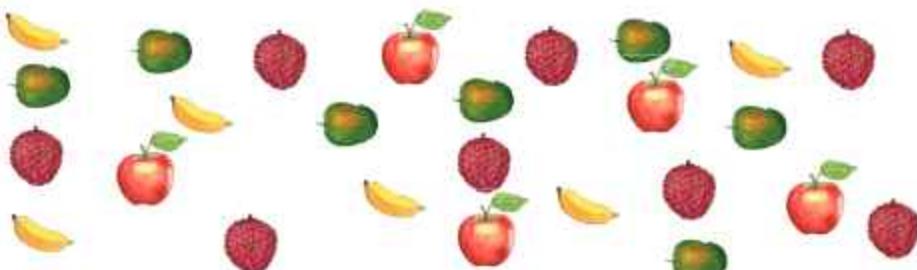
- 2 Eva bought 4 eggs for 40 taka and a packet of biscuits for 65 taka. How much money did she spend?
- 3 The price of a note book and a pen is 105 taka in total. If the price of a pen is 15 taka, what is the price of a note book?
- 4 Meherul had 100 taka. His father gave him 50 taka. He bought a geometry box for 120 taka. How much money does he have now?

Chapter Seven Data

Data Collection and Arrangement



Let us think how to find the number of fruits in the picture below.

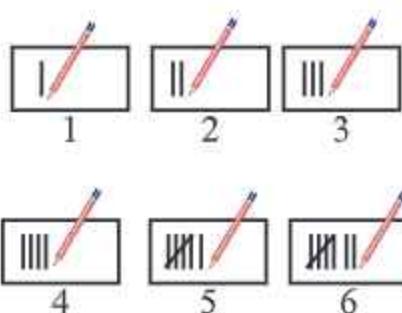


We can easily find the number of fruits by making a list.



Tally marks can also help us to find the number of fruits.

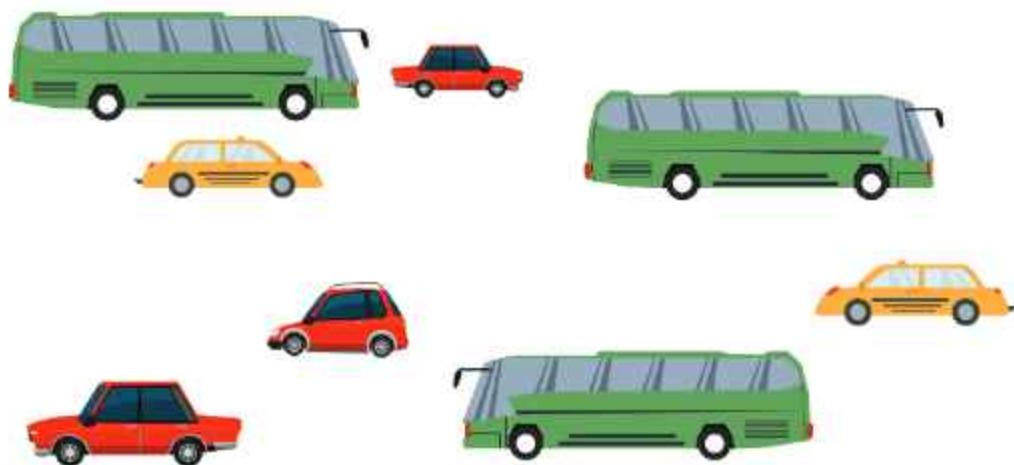
Let us draw a vertical line for each fruit of each kind. In this way we can draw 4 lines side by side. The fifth line is drawn diagonally across four lines giving a bundle of five. In this way the number of each fruit can easily be counted. These marks are called tally marks.



Count of fruits is shown using tally marks

Name	Tally	Count
Mango		7
Banana		6
Lichi		8
Apple		5

- 1 The picture below shows the vehicles that run along a street in a day. Let us write their names and make a list of the vehicles. Let us make a tally mark next to each vehicle and count the number of each vehicle. Next, let us make a table by writing numbers beside tally marks.



- 2 The teacher will demonstrate pictures of domestic animals on board. By watching carefully, students count the number of each animal drawn, using the tally marks.

9

The class representative will ask each student:

- Which of these three subjects among Bangla, English and Mathematics do you like most?
- Which of the 4 birds among crow, cuckoo, pigeon and martin is your favorite?
- Which color among red, blue, green and purple do you like most?

For each of the above cases, record the numbers using tally marks and make a table.

4

Task:

With the help of your teacher, collect 3 or 4 kinds of leaves and put them in a box in the classroom. Later, pull out one leaf at a time and put a tally mark to record the number. Then, convert the tally marks into numbers and make a table.

– The End –

To tell a lie is a great sin.

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