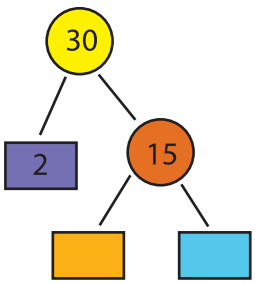
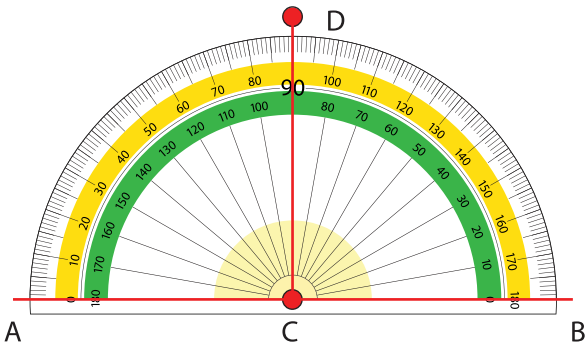
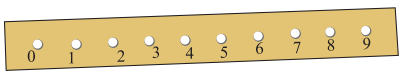
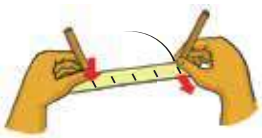
Elementary Mathematics

Class Four

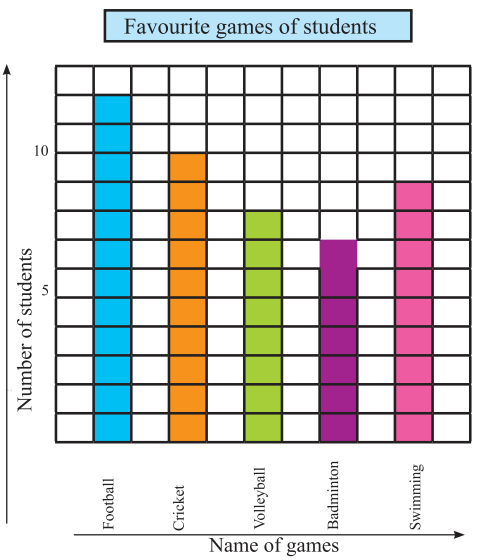












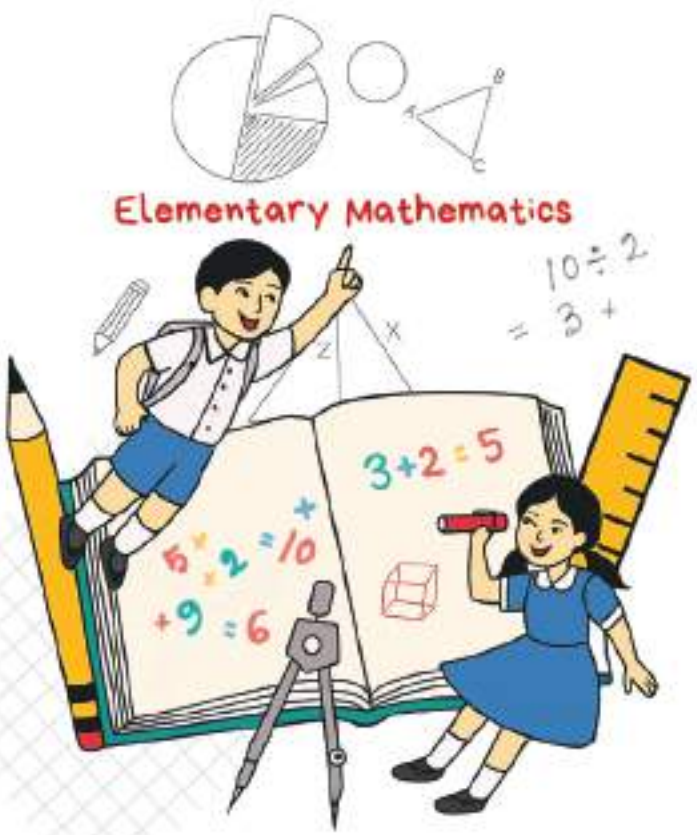
National Curriculum and Textbook Board, Bangladesh

Prescribed by the National Curriculum and Textbook Board
as a textbook for Class Four from the academic year 2026

Elementary Mathematics

Class Four

(Experimental Edition)



National Curriculum and Textbook Board, Bangladesh

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Preface

Primary education bears paramount importance in national life. Equal opportunities have been created for all children in the country to receive quality primary education irrespective of ethnicity, socio-economic status, physical and mental limitations, or geographical location. A key objective of primary education is to foster humanitarian values, follow a curriculum and textbooks tailored to the local environment and resources, and create a joyous and congenial school environment to facilitate the physical and mental development of children.

In light of the National Education Policy 2010, the National Curriculum and Textbook Board (NCTB) has adopted an integrated curriculum to make primary education more contemporary. Curricula of different countries have been reviewed and teaching learning values have been incorporated in the context of Bangladesh. This has provided a practical foundation for making education more life-oriented and effective. In the context of globalization, the psychological state of children has been given special consideration. Considering the needs and opinions of stakeholders in the changed context, necessary revisions were made in 2025 to the National Curriculum 2021 (Primary Level). In this light, textbooks for Class One to Three have already been revised, and the textbook for Class Four has been developed.

The textbook is the most important component of curriculum implementation. Prioritizing this, the NCTB is always diligent in developing textbooks for every level and grade. In the writing and editing of each textbook, the curriculum's goals and objectives have been focused upon. Careful attention has been paid to the diverse interests and cognitive capabilities of children. Special importance has been given to textbook development to ensure to provide teaching-learning activities become a joyful experience. It is hoped that each textbook will contribute to the balanced psycho-physical development of children. At the same time, it will facilitate their acquisition of desired skills, adaptability, patriotism, and moral values.

In developing the *Elementary Mathematics* textbook for Class Four, continuity with previous grades has been maintained. In developing the textbooks from Class One to Class Four, efforts have been made so that students can meet their fundamental learning needs by acquiring essential knowledge, subject-based skills, attitudes, and values. The informational and descriptive content in the textbooks for all four grades maintains continuity.

This textbook has been developed and revised under the direct supervision of the Primary Curriculum Wing of the National Curriculum and Textbook Board. Sincere thanks and gratitude are extended to all the class teachers, teacher trainers, pedagogues, curriculum specialists, subject experts, artists, and graphic designers who contributed their intellect and labor at various stages of the textbook's development, rational evaluation, finalization, and coordination. Thoughtful opinions and suggestions from all concerned for improving the textbook will be considered with importance.

September 2025

Professor Robiul Kabir Chowdhury
Chairman (Additional Charge)
National Curriculum & Textbook Board, Bangladesh

Explanation of the characters and symbols

1) Character: A dialogue between two students named Rafi and Tuli and comment by a parrot is shown in the textbook. The mathematical idea of the students would be clear through their discussion and opinion.



Rafi



Tuli



Parrot

2) The steps have been indicated by using some symbols in the lesson.

Key question: Let us solve the problem together.

Task: Let's solve the problem after discussing with the friends and teacher.

Exercise: Solve the problem by logical thinking. Discuss with the friends and take assistance from the teacher if required.

Do it yourself: Let's do it ourselves.

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Name: .....

Name of the School: .....

Class: ..... Section:.....

Roll No: .....

Chapter 1

Number and Place value

Counting numbers

The price of an environment-friendly car is 312841 taka. How can we read and write the number after counting?





Let us try to think how to count large number.

Like grade 3, we can read and write number by using place value. Let us read and write the price of the car.



Name of place value

Lakhs	Ayuts	thousands	hundreds	tens	ones
3	1	2	8	4	1
three lakh	twelve thousand		eight hundred	forty one	

Let us read the number 312841

'Three lakh twelve thousand eight hundred forty one'

3 1 2 8 4 1

1 ones — 1

4 tens — 40

8 hundreds — 800

2 thousands — 2000

1 Ayuts (12 thousands) — 10000

3 Lakhs — 300000

1. Mr. Arif has set 290516 as his mobile password. Let us read and write the number.



We can count the number as we did before.

It will be easier if we put the number in the place value table.



Lakhs	Ayuts	thousands	hundreds	tens	ones

Let us write the number in words

2. The population of a district in Bangladesh is 3169615. How will we read this number ?



we can count this large number as we did before.

Wait! It seems a little bit different. Because the space for the place value of 3 in the left is missing.

Lakhs	Ayuts	thousands	hundreds	tens	ones
1	6	9	6	1	5

3

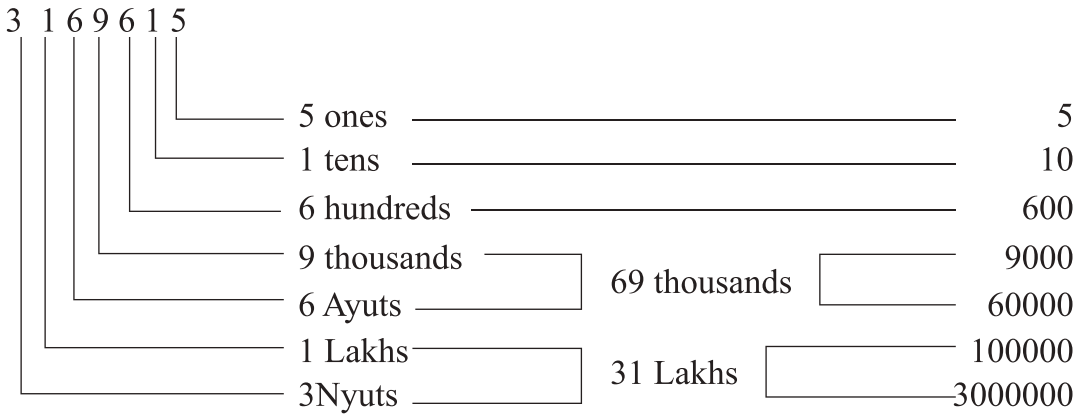


Name of place

Nyuts	Lakhs	Ayuts	thousands	hundreds	tens	ones
3	1	6	9	6	1	5

The name of new place is ‘Nyuts’. 1 Nyut is equal to 10 Lakhs.





1. Let us count and write in digits as per place value.

Nyuts	Lakhs	Ayuts	thousands	hundreds	tens	ones
		10000				1
		10000				1
	100000	10000		100		1
1000000	100000	10000	1000	100		1
1000000	100000	10000	1000	100	10	1
1000000	100000	10000	1000	100	10	

The number is .....

2. Let us read the number aloud and write in words and find the place values as shown above.

(1) 236517 (2) 3565881 (3) 5127601

3. Let us write in digits.

(1) Five lakh fifty seven thousand three hundred sixty two

(2) Twelve lakh three thousand eight hundred eighty four

(3) Fifty five lakh eighteen thousand five hundred thirty six

(4) Number formed by 4 one lakh, 12 one thousand

(5) Number formed by 18 one lakh, 73 one thousand, 6 one hundred and 34

3. According to the statistics of 2022, there were 21046091 students in primary schools of Bangladesh. How will we read and write this number?



A lot of students! I think another place is needed to write the number.

What is the name of this new place?



The name of the new place is Crore.
1 crore is equal to 10 Nyut and it is written as 10000000



Name of place

crores	Nyuts	Lakhs	Ayuts	thousands	hundreds	tens	ones
2	1	0	4	6	0	9	1
two crore	ten Lakh		forty six thousand		-	ninety one	

In International Counting System 1 nyut or 10 lakh is equal to one million.





Let us read the number '21046091'
Two crore ten lakh forty six thousand ninety one

crores	Lakhs		thousands		hundreds	tens	ones
2	1	0	4	6	0	9	1

Let us read the number in International Counting System
Twenty one million forty six thousand and ninety one.

millions			thousands			hundreds	tens	ones
	2	1	0	4	6	0	9	1

Comparison between national and international counting system

National	crores	Lakhs		thousands		hundreds	tens	ones
	crores	Nyut	Lakhs	Ayuts	thousands			
Number	2	1	0	4	6	0	9	1
International	millions		thousands			hundreds	tens	ones

4. Let us write in words.

Number		
13205628	National system	
	International system	
43451280	National system	
	International system	
7620624	National system	
	International system	
42981056	National system	
	International system	

5. Let us fill in the blanks.

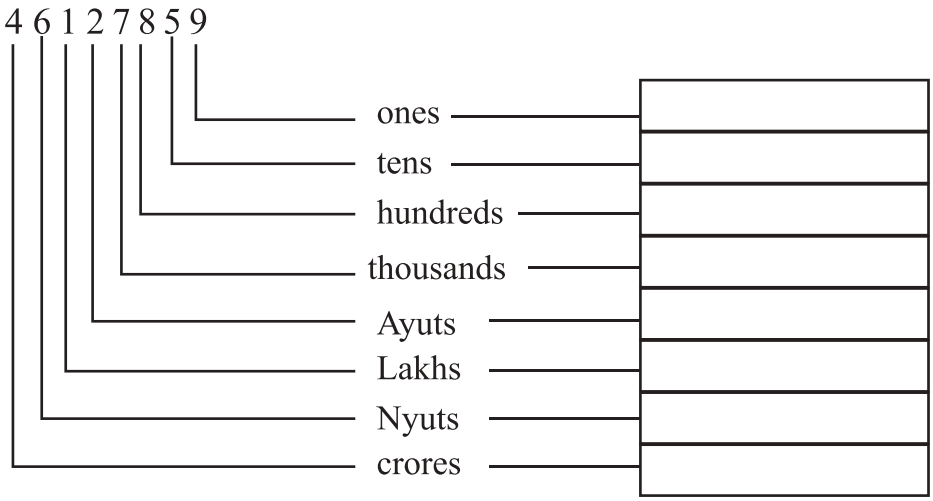
number	crores	Nyuts	Lakhs	Ayuts	thousands	hundreds	tens	ones
427805								
51287695								
7248592								
54901067								

6. (1) What are the place values of 6 and 3 in 16523912? What digit holds crores place?

(2) What digit holds nyuts place in 2455781? What is the place value of 4 ?

7. There are 81712824 male and 83347206 female among total population of Bangladesh by 2022 census. Let us read aloud, write in words, and find the place values of digits of the two numbers.

8. Let us write the place values of digits of the number.



9. Let us write in words.

(1) 2671395 (2) 38954129 (3) 44444444 (4) 20452378

10. Let us write in digits.

(1) Fifty six lakh sixty thousand seven hundred seventy nine

(2) One crore twelve lakh thirteen thousand five hundred twenty two

(3) Three crore sixteen lakh thirty three thousand nine hundred ninety nine

(4) Five crore thirty lakh fifty five thousand two hundred sixty two

Usage of 'Comma'

How can we count large number very easily?



We often face problems in counting large numbers.

To read the number easily we use comma.



Let us see the use of comma by an example.

Total number of students of primary schools in Bangladesh is approximately 21046091.

Usage of comma in National system

2,	1	0,	4	6,	0	9	1

2 digits 2 digits 3 digits

The first comma is placed after three digits from right side of the number, then following comma takes place after two digits sequentially.

Usage of comma in International system

2	1,	0	4	6,	0	9	1

3 digits 3 digits

Comma is placed after three digits sequentially in international system.

crores		Nyuts	Lakhs		Ayuts	thousands		hundreds	tens	ones
2	,	1	0	,	4	6	,	0	9	1
two crore		ten lakh			forty six thousand			-	ninety one	
Commas (,) are given after crores, lakhs and thousands places.										

We can read the number easily by using comma.



1. Let us insert a comma properly and read it loudly in both national and international system.

(1) 3206 (2) 5215723 (3) 48641785 (4) 80006

Comparison of numbers

Which number is larger?

Which number is larger between 485000 and 428000?



We learned comparison of five digit numbers in class three.

Got it! First we will compare digits in the largest place and continue with digits in smaller places sequentially.



The two digits at lakhs place are equal.

8 is greater than 2 at ayuts place.

4	8	5	0	0	0

4	2	8	0	0	0

Finally, 485000 is greater than 428000

485000 > 428000

1. Let us compare the numbers 5629071 and 5624329



We will compare larger place to smaller place digits sequentially. Sequence starts with nyuts place follwed by lakhs, ayuts, thousands, hundreds, tens and ends with ones place.



the place values of nyuts, lakhs and ayuts contain same digit 5,6 and 2



Let us compare digits in thousands place. 9 is greater than 4



Finally, we can say, 5629071 is greater than 5624329

2. Let us compare the following numbers and insert '>' or '<' in blanks.

(1) 76400 ☐ 86400 (2) 765311 ☐ 769311

(3) 4572310 ☐ 4572364 (4) 27489714 ☐ 28489714

(5) 6555212 ☐ 6555219 (6) 34052188 ☐ 68012375

1. Which number is larger between 39000 and 371020?



It seems 39000 is greater than 371020. Because 9 is greater than 7



Wait! We do mistakes frequently in reading large number. Let us place the number in proper place and put a comma.

	3	9	0	0	0
3	7	1	0	2	0

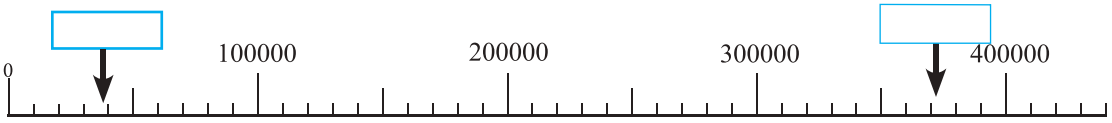
39,000 3,71,020



Wow! That's right. The number of digits here is different. It is clear that 371020 is greater than 39000.

$$371020 > 39000$$

Let us identify two numbers on number line and compare them.



Comparison of two numbers

1. The number with more digits is larger.
2. when the number of digits is equal-

(a) The number with greater digit in the largest place is greater.

(b) If the digits in the largest place are equal, then the digits in the next place are compared until a larger number is found.

(c) If the digits in every place are same, then the two numbers are equal.

3. Let us compare the following numbers and insert the symbol '>' or '<' in the blank.

(1) 98370 ☐ 214130 (2) 555555 ☐ 99999

(3) 100456 ☐ 1000456 (4) 16295205 ☐ 9598410

Ratan went to buy a bicycle with his father. They checked bicycle prices in different shops. Bicycle prices were 5648 taka, 7425 taka, 8600 taka, 6599 taka and 7450 taka. Which bicycle is the cheapest and which one is the costliest?



Ok, all the numbers are of four digits. What if we put a comma to clarify the places?

Let us arrange the numbers vertically for comparing.



5,648 7,425 8,600
6,599 7,450

→

5	6	4	8
7	4	2	5
8	6	0	0
6	5	9	9
7	4	5	0

By looking at the place value , we have

5648 < 6599 < 7425 < 7450 < 8600

Smallest Largest

The lowest price of bicycle is 5648 taka.

The highest price of bicycle is 8600 taka.



We can arrange the numbers from larger to smaller
8600 > 7450 > 7425 > 6599 > 5648

1. Let us arrange the following numbers from larger to smaller and from smaller to larger by using symbol.

763981, 57291, 64712935, 354712, 98767

It is suitable to arrange these numbers vertically.





Which one is easier- using comma or arranging vertically?

Larger to smaller

[ ] > [ ] > [ ] > [ ] > [ ]

Smaller to larger

[ ] < [ ] < [ ] < [ ] < [ ]

1. 863452, 672910, 65712950, 980279, 583296

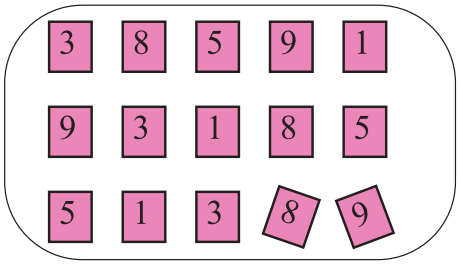
(a) Which one is the largest among the numbers?

(b) Which one is the smallest among the numbers?

2. Let us make five number cards like the picture below and build most possible numbers with them. Let us write the numbers in notebook.



Let us build number by arranging these cards in a different way.





What is the largest number we can build by arranging five cards?

What is the smallest number we can build by arranging five cards?

The largest number is ☐

The smallest number is ☐

How will we build the largest and smallest number if a card is of 0 digit?



3. There are six number cards. Let us build six digit numbers by using these cards.



(1) Let us build largest number of six digits by using all these cards.

(2) Let us build smallest number of six digit by using all these cards.

How will we build the largest and smallest number if a card is of 0 digit?





Exactly! You are right. Number does not start with zero '0'

The largest number is 974320

The smallest number is 203479

Let us share the issue with each other and find the rules and listen to other opinions.



To make the largest number, we need to put the largest digit first and the second largest digit in the second position.

Yes, of course. Thus the numbers are arranged in order from larger to smaller. Like as 974320





On the other hand, to create the smallest number, we need to place the smallest digit first and the second smallest digit second. In this way, we need to arrange the digits in order from the smallest to the largest.

We must care the placement of 0. Though 0 is the smallest digit, number does not start with 0. Zero does not show any significance by positioning on left most place. So instead of first place, we set 0 in second position. Example:

Wrong one is 023479 , right one is 203479



4. Let us build the largest and the smallest number up to six digits and discuss the formed numbers with friends.

Number	Largest	Smallest
One digit number		1
Two digit number		
Three digit number		
Four digit number		
Five digit number		
Six digit number		

(1) Which number is next to 999?

(2) Which number is prior to 10000?

5. There are seven number cards. Let us build seven digit number by using them.



(1) Let us build the largest number.

(2) Let us build the smallest number.

(3) Let us build the largest odd number.

(4) Let us build the smallest even number.

6. Number Pattern card game.

[The game can be played in pairs or teams]
First, you need to create a total of 9 number cards from 1 to 9.

If the game is played in pairs, one person takes any 3 cards from the 9 cards, creates the largest number and the smallest number and writes them in a notebook. Now, the person subtracts the smallest number from the largest number and tells the other person the digit in ones place of the subtraction. The other person hears the digit in ones place and tells the remaining two digits (ten's and hundred's place) without looking .
(let us figure out the strategy of the game and play.)

Number Pattern

50, 45, ... , 35, 30, ... , ... , 15, 10, ... ,
Which numbers will be placed to complete the pattern?



Every pattern has the specific rule. We learnt it in class 3. It is to find the rule first.

The rule of the pattern is that every number decreases by five. So in this case subtracting five (-5) is a rule.



1. Let us observe the following patterns. Let us fill in the blanks by finding rules.

(1) 6, 9, 12, 15, ☐, ☐, 24, ☐, 30, ☐, 36

(2) ☐, 10, ☐, ☐, 25, ☐, 35, 40, ☐

(3) 450, ☐, 350, 300, ☐, 200, ☐, ☐, 50

(4) 8888, ☐, 6666, ☐, 4444, 3333, ☐, 1111

2. Let us discuss with the classmates the pattern built randomly.

3. Let us make a pattern which starts with 34 and ends with 634. The next number is 100 more than the prior number.

1. Which number fills in pattern 3, 6, 12, 24, 48, ☐ ?



It seems that this pattern is a little bit different. The rule is not easy to find.

Think carefully, every number doubles.
3×2=6, 6×2= 12, 12×2=24, 24×2=48 empty box contains 48×2=96



In every case, the next number is double to prior number. That is why, the rule defines by prior number × 2

4. Let us find the rule and complete the pattern by filling blanks.

1) 2, 6, 18, 54, ☐ , ☐	rules :	previous number × 3
2) 4, 8, 16, 32, ☐ , ☐	rules :	
3) 1, 5, 25, ☐ , ☐	rules :	
4) 3, 12, 48, ☐ , ☐	rules :	
5) 1, 10, 100 ☐ , ☐	rules :	

2. 3, 2, 7, 3, 2, 7, 3, ☐ , 7, ☐ , 2, ☐ Which numbers fill in the blanks?



This pattern is a little bit different.

It seems that three numbers (3,2,7) repeat again and again in this sequence.



Pattern as follows is 3, 2, 7, 3, 2, 7, 3, 2, 7, 3, 2, 7

5. Let us find the rule and complete the pattern by filling in the blanks.

1) 1, 3, 5, 1, 3, 5, 1, ☐ , ☐

2) 4, 5, 7, 4, 5, 7 , ☐ , 5, ☐

3. Which number will fill in the blanks?

23	19
31	27
42	38
?	45



Certainly, there is a different rule here but I don't understand it.



I found a rule. In every row, the second number is 4 less than the first number or the first number is 4 more than the second number in the row.

With this rule, fill in the blanks: 45 + ☐ = ☐

6. Let us find the number in the blanks.

55	43
66	54
78	66
?	83

7. Let us complete the following patterns

1) 104, 113, 122, 131, 140, ☐, ☐, Rule : .....

2) 990, 880, 770, 660, 550, ☐, ☐, ☐ Rule : .....

3) 0, 9, ☐, ☐, ☐, ☐ Rule : Previous number+9

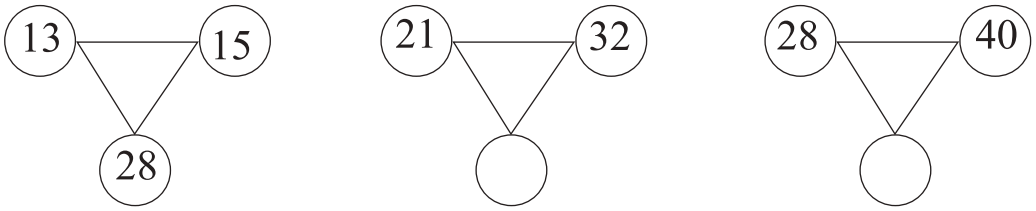
4) ☐, 409, 399, 389, 379, ☐, Rule : .....

5)

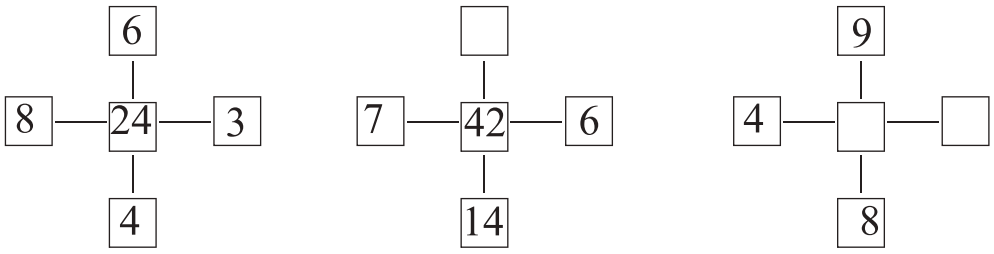
30		24	21					6	3	Rule : .....

8. Let us fill the blanks of following patterns.

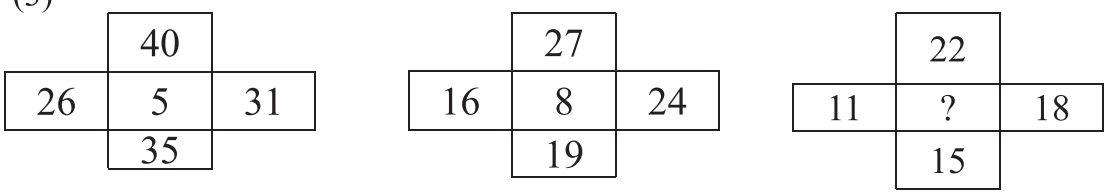
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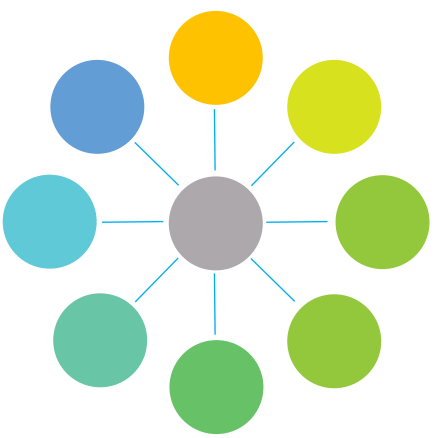
(2)



(3)



(4) Let us set numbers from 1 to 9 in the number cycle so that the sum of three numbers in every line will be 15.



(5) Discussing with the classmates let us complete the pattern by finding rule.

0	1	1	2	3	5	8	13					

Let us try

1. Let us build the largest number and the smallest number by using number cards and place comma properly.

7	5	0	4	8	1	3

The largest number is ☐

The smallest number is ☐

Let us find the place value by placing the largest number in the blanks below.

Let us write the number							
Let us write the place value							

2. Let us write the number 4318507 in words.

☐

3. Let us write the number 8405731 in words using the international number system.

☐

4. Let us arrange 58209, 1092, 82300, 999, 2410 in order by using symbol.

Larger to smaller

☐ > ☐ > ☐ > ☐ > ☐

Smaller to larger

☐ < ☐ < ☐ < ☐ < ☐

5. Let us complete the pattern of 0, 7, 7, 14, ☐, ☐, ☐ and write the rules ☐

Let us do

1. Let us put a tick mark (√) on the correct answer.

(1) What is the place value of '2' in the number 72510?

a) Tens b) hundreds c) thousands d) Ayuts

(2) If the largest number is formed by the digits 0,9,8 and 3, what will be the place value of 8?

a) 8 b) 80 c) 800 d) 8000

(3) How many digits are there in twenty seven lakh five hundred thirty four.

c) 5 b) 6 c) 7 d) 8

(4) What is the largest even number formed by the digits 4, 8, 8, 6, 0, 7?

a) 406788 c) 887640 c) 886704 d) 407886

(5) Rothi wrote the smallest five digit number and asked Shathi to write the number prior to it.

a) 1000 b) 10000 c) 999 d) 9999

2. Let us read aloud, write in words and find place values.

(1) 968556 (2) 8169290 (3) 28916782 (4) 20202022

3. Let us write the numbers in digits and words.

(1) Numbers made up of 69 thousand (2) Numbers made up of 100 lakhs

(3) Numbers made up of 2000 thousands (4) Numbers made up of 12 lakhs, 12 thousands, 12 hundreds and 12

4. Following the example, let us put the numbers in the correct place.

Example 478231 (1) 6719043 (2) 87291755

Crores	
Nyuts	
Lakhs	4
Ayuts	7
Thousands	8
Hundreds	2
Tens	3
Ones	1

Crores	
Nyuts	
Lakhs	
Ayuts	
Thousands	
Hundreds	
Tens	
Ones	

Crores	
Nyuts	
Lakhs	
Ayuts	
Thousands	
Hundreds	
Tens	
Ones	

5. Let us put commas in the correct place.

(1) 13524897 (2) 77777777 (3) 97237658

6. Let us compare the numbers below and put the '<', '>', or '=' sign

(1) 89437 ☐ 87437 (2) 11100 ☐ 11101

(3) 289999 ☐ 299998 (4) 638924 ☐ 1232104

(5) 30330303 ☐ 30330303 (6) 88888788 ☐ 8888788

7. Let us build numbers using all the cards below

0	5	2	8	6	3

(1) Let us build the largest number.

(2) Let us build the smallest number.

(3) Let us build the largest odd number.

(4) Let us build the smallest odd number.

8. The population of some districts as per the 2024 census is given below. Let us arrange the numbers from the smallest to the largest. Find which district has the highest population and which district has the lowest population.

District name	Population
Tangail	40,37,608
Jessore	27,64,547
Magura	9,18,419
Khagrachari	7,14,119
Khulna	23,78,971

9. Let us collect population data of 8 divisions of Bangladesh from various sources (magazines, guardians, internet etc) and arrange the numbers from larger to smaller.

10 Let us complete the patterns below.

(1) 9, 18, 27, 36, ☐ , ☐

(2) 48, 40, 32, 24, ☐ , ☐,

(3) 178, 172, 166, 160, 154, ☐ , ☐

(4) 25, ☐ , ☐ , ☐, 45, ☐ , ☐ , ☐ , 65

11 Let us build a pattern that starts with 0 and the rule is +8 with the previous number.

Chapter 2

Addition and Subtraction

Addition



In a litchi garden, 8504, 9725, 9233 and 7549 litchis were picked from four trees respectively. How many litchis were picked from those four trees in the garden?



We did such additions in class 3. First, we add the digits of ones places, then sequentially add the digits of the places of tens, hundreds, and thousands.



You are right. Let us think and find out how to do the addition keeping numbers in hand.

	2	1	2	
	8	5	0	4
	9	7	2	5
	9	2	3	3
+	7	5	4	9
3	5	0	1	1

ones place 4 + 5 + 3 + 9 = 21

tens place 0+ 2 + 3 + 4 + 2 = 11

hundreds place 5 + 7 + 2 + 5 + 1 = 20

thousands place 8 + 9 + 9 + 7 + 2 = 35

1. Let us add.

(1)
$$\begin{array}{r} 467 \\ 830 \\ +\ 351 \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 4792 \\ +\ 3280 \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 6392 \\ 777 \\ +\ 2853 \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 3504 \\ 725 \\ 9233 \\ +\ 5549 \\ \hline \end{array}$$

(5)
$$\begin{array}{r} 333 \\ 4552 \\ 111 \\ +\ 1003 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 5139 \\ 3730\,2 \\ 2465\,1 \\ +\ 989 \\ \hline \end{array}$$

(7) 512 + 222

(8) 3782 + 4520 + 1111

(9) 4444 + 3333

(10) 98 + 649 + 4872

(11) 57232 + 43201

(12) 24371 + 5793 + 67813

48936 women, 49877 men and 8372 children live in a city.
What is the total population of that city?



Here, we have to find out the total population of the city.

Mathematical sentence

Let us add the numbers putting them vertically.

	2	2	1	1	
	4	8	9	3	6
	4	9	8	7	7
+		8	3	7	2
1	0	7	1	8	5

ones place	6 + 7 + 2 = 15
tens place	3 + 7 + 7 + 1 = 18
hundreds place	9 + 8 + 3 + 1 = 21
thousands place	8 + 9 + 8 + 2 = 27
Lakhs place	4 + 4 + 2 = 10

In case of addition, the number in hand should be put in proper place.



The total population is 107185

1. Let us add.

(1) 3 3 5 8
+ 4 5 7 1

(2) 4 7 2 4 9
+ 3 5 7 8 6

(3) 5 7 3 4 4
+ 2 6 8 4 7

(4) 3 7 9 9 0
+ 4 5 2 7 8

(5) 1 8 9 3 4
+ 6 2 6 2 3

(6) 3 4 7 5 4
+ 4 3 4 7 5

(7) 2 3 6 6 1
5 8 8 9
+ 3 2 7 4 6

(8) 4 3 8 5 4
2 5 8 0 5
+ 2 6 3 7 3

(9) 9 9 9 9 9
+ 1

1. How much is the total price of two motorcycles?



165725 taka



144999 Taka



Since we want to know the total price, the calculation process will be addition.

Mathematical sentence ☐

	1	1	1	1	1	
	1	6	5	7	2	5
+	1	4	4	9	9	9
	3	1	0	7	2	4

ones place	5 + 9	= 14
tens place	2 + 9 + 1	= 12
hundreds place	7 + 9 + 1	= 17
thousands place	5 + 4 + 1	= 10
Ayuts place	6 + 4 + 1	= 11
Lakhs place	1 + 1 + 1	= 3

Total price is 310724 Taka.

The process of addition is in fact the same, but the number kept in hand has to be considered carefully.



2. Let us add.

(1)
$$\begin{array}{r} 3\,4\,2\,3\,1\,8 \\ +\ 2\,5\,7\,6\,4\,0 \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 4\,7\,9\,3\,7\,8 \\ 2\,3\,1\,0\,6\,3 \\ +\ 1\,4\,5\,6\,9\,2 \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 5\,7\,9\,3\,2\,0 \\ 9\,8\,3\,5\,3 \\ 2\,5\,8\,9\,2\,4 \\ +\ 1\,6\,7\,3\,2\,9 \\ \hline \end{array}$$

3. Let us find the number in the blanks.

(1)

	5	3	6	9	□
	2	7	9	□	5
+	1	0	□	4	9
	□	2	2	7	6

(2)

	4	1	0	7	□	3
	1	3	□	8	2	6
	2	5	7	3	8	□
+	□	4	2	□	4	9
	9	□	7	7	5	2

(3)

	□	2	2	2	2	8
	1	□	8	7	□	0
	3	7	9	3	5	□
+	1	4	□	9	4	3
	8	8	6	□	7	5

In case of horizontal addition, first we will add the digits of each number in ones place and then put the sum in ones place. If there is a digit in hand, it will be added to the sum of digits in tens place. In the same way, we will add the digits in tens, hundreds, thousands, ayuts and lakhs places and put them in their places. It will be convenient to put a '/' mark on the calculated place.

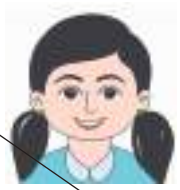
2. 243681 + 189234 + 452011+ 332810 + 212453= ☐



Let us solve the problem.

(1) Ones place

1 + 4 + 1 + 0 + 3 = 9



243681 + 189234 + 452011 + 332810 + 212453 | | | | | | | 9 |

(2) Tens place

243681 + 189234 + 452011 + 332810 + 212453 | | | | | | 1 | 8 | 9 |

(3) Hundreds place

243681 + 189234 + 452011 + 332810 + 212453 | | | | | 2 | 1 | 8 | 9 |

(4) Thousands place

243681 + 189234 + 452011 + 332810 + 212453

= | | | | | | 1 | 8 | 9 |

(5) Ayuts place

243681 + 189234 + 452011 + 332810 + 212453

= | | | | | | 1 | 8 | 9 |

(6) Lakhs place

243681 + 189234 + 452011 + 332810 + 212453

= | | | | | | 1 | 8 | 9 |

4. Let us add horizontally.

(1) 2510 + 3618 + 2320 +1954

(2) 2416 + 1042 + 1420 + 4329 + 2156

(3) 40321 + 14025 + 28734 + 29381

(4) 36180 + 2371 + 30278 + 1203 + 28716

(5) 321819 + 230913 + 144782 + 218903 + 110123

5. Let us add vertically.

(1)
```
  2513
  1242
+ 5234
------
```

(2)
```
  3281
   675
  4826
+ 2621
------
```

(3)
```
  32724
   9063
  12626
+ 21151
-------
```

(4)
```
  291045
  173422
    5826
   24770
+ 390246
--------
```

(5)
```
  32731
   4328
  64390
   5439
+ 7395
------
```

(6)
```
  16353
  27154
  26439
  18235
+ 19834
-------
```

(7)
```
  541297
  107629
  238712
  218793
+ 295621
--------
```

(8)
```
  329760
  217034
   56381
    1654
+ 182304
--------
```

6. Let us solve by putting digits in the blanks.

(1) 2150 + 351 □ + 1310 + 1 □ 14 + 11 □ 1 = □ 393

(2 1 □ 3 + 321 + 400 □ + 2222 + □ 333 = 9 □ 99

(3) □ 4163 + 1 □ 425 + 14 □ 03 + 23 □ 0+ 16025 = 6715 □

(4)

	□	4	8	2
	7	2	5	4
+	5	7	4	8	□
	□	0	□	□	1

(5)

			5	4	3	
		4	3	2	□	7
	□	5	3	8	9	2
	1	7	8	5	3	□
+	3	2	7	□	0	4
□	5	0	3	5	1	8

(6)

2	1	5	6	□	
1	□	6	0	2	
2	5	6	□	8	
2	1	□	1	3	
+	□	2	2	4	3
□	0	0	0	0	0

3. Let us choose some 6 digits numbers whose total will be 1000098

(1) Let us start with two numbers.

+						
1	0	0	0	0	9	8



How can I do the task? I have to think of the task.

Let us start with the ones place.



The ways of getting 8 as the sum of two digits at ones places are :

0	1	2	3	4
8	7	6	5	4
8	8	8	8	8

2026



Got it! In the same way, I can find the digits in the other places.

[Example]

	1	1	1			
	6	7	4	7	3	4
+	3	2	5	3	6	4
1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

(2) Let us add by taking three numbers.

	3	4	2	4	3	6
	3	2	5	1	2	6
+	3	3	2	5	3	6
1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

Wow! How interesting! Now let us try to match that same sum by taking five 6-digit numbers as we like.



(3) Let us add by taking five numbers.

	2	2	4	2	2	
	1	5	1	9	6	4
	2	2	3	5	2	5
+	2	4	4	8	8	6
	1	3	5	9	4	6
	2	4	3	7	7	7
1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

+

1	0	0	0	0	9	8

Subtraction

A litchi seller has 7652 litchis. From them he sold 2679 litchis. How many litchis does he have now?



Let us discuss how to subtract 4 digit numbers.

Let us subtract the digits in ones place first and successively subtract the next places.



$$\begin{array}{r} {\scriptstyle 4}\ {\scriptstyle 10} \\ 7\ 6\ \cancel{5}\ 2 \\ -\ 2\ 6\ 7\ 9 \\ \hline \qquad\quad 3 \end{array}$$

[Ones place] 12 – 9 = 3

We cannot subtract 9 from 2. So, move 1 ten (=10 ones) from tens place to the ones place and subtract 9 from 12.

$$\begin{array}{r} \qquad {\scriptstyle 10} \\ {\scriptstyle 5}\ {\scriptstyle 4} \\ 7\ \cancel{6}\ \cancel{5}\ 2 \\ -\ 2\ 6\ 7\ 9 \\ \hline \qquad\ 7\ 3 \end{array}$$

[Tens place] 14 – 7 = 7

We cannot subtract 7 from 4. So, bring 1 hundred (=10 tens) from hundreds place to tens place and subtract 7 from 14.

$$\begin{array}{r} \qquad\quad {\scriptstyle 10} \\ {\scriptstyle 6}\ {\scriptstyle 5} \\ \cancel{7}\ \cancel{6}\ \cancel{5}\ 2 \\ -\ 2\ 6\ 7\ 9 \\ \hline \qquad 9\ 7\ 3 \end{array}$$

[Hundreds place] 15 – 6 = 9

We cannot subtract 6 from 5. So, bring 1 thousand (= 10 hundreds) from thousands place to hundreds place and subtract 6 from 15.

$$\begin{array}{r} \qquad\quad {\scriptstyle 6} \\ \cancel{7}\ \cancel{6}\ \cancel{5}\ 2 \\ -\ 2\ 6\ 7\ 9 \\ \hline 4\ 9\ 7\ 3 \end{array}$$

[Thousands place] 6 – 2 = 4

We can subtract 2 from 6. So, it will be 6 – 2 = 4 in thousands place.

There are 4973 litchis.

1. Let us subtract.

(1) $\begin{array}{r} 5\,8\,0 \\ -\ 3\,2\,5 \\ \hline \end{array}$

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

(3) $\begin{array}{r} 7\,8\,3\,6 \\ -\ 4\,5\,6\,1 \\ \hline \end{array}$

(4) $\begin{array}{r} 4\,0\,2\,9\,1 \\ -\ 1\,7\,7\,7 \\ \hline \end{array}$

(5) $\begin{array}{r} 5\,2\,3\,0 \\ -\ 3\,2\,7\,8 \\ \hline \end{array}$

(6) $\begin{array}{r} 2\,8\,3\,0\,4 \\ -\ 1\,6\,5\,2\,9 \\ \hline \end{array}$

There were 76,984 spectators on the first day and 90,568 on the second day in a football tournament. What is the difference between the numbers of spectators of the two days?



Since we need to find the difference, we need to subtract.

We have to subtract the smaller number from the larger number.



Mathematical sentence

	9	0	5	6	8
-	7	6	9	8	4
					4

[Ones place] 8–4 = 4
We can subtract 4 from in ones place 8.

			4	10	
	9	0	5	6	8
–	7	6	9	8	4
				8	4

[Tens place] 16–8 = 8
We can't subtract 8 from 6, so we bring 1 hundred (10 tens) from hundreds place to tens place and subtract.

		9	10	4	
	8	10			
	9	0	5	6	8
–	7	6	9	8	4
			5	8	4

[Hundred place] 14–9 = 5
We cannot subtract 9 from 4, so we bring 1 thousand (=10 hundreds) from thousands place to the hundreds place, but there is only '0' in thousands place. So let's bring 1 ayut (=10 thousands) from ayuts place to thousands place. Then bring 1 thousand (=10 hundreds) from thousands place to hundreds place and subtract.

			9		
	8		10		
	9	0	5	6	8
–	7	6	9	8	4
		3	5	8	4

[Thousands place] 9–6= 3
We moved 1 ayut (10 thousands) to thousands place and 1 thousand to hundreds place. So we have 9 thousands in thousands place. And we can subtract 6 from 9.

			9		
	8		10		
	9	0	5	6	8
–	7	6	9	8	4
	1	3	5	8	4

[Ayuts Place] 8–7 = 1
We can subtract 7 ayuts from 8 ayuts.

The difference in the number of spectators is 13584 people.

1. 100000 saplings were planted on both sides of a road. If 187 saplings died, how many saplings would have survived?

Dead saplings should be excluded from the total number of saplings.



Mathematical sentences

1	0	0	0	0	0
		–	1	8	7

[Ones place]

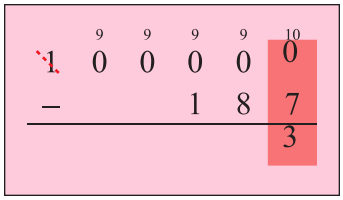
We cannot subtract 7 from 0, so we bring 1 ten (= 10 ones) to ones place. But the number in tens place is '0'. So we have to move 1 hundred (= 10 tens) from hundreds place to tens place but there is also '0' in the hundreds place and '0' in the place of thousands and ayuts.



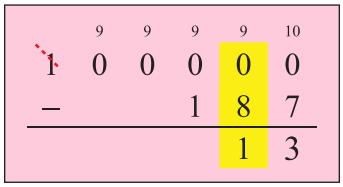
I don't understand how to solve the problem.

Let us bring 1 lakh (= 10 ayut) from lakhs place to ayuts place. Let us bring 1 ayut from 10 ayuts (= 10 thousand) to thousands place. In this way, we solve by moving 1 thousand from thousands place to the hundreds place, 1 hundred from hundreds place to tens place, 1 ten from tens place to the ones place.

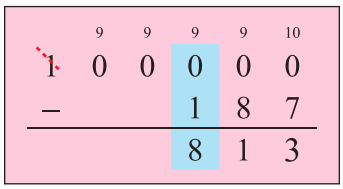




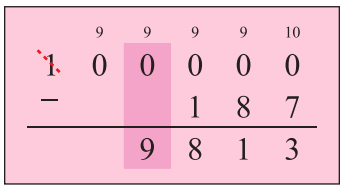
[Ones place] 10 – 7 = 3



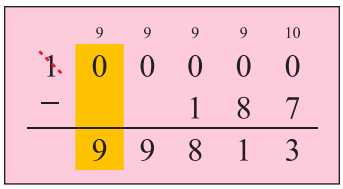
[Tens place] 9 – 8 = 1



[Hundreds place] 9 – 1 = 8



[Thousands place] There will be no subtraction (or 9-0 = 9).



[Ayuts place] There will be no subtraction here. (or 9-0= 9)

∴ 99813 saplings survived.

1. Let us subtract vertically.

(1) 10000 − 99

(2) 100000 − 111

(3) 100000 − 1

(4) 5397 − 928

(5) 7237 − 4355

(6) 17894 − 8493

(7) 28169 − 3784

(8) 52197 − 27681

(9) 10000 − 789

(10) 972361 − 98024

(11) 100000 − 89

(12) 823651 − 532876

2. Let us subtracth horizontally.



As in addition, we can subtract digits beginning from ones place to the larger places. Let us mark the calculated figures with '/' and be careful while keeping in hand.

[Example]

$\overset{6}{7}\overset{3}{4}\overset{2}{3}\overset{10}{2}9 - 46836 = 27493$

2. Let us subtract.

(1) 7692 − 3249 = ☐

(2) 67493 − 23654 = ☐

(3) 92370 − 23155 = ☐

(4) 542719 − 95288 = ☐

(5) 638210 − 321789= ☐

(6) 100000 − 11111= ☐

3. Let us find the difference by creating the largest and the smallest number using the following digits.

5	2	9	0	7

4. Let us make a story with the mathematical sentence 753 − 230 = ☐

Relations Between Addition and Subtraction

Total number of men and women in an area is 458525. If the number of women is 206388, what is the number of men?



As we need to find the number of men, the number of women should be subtracted from the total number of men and women.

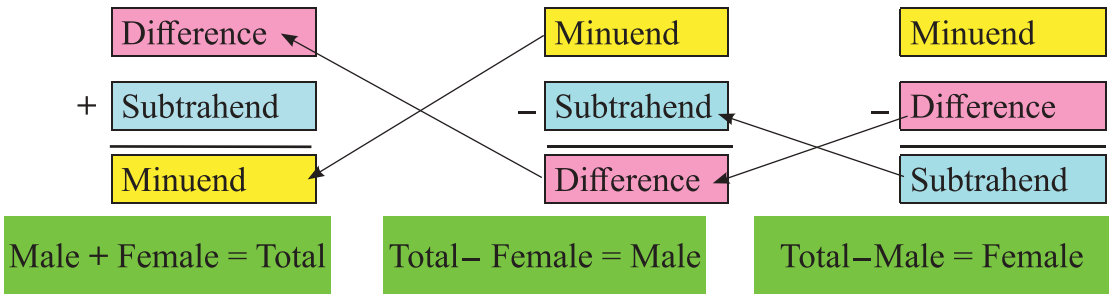
Mathematical sentence

$$\begin{array}{rl} & {}^{10}\\ & 4\ \ 1\ 10\\ 4\ 5\ 8\ 5\ 2\ 5 & \longrightarrow \text{Minuend}\\ -\ 2\ 0\ 6\ 3\ 8\ 8 & \longrightarrow \text{Subtrahend}\\ \hline 2\ 5\ 2\ 1\ 3\ 7 & \longrightarrow \text{Difference} \end{array}$$

The number of men is 252137

We learned in class 3, that there is a relation between minuend, subtrahend and difference. Let us recall





Using the relation between addition and subtraction, we can determine the third one if any two of the minuend, subtrahend, and difference are known.

9. Let us solve the following two problems using the relation between addition and subtraction.

A school has 260 girls and 279 boys. How many students are there in that school?	A school has a total of 539 students out of which 260 are girls. How many boys are there in that school?

2. Let us fill in the blanks.

(1) 5555 − ☐ = 3333 (2) ☐ + 2222 = 5678

(3) 3456 + ☐ = 5678 (4) ☐ − 17253 = 9566

1. Abir had 4865 taka. His mother gave him 733 taka more before going to the market. He spent 1045 taka for shopping. How much money is left with him now?



The money given by his mother should be added and the money spent for shopping should be subtracted.

The mathematical sentence will be ☐

Let us calculate.

$$\begin{array}{r} 4\,8\,6\,5 \\ +\quad 7\,3\,3 \\ \hline \square \end{array} \quad \Rightarrow \quad \begin{array}{r} \square \\ -\,1\,0\,4\,5 \\ \hline \square \end{array}$$

Remaining money

∴ Now he has ☐ taka.

3. A metro train started its journey with 1048 passengers from a station. At the next station, 148 passengers got down and 180 new passengers boarded. How many passengers are there in the metro train now?

3. Let us put some numbers in the blanks as we wish and make a story. [One is done for you.]

57321 + 8550 − 1030 = ?	There are 57321 plants in a garden. 8550 new saplings were planted, out of which 1030 saplings died. How many plants are there now?
☐ + ☐ + ☐ = ?	
5941 + 687 + 1050 − 3075 = ?	Mr. Abdur Rahim has 5941 taka. He gets 687 taka by selling mangoes and 1050 taka by selling fishes. He spends 3075 taka for his family. How much money is left in his hand now?
☐ + ☐ − ☐ − ☐ = ?	

3. Salma spent 72 taka for notebook, 60 taka for pen and 185 taka for a geometry box from a shop. If she gives 500 taka to the shopkeeper, how much money will she get back?



I think the problem has to be solved in two steps. So there will be two mathematical sentences.

Total cost of notebook, pen and geometry box should be added and the sum should be deducted from five hundred taka to get the refund.



Mathematical sentences: $72 + 60 + 185 = \square$

$500 - \square = \square$

Let us calculate.

Step 1:

$\square + \square + \square = \square$

Step 2: $500 - \square = \square$ ∴ The shopkeeper will return $\square$ taka

4. The sum of the present age of mother and daughter is 98 years. 8 years ago the age of the daughter was 25 years.

(1) What is the present age of the girl?

(2) What is the present age of the mother?

(3) How old will the mother be after 10 years?





Let's make some more mathematical stories like this one and solve them.

Making mathematical stories is interesting.



Let us try

1. Let us calculate.

470238 82031 2956 + 51169	834901 38299 60327 + 999	852016 – 98201	945105 – 63274

371904 + 57012 + 7702 + 501456 = ☐ 760034 – 5290 = ☐

2. Minu had 15570 taka. Her elder brother gave her 2200 taka. If Minu gives 1685 taka to her younger sister, how much money does she have now?

☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐

☐ taka left.

3. 925 fish fingerlings were released in Mr. Roni's pond. 120 fewer fish fingerlings were released in Mr. Rakib's pond and 187 more fish fingerlings were released in Mr. Reza's pond than in Mr. Roni's pond. How many fish fingerlings were released in their ponds in total?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Total number of fish fingerlings released ☐

4. Fatima buys a pencil box for 175 taka and pens for 40 taka. If she gives the shopkeeper 500 taka, how much money will the shopkeeper return?

☐ ☐ ☐ ☐ ☐ ☐

Shopkeeper will return ☐ taka.

Let us do

1. Let us put a tick mark (√) on the correct answer.

(1) Which one is correct?

a) Subtrahend+Minuend = Difference b) Minuend−Subtrahend = Difference

c) Minuend × Subtrahend = Difference d) Subtrahend ÷ Minuend = Difference

(2) Nila and Mila have 11320 taka in total. If Nila has 7019 taka, how much money does Mila have?

a) 4011 taka b) 4301 taka c) 7019 taka d) 11320 taka

(3) Moni and Roni's father bought two bicycles for 12820 taka and 11380 taka respectively. How much money was spent to buy two bicycles?

a) 11380 taka b) 12820 taka c) 23100 taka d) 24200 taka

(4) 9999 - 999 = 9000, What is the subtrahend here?

a) 9999 b) 9000 c) 999 d) 99

(5) If the subtrahend is 799 and difference is 201, what is the minuend?

a) 201 b) 598 c) 799 d) 1000

2. Let us calculate vertically.

(1)	76281 4629 + 21982	(2)	82450 999 + 19345	(3)	127280 34746 219825 + 53891	(4)	370821 127836 211893 506322 + 438720
(5)	64382 − 999	(6)	37201 − 12837	(7)	693521 − 327810	(8)	863427 − 2399

3. Let us calculate horizontally.

(1) 23781+ 34291+ 6788 (2) 340326 + 210024 + 561286+452398

(3) 20000 − 17253 (4) 872530 − 278176

4. Fill in the blanks.

(1) 65231 + ☐ = 97238 (2) 23805 + 13276 + ☐ = 56318

(3) ☐ − 6483 = 3517 (4) 982531 − ☐ = 247389

5. A warehouse has 14845 sacks of rice, 10483 sacks of wheat and 6958 sacks of pulses. How many sacks of goods are there in the warehouse?

6. Find a number that is 475 more than 3582.

7. Find the difference between the largest and the smallest numbers formed by 3, 8, 5, 0, 6, 4 using each of them only once.

8. Which number will you add to 83291 to get the sum 128792?

9. The sum of three numbers is 89340. If two of them are 32074 and 20689, what is the third number?

10. Shyamal has 490 taka more than Shimul. Shimul has 502 taka less than Saikat. Saikat has 980 taka. How much money do Shimul and Shyamal have? How much money do three of them have together?

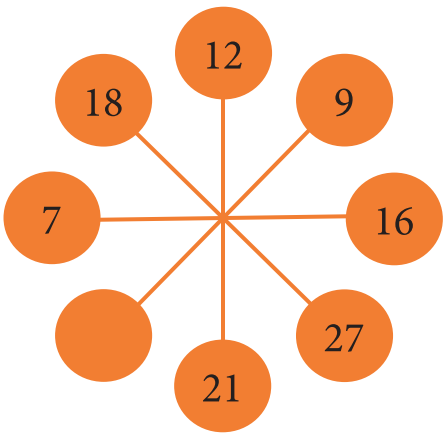
11. Mr. Zahid bought a land for 285000 taka. He spent 28500 taka for registration and 9045 taka for planting trees on the land. After some days, he sold the land for 410675 taka. How much money did he get as profit?

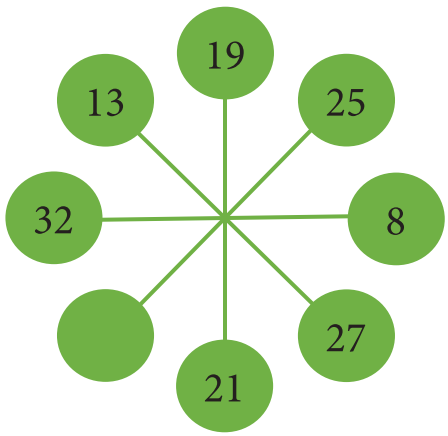
12. 10 years ago, the sum of the age of father and son was 76 years. At present the father's age is 66 years. How old will the son be after 7 years?

13. Let us make a story with the mathematical sentence

2587 − 854 − 399 − 250 = ☐

14. Let us find the rule of the pattern and find the number in the blanks.





Chapter
3

Multiplication



The price of a duck is 354 taka . What is the price of 29 ducks?

We did this type of calculation in class 3. It is to multiply 345 by 29.





I have done vertical multiplication.

I have done horizontal multiplication.



		3	5	4
		×	2	9
3 5 4 × 9 →		3	1	8	6
3 5 4 × 20 →	7	0	8	0
	1	0	2	6	6

$354 \times 29 = 354 \times (20 + 9)$

$= 354 \times 20 + 354 \times 9$

$= 7080 + 3186$

$= 10266$

$354 \times 29 = 10266$

Multiplicand ☐

Multiplier ☐

Product ☐

Since 20 and 9 make 29, I multiplied 354 by 20 and 9 separately and added the two products.



Multiplicand × Multiplier = Product

1. Let us think about how to calculate 535 × 125

```
  5 3 5
× 1 2 5
-------
  2 6 7 5
```

535 × 125

5 × 5= 25; 5 is in ones place and the carried 2 is in tens place.

3× 5=15; (15+2=17),7 is in tens place and carried 1 is in hundreds place.

5 × 5= 25; (25+1=26), 6 is in hundreds place and carried 2 is in thousands place.

```
  5 3 5
× 1 2 5
-------
  2 6 7 5
1 0 7 0 0
```

535 × 20

Let us put 0 in ones place, then multiply 535 by 2

5 × 2= 10; 0 is in tens place and carried 1is in hundreds place.

3× 2= 6; (6+1=7) , 7 is in hundreds place.

5 × 2= 10; 10 is in thousands place.

```
  5 3 5
× 1 2 5
-------
  2 6 7 5
1 0 7 0 0
5 3 5 0 0
```

535 × 100

Let us put 0 in ones place and tens place, then let us multiply 535 by 1

5 × 1= 5; 5 is in hundreds place, 3× 1= 3; 3 is in thousands place

5 × 1= 5; 5 is in ayuts place.

```
  5 3 5
× 1 2 5
-------
  2 6 7 5
1 0 7 0 0
5 3 5 0 0
-------
6 6 8 7 5
```

Let us add.

1. Let us multiply.

(1) 2 4 8 × 3 2

(2) 3 9 5 × 4 3

(3) 4 0 5 × 5 5

(4) 6 8 4 × 2 3 6

2. Let us multiply.

(1) 284 × 24 (2) 325× 28 (3) 705× 51 (4) 803× 39

(5) 2 7 6 × 1 7 4 (6) 6 3 1 × 2 5 2 (7) 3 9 8 × 4 2 8 (8) 9 0 5 × 472

Let us solve 4500 × 700 by using the fact 45 × 7= 315

45 × 7 = 315

45 ×100 → 4500 × 7 → 315 × 100 → 31500

4500 × 7 ×100 → 700 → 31500 × 100 → 3150000

31500 × 10000 = 3150000





4500 × 700

=45 × 100 × 7 × 100

= 45 × 7 × 100×100

= 315 × 10000

= 3150000

Both are giving the same result. They have calculated these easily.



3. Let us try to multiply vertically of 5400 × 720 by using the fact 54 × 72 = 3888

5 4 0 0	100 times	5 4
× 7 2 0	10 times	× 7 2
1 0 8		1 0 8
3 7 8 0		3 7 8 0
3 8 8 8 0 0 0		3 8 8 8

1000 times

5400 × 720

= 54 × 100 × 72 × 10

= 54 × 72 × 100 × 10

= 3888 × 1000

= 3888000

In other words, we first multiply the numbers except for the last '0'. Then we put as many 0s at the end of the product as there are at the end of the multiplicand and the multiplier.



1. Let us Multiply the following numbers by using the fact $21 \times 34 = 714$

(1) 210×340 (2) 2100×34 (3) 210×3400

2. Each of the 132 students of a primary school in a village was given a stipened of 1564 taka to buy pencils, pens and notebooks. How much money was given to them in total?

1564 taka was given to everyone. So, we need to multiply to find the total amount of money of 132 students.



Mathematical sentence 1 5 6 4 × ☐ = ☐

1 5 6 4
× ☐ ☐ ☐

1564 × ☐ ⟶ ☐ ☐ 2 8
1564 × 30 ⟶ 4 ☐ 9 ☐ 0
1564 × ☐ ⟶ ☐ 5 ☐ 4 0 0

☐ 0 ☐ 4 4 8

In total ☐ taka was given

2. Let us multiply.

(1) 6 2 5 0 × 4 2 2 (2) 8 0 7 0 × 3 4 0 (3) 4 1 8 9 × 2 8 5 (4) 1 0 1 0 × 5 6 0

3. Let us multiply in simple method.

(1) 2 4 5 × 9 9

= 2 4 5 × (100 – 1)

= 2 4 5 × ☐ – 2 4 5 × ☐

= ☐ – ☐ = ☐

Product ☐

(2) 9 9 9 × 3 4

= (☐ – ☐) × ☐

= ☐ × ☐ – ☐ × ☐

= ☐ – ☐

= ☐

Product ☐

3. Let us multiply using simple method.

(1) 643 × 99 (2) 999 × 39 (3) 435 × 700 (4) 5060 × 400

(5) 99 × 990 (6) 575× 999 (7) 750 × 950 (8) 7940× 200

4. Let us multiply.

(1) 5239 × 383 (2) 8056 × 826 (3) 7504 × 890 (4) 1087 × 502

4. Let us fill in the blanks to complete the multiplications.

(1)

$$\begin{array}{r} 46 \\ \times\ 5\square \\ \hline 9\square \\ 2300 \\ \hline 23\square 2 \end{array}$$

(2)

$$\begin{array}{r} 350 \\ \times\ \square 0\square \\ \hline 2800 \\ 0\square 00 \\ 3\square 5000 \\ \hline 31780 \end{array}$$



In case of (1),
I noticed that
46 × 50=2300
Then I calculated the other digits.

In case of (2), I noticed
350× ☐ = 2800 and
350× ☐ = 3150



5. 1590 × 235 = ☐

Let us make a story.



There are 1590 families living in our area. Every family donated 235 taka to build a culvert. What was the total amount of donation?

There are 1590 chicks in a farm. Each chick weighs 235 grams. What is the total weight of the chicks ?



Now it's your turn to write a story.

Let us try

1. Let us multiply.

(1)
$$\begin{array}{r} 6\,5\,8 \\ \times\, 4\,7 \\ \hline \square\square\square\square \\ \square\square\square\square\square \\ \hline \square\square\square\square\square \end{array}$$

(2)
$$\begin{array}{r} 9\,3\,2 \\ \times\, 6\,7\,4 \\ \hline \square\,7\,\square\,8 \\ 6\,5\,\square\,\square\,\square \\ 5\,\square\,9\,2\,\square\,0 \\ \hline 6\,2\,\square\,1\,\square\,8 \end{array}$$

2. Let us open a page of our Mathbook and count the number of words in that page. Let us multiply this number of words by the number of total pages of the book to find the approximate number of words.

Solution: Total number of words : ☐ × ☐

= ☐

3. Let us fill in the blanks with appropriate digits

(1)
$$\begin{array}{r} 3\,4 \\ 4\,\square \\ \hline 1\,\square\,0 \\ 1\,\square\,6\,0 \\ \hline \square\,5\,\square\,0 \end{array}$$

(2)
$$\begin{array}{r} 2\,\square \\ \square\,3 \\ \hline 8\,4 \\ 1\,\square\,0\,0 \\ \hline 1\,\square\,8\,\square \end{array}$$

(3)
$$\begin{array}{r} \square\,4\,5 \\ 3\,\square\,2 \\ \hline 4\,\square\,0 \\ 1\,9\,\square\,0\,0 \\ 7\,\square\,5\,0\,\square \\ \hline 9\,\square\,5\,9\,0 \end{array}$$

4. (1) $999 \times 42 = (1000 - 1) \times 42$

$= \square \times 42 - \square \times 42$

$= \square - \square$

$= \square$

(2) $9900 \times 345 = (\square - 100) \times 345$

$= \square \times 345 - \square \times 345$

$= \square - \square = \square$

Let us do

1. Let us put a tick mark (√) on the correct answer.

(1) 9700 × 100 = What?

a) 970 b) 9700 c) 97000 d) 970000

(2) 112 × 12 = 1□44, Which digit will be placed in empty box?

a) 1 b) 2 c) 3 d) 4

(3) 78×40 = 3120, If the multiplicand is considered as the multiplier and the multiplier is as the multiplicand, what will be the product?

a) 312 b) 1600 c) 3120 d) 6084

(4) Ria has 99 notes of hundred taka. How much money does Ria have?

a) 99 taka b) 990 taka c) 9900 taka d) 99000 taka

(5) 1432 × 300 = what?

a) 1732 b) 3296 c) 32960 d) 429600

2. Let us answer in short.

(1) What is the formula to find a product?

(2) 5600 × 10 = what?

(3) 48 × ☐ = 240

(4) If the price of a pen is 6 taka, what is the price of two dozen pens?

(5) What happens to the product when the multiplicand and the multiplier are interchanged?

3. Let us multiply.

(1) 875× 100 (2) 6210 × 100 (3) 9481 × 520 (4) 1000 × 100

(5) 691 × 532 (6) 753 × 417 (7) 5702 × 580 (8) 918 × 359

(9) 3 6 0 9 × 8 1

(10) 4 0 5 8 × 6 5 7

(11) 5 7 0 2 × 8 0

(12) 6 5 1 0 × 8 3 0

4. Let us multiply in simple method.

(1) 389 × 99 (2) 706 × 99 (3) 999 × 59 (4) 6 0 9 × 99

(5) 1745× 999 (6) 3726 × 990 (7) 5 8 3 9 × 900 (8) 64 0 0 × 5 0 0

5. One ream contains 500 sheets of paper. How many sheets are there in 163 reams ?

6. A worker earns 525 taka per day. How much money does he earn in 3 months 18 days? (1 month= 30 days)

7. Sabiha earns 650 taka per day by sewing. How much money does she earn in 235 days?

8. Each of the 49 bundles contains 500 football match tickets. How many tickets are there in the bundles in total?

9. A chocolate box contains 250 pieces of chocolates. How many pieces are there in 647 boxes?

10. Mr. Muhib saves 2345 taka per month. How much money will he save in 16 years?

11. The price of a bicycle is 8975 taka. What is the total price of 425 bicycles?

12. You have a 250-meter-long rope, what will be the total length of 17 pieces of such ropes?

13. Let us make a story by the following mathematical sentence.

(1) 240 × 25 = ☐ (2) ☐ × 72 = 7200

Chapter
4

Division

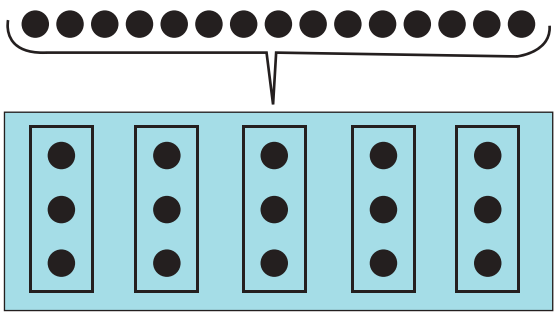
If 15 marbles are divided equally among 5 people, how many marbles will each person get?



Mathematical sentence 15÷5= ☐



we can calculate by using dots instead of marble.



15÷5=3 ∴ Everyone will get 3 marbles.

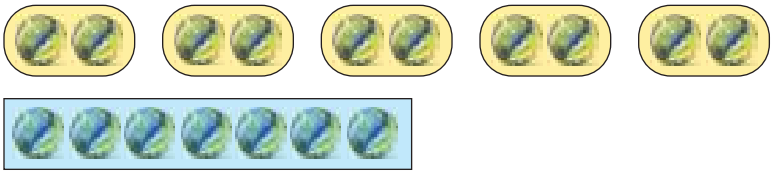
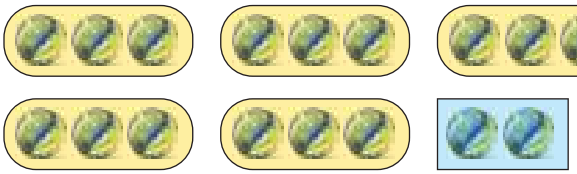


1. If 17 marbles are divided equally among 5 people, how many marbles will each person get?





Mathematical sentence $17 \div 5 =$ ☐

	When 2 marbles are given, $2 \times 5 = 10$, 7 remain.
	When given 3 marbles, $3 \times 5 = 15$, 2 remain.
	When 4 marbles are given, $4 \times 5 = 20$, 3 more are required.



Each person gets 3 marbles and number of remaining marbles is 2

Let us think about the difference between two problems above.



There is no marble left in the first problem. On the other hand, there are 2 remaining marbles in the second problem. Therefore, it is not possible to distribute the marbles equally.

In division, if there is no remainder, it is perfectly divisible and if there is a remainder, it is not perfectly divisible.

1. You bought 20 chocolates from a shop and went home. You distributed chocolates among all members of your family. How many chocolates will everyone get?

Let us divide vertically 65 ÷5

5)	6	5	

→ First Let us divide 6 by 5

	1		
5)	6	5	
	5		
	1		

→ We get 5 as a product of 5 and 1. Let us put quotient 1 above tens place of dividend. It is 1 by subtracting 5 from 6

	1		
5)	6	5	
	5	↓	
	1	5	

→ Let us drop 5 of ones place down.

	1	3	
5)	6	5	
	5	↓	
	1	5	
	1	5	
		0	

→ We get 15 as a product of 5 and 3. It is zero by subtracting 15 from 15

The quotient is 13. The remainder is 0. So the dividend is perfectly divisible



1. Let us fill in the blanks by dividing 72 by 6

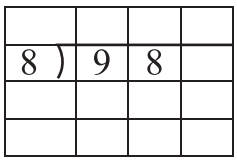
$$\begin{array}{r} \square\square \\ 6\overline{)\,7\;\;2} \\ \square \\ \hline \square\square \\ \square\square \\ \hline \square \end{array}$$

1. Let us divide.

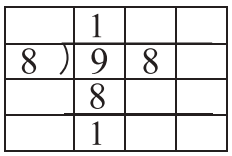
(1) $6\overline{)78}$ (2) $8\overline{)96}$ (3) $9\overline{)72}$ (4) $5\overline{)60}$

(5) $3\overline{)60}$ (6) $7\overline{)84}$ (7) $4\overline{)64}$ (7) $2\overline{)58}$

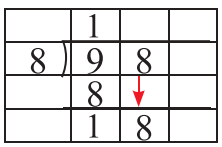
1. Let us divide 98 by 8 vertically.



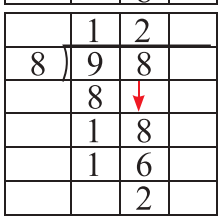
First let us divide 9 by 8



We get 8 as a product of 8 and 1. Let us put the quotient 1 above tens place of dividend. It is 1 by subtracting 8 from 9



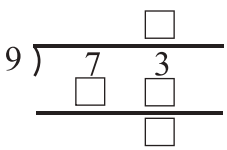
Let us drop 8 of ones place down.



We get 16 as a product of 8 and 2. Let us put the quotient 2 above ones place of dividend. It is 2 by subtracting 16 from 18

The quotient is 12 and the remainder is 2

1. Let us fill in the blanks by dividing 73 by 9



2. Let us divide.

1) $5\overline{)63}$ 2) $7\overline{)81}$ 3) $4\overline{)54}$ 4) $6\overline{)92}$

5) $8\overline{)95}$ 6) $9\overline{)64}$ 7) $3\overline{)22}$ 8) $2\overline{)35}$

A box contains 129 pieces of pen. If each person is given 3 pens, among how many people can the pens be divided equally.



Mathematical sentence $129 \div 3 = \square$

We can calculate vertically.

3	) 1	2	9

→ We cannot divide 1 in the hundreds place by 3. Let us consider the pair of digits from hundreds and tens place of dividend. As a result, we get 12

		4	
3	) 1	2	9
	1	2	
		0	

→ We can get 4 by division of 12 ÷3. Let us put the quotient 4 above tens place of dividend. It is zero by subtracting 12 from 12

		4	3
3	) 1	2	9
	1	2	↓
			9
			9
			0

→ Let us drop 9 in ones place down. We get 3 by division of 9 by 3. It is zero by subtracting 9 from 9

It can be divided among 43 people.



1. Let us divide 154 by 9 and explain the following steps.

9)	1	5	4

→ [ ]

		1	
9)	1	5	4
		9	
		6	

→ [ ]

		1	7
9)	1	5	4
		9	↓
		6	4
		6	3
			1

→ [ ]

The quotient is 17 and the remainder is 1



2. Let us fill in the blanks.

(1)

			5	□
7	3	)	8	6
	3		5	
			□	6
			3	5
				□

(2)

			□	□
8)	5		1	2
	□		□	
			3	□
			3	2
				□

(3)

			□	□
6)	2		4	6
	□		□	
				□
				□
				□

1. Let us divide.

(1) 144÷4 (2) 285÷5 (3) 394÷7 (4) 662÷2 (5) 783÷9

(6) 438÷6 (7) 196÷3 (8) 871÷9 (9) 552÷8 (10) 931÷7

2026

If 1752 meters of ribbon are divided equally among 8 students, how many meters will each student get?



Mathematical sentence
$1752 \div 8 =$ ☐

How do we do this calculation?





We can calculate this vertically.

8)	1	7	5	2

→ We cannot calculate 1÷8 in thousands place. Let us consider the pair of digits from thousands and hundreds place of dividend. As a result, we get 17

		2		
8)	1	7	5	2
	1	6	↓	
		1	5	

→ We get 2 as a quotient of 17÷8. Let us write the quotient 2 above hundreds place of dividend. It is 1 by subtracting 16 from 17. Let us drop 5 of tens place down.

		2	1	
8)	1	7	5	2
	1	6	↓	
		1	5	
			8	
			7	

→ We get 1 as a quotient of 15÷8. Let us write the quotient 1 above tens place of dividend. It is 7 by subtracting 8 from 15

		2	1	9
8)	1	7	5	2
	1	6		↓
		1	5	
			8	↓
			7	2
			7	2
				0

→ Let us drop 2 of ones place down. For 72÷8, we get 9. Let us write 9 above ones place of dividend. It is 0 by subtracting 72 from 72

Everyone will get 219 meter of ribbon.



1. Let us divide.

(1) 2148÷4 (2) 1326÷3 (3) 4956÷6 (4) 6149÷8

(5) 1823÷5 (6) 7824÷6 (7) 2961÷9 (8) 5747÷7

80 chocolates were placed in 20 small packets.

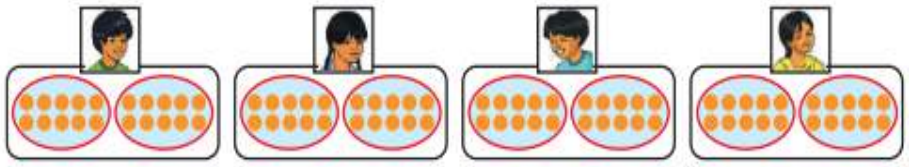
1) You want to give 20 chocolates to each of your friends. How many of your friends can you give the chocolates to?



Mathematical sentence
80÷20= ☐

Considering it as a group of 10, we get 8÷2





8÷2=4

That is 80÷20=4

That means I can give the chocolates to 4 friends.

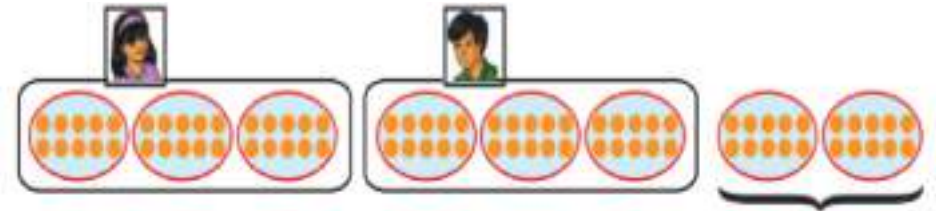
2) If you give 30 chocolates to each of your friends, how many friends can you give the chocolates to?



Mathematical sentence
80÷30= ☐

Consider it a group of 10





Remainder

80÷30=2 remainder 20

2 friends will get chocolates and there will be 20 chocolates left

1. Let us divide.

(1) 90 ÷ 30 (2) 80 ÷ 40 (3) 120 ÷ 40 (4) 240 ÷ 60

(5) 120 ÷ 30 (6) 210 ÷ 50 (7) 390 ÷ 60 (8) 500 ÷ 90

2026

You have 85 chocolates. You want to give 21 chocolates to each of your friends. How many friends can you give the chocolate to?



Mathematical sentence: 85÷21 = ☐

We can calculate by thinking of 85 as 80 and 21 as 20

85÷21 80÷20 8÷2

That is, the estimated quotient is 8 ÷2=4



$21\overline{)85}$ $\quad$ $\begin{array}{r}4\\21\overline{)85}\end{array}$ $\quad$ $\begin{array}{r}4\\21\overline{)85}\\84\end{array}$ $\quad$ $\begin{array}{r}4\\21\overline{)85}\\84\\\hline 1\end{array}$

First, we look at the tens place of the quotient. But we can't do 8÷21. So we go to the ones place of the quotient

We can do 85÷21. We write the estimated quotient in ones place as 4

Let us multiply 21 by 4. The answer will be 84

Let us subtract 84 from 85. The remainder is 1

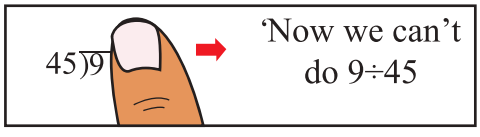
85÷21 = 4 remainder 1

I can give chocolates to 4 friends and have 1 chocolate left over.

1. Let us divide vertically.

$21\overline{)63}$ $\quad$ $\begin{array}{r}\square\\11\overline{)66}\end{array}$ $\quad$ $\begin{array}{r}\square\\24\overline{)51}\end{array}$ $\quad$ $\begin{array}{r}\square\\35\overline{)72}\end{array}$

Use of fingers:It is convenient to use the following fingers to check the place value of a number when dividing



2026

There are 165 pencils in a box. If we distribute an equal number of pencils to 55 people, how many pencils will each person get?

Mathematical sentence $165 \div 55 = ?$

Assume : $165 \div 55$ → $160 \div 50$ → $16 \div 5$ → arround 3

$55\overline{)165}$ → $55\overline{)165}$ → $\begin{array}{r} 3 \\ 55\overline{)165} \\ 165 \end{array}$ → $\begin{array}{r} 3 \\ 55\overline{)165} \\ 165 \\ \hline 0 \end{array}$

We can't do 1÷55 in the hundreds place. So this time the tens place of the dividend is included.

We can't do 16÷55 even in the tens place. So this time the ones place of the dividend is included.

Now we can do 165÷55. We write estimated 3 as the quotient in the ones place. Multiplying 55 by 3 gives 165.

Let us subtract 165 from 165 and get 0 as remainder.

$165 \div 55 = 3$

Everyone will get 3 pencils.

1. Let us divide 94÷34

90÷30 → ☐ → ☐



Let us choose a small number

$\begin{array}{r} 3 \\ 34\overline{)95} \\ 102 \end{array}$ → $\begin{array}{r} 2 \\ 34\overline{)95} \\ \square \\ \hline \square \end{array}$

A large number can not be subtracted from a small number.

If the estimated quotient is larger, then we take the smaller number immediately before it.

1. Let us divide.

(1) 129÷43 (2) 128÷32 (3) 415÷83 (4) 359÷51

(5) 382÷62 (6) 314÷43 (7) 662÷94 (8) 239÷47

3266 fish fingerlings were released evenly into 23 ponds. How many fish fingerlings were released into each pond?

```
   1          1 4          1 4 2
23)3266    23)3266    23)3266
  23         23         23
   9          96         96
              92         92
               4          46
                          46
                           0
```

3266 ÷ 23 = 142



142 fish fingerlings were released into the pond.

1. Let us divide 941 ÷23

```
   4          4□
23)941     23)941
  92         92
  21         21
             □□
             □□
```

That is 941 ÷23= ☐ remainder ☐

21÷23 is not possible. So 23 must be multiplied by 0

1. Let us divide

(1) 711 ÷ 23 (2) 731 ÷ 18 (3) 763 ÷ 25 (4) 810 ÷ 27

(5) 1576÷17 (6) 3038÷14 (7) 7824÷48 (8) 5876÷32

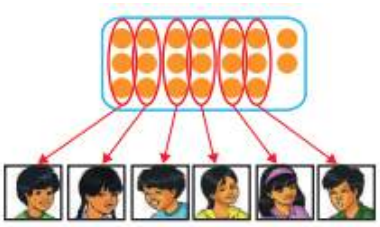
3. Let us make a story with 365 ÷ 12 = ☐

My story is: If you pick 365 lychees from Riad's garden and divide them equally among 12 friends, how many will each get and how many will be left over? Now tell your story.



Relation between dividend, divisor, quotient and remainder

20 biscuits are divided in such a way that each person gets 3 biscuits. So how many people will get the biscuits?





Mathematical sentence $20 \div 3 = 6$, remainder is 2. 6 people will get biscuits and there will be 2 biscuits left over.

Here, $20 = 3 \times 6 + 2$



Here, what do we call 20, 3, 6 and 2?



20 is the dividend, 3 is the divisor, 6 is the quotient and 2 is the remainder.



Here, $20 = 3 \times 6 + 2$

That is Dividend = Divisor × Quotient + Remainder

WOW! Great. We can use this relation to check the answer of the division



1. Let us fill in the blanks with numbers.

(1) $\square = 146 \times \square + 3$

(2) $387 = 190 \times \square + \square$

1. Let us check if it is correct or not

(1) The quotient of $872 \div 28$ is 31 and the remainder is 4

(2) The quotient of $5345 \div 35$ is 152 and the remainder is 28

(3) The quotient of $996 \div 9$ is 11 and the remainder is 6

What is the relation between multiplication and division?



Multiplication and division are inverse processes.

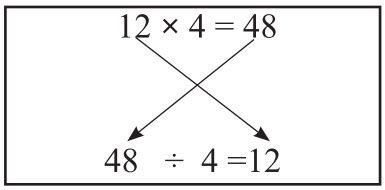


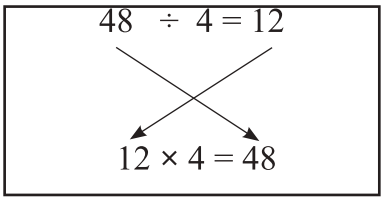
Multiplication is adding the same number repeatedly and division is subtracting the same number repeatedly.

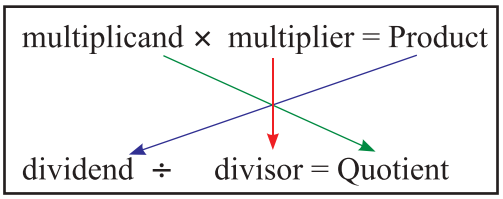
For example, 12 multiplied by 4 means,
12+12+12+12=48
That is, 12×4=48

On the other hand, 12÷4 means,
12– 4=8
8– 4=4
4– 4=0
That is, 12÷4=3









We can use this relation to check the answers of multiplication and division.

2026

1. You have 144 pieces of paper. If you divide them into 12 equal parts and give 3 parts to your brother, how many pieces of paper will your brother get?



First, we need to divide 144 by 12
144÷12=12
Then 12×3=36

That is, he will get 36 pieces of paper.



I did it like this
144÷12×3
=12×3
=36
That is , he will get 36 pieces of paper.



If a mathematical sentence contains multiplication and division, the one that comes first must be solved first.

2. Each packet contains 30 marbles. If 15 such packets are bought and divided equally among 18 people, how many marbles will each person get?

Each person will get ☐ × ☐ ÷ ☐ marbles

= ☐ ÷ ☐

= ☐ marbles

Each person will get ☐ marbles.

1. Let us fill in the blanks.

(1) 212×5÷20= ☐

(2) 1596÷12×26= ☐

(3) 638÷22×35= ☐

(4) 374×13÷17= ☐

2026

3. If the price of 25 kg of rice is 2275 taka, what is the price of 3kg of rice?

The price of 25 kg of rice is 2275 taka

Price of 1 kg rice is (2275÷25) taka

= ☐ taka

That is, the price of 1 kg of rice is ☐ taka

∴ The price of 3 kg of rice is ☐ × 3 = ☐ taka।

4. When a number is divided by 34, the quotient is 3 and the remainder is 10. What is the number?

Here the number will be dividend.

Dividend = Divisor × Quotient + Remainder

= 34×3+10

= ☐ + ☐

= ☐

The number is ☐

5. If the price of a dozen oranges is 312 taka, what is the price of 25 oranges.

Mathematical sentence: ☐ ÷ ☐ × ☐

= ☐ × ☐

= ☐ taka

6. Let us make up a story for the following mathematical sentence

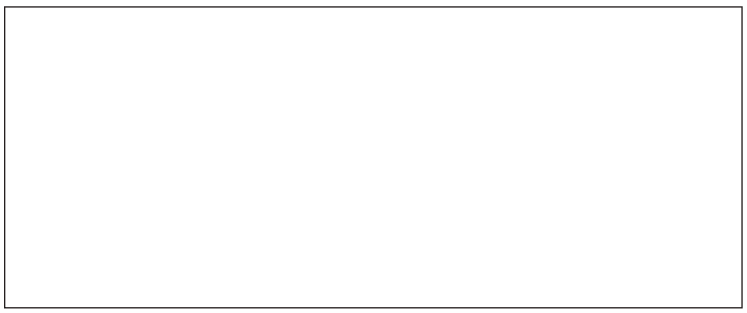
5625 ÷ 25 × 5 = ☐

My story:	Share your story:
5625 Lychees are divided into 25 equal parts and 5 parts are given to Sumi, how many Lychees will Sumi have?	

Let us try

1. Let us do the following division. Explain whether the division is perfectly divisible or not.

$6\overline{)8\ 4\ 9}$



2. You have some colored paper. You divided the paper equally among 20 of your friends, each of whom got 4 papers, leaving 10 papers left. How many papers did you have?
Here the number of papers will be dividend.

Dividend = Divisor × Quotient + Remainder

= ☐ × ☐ + ☐

= ☐ + ☐

= ☐

I had ☐ pieces of paper.

3. Let us fill in the blanks.

$$\begin{array}{r} 1\ \square\ 1 \\ 15\overline{)1\ 9\ 6\ 5} \\ 1\ 5 \\ \hline \square\square \\ 4\ 5 \\ \hline \square\ 5 \\ \square\square \\ \hline 0 \end{array}$$

$$\begin{array}{r} \square\ 6\ 0 \\ 5\overline{)8\ 0\ 1} \\ \square \\ \hline 3\ 0 \\ \square\square \\ \hline 1 \\ \square \\ \hline 1 \end{array}$$

Let us do

1. Let us put a tick mark (√) on the correct answer.

(1) What is the quotient if the smallest five-digit number is divided by 100 ?

a) 1 b) 10 c) 100 d) 1000

(2) 6573÷100, What will be the remainder in this division?

a) 73 b) 65 c) 57 d) 3

(3) In a mathematical problem, what will be the quotient if the dividend and divisor are equal?

a) 0 b) 1 c) 2 d) 3

(4) 625 ÷ ☐ = 25, which number will go in the blank?

a) 650 b) 625 c) 600 d) 25

(5) What is the remainder in case of perfectly divisible number?

a) equal to the divisor b) equal to the dividend

c) equal to the quotient d) zero

(6) If the quotient is 5 and the divisor is 5 times the quotient, what is the dividend?

a) 5 b) 10 c) 25 d) 125

(7) By which number will the quotient be 17 if 340 is divided?

a) 2 b) 17 c) 20 d) 34

2. Let us answer briefly.

(1) What is the formula for finding the dividend if there is no remainder?

(2) By what number will the quotient be 12 if 240 is divided?

(3) How many colored pencils worth 25 taka can be purchased with a 500 taka note?

(4) If there are 20 pushpins in a box, how many boxes will be needed to make 400 pushpins

(5) If the price of 1 hali eggs is 40 taka, what is the price of 9 eggs?

3. Let us divide.

(1) 60÷30 (2) 90÷40 (3) 310÷40 (4) 99÷28 (5) 168÷42

(6) 455÷73 (7) 224÷28 (8) 3030÷14 (9) 1674÷18 (10) 9316÷32

4. Let us check if it is correct or not.

(1) The quotient of 390 ÷ 7 is 50 and the remainder is 5

(2) The quotient of 538 ÷ 12 is 53 and the remainder is 2

(3) The quotient of 1512 ÷ 24 is 60 and the remainder is 3

(4) The quotient of 8217 ÷ 34 is 241 and the remainder is 23

5. Fill in the blanks by calculating.

(1) 78 × 9 ÷ 13 = ☐

(2) 1155 ÷ 15 × 9 = ☐

(3) 282 × 6 ÷ 18 = ☐

(4) 658 ÷ 47 × 34 = ☐

6. If the divisor is 23, the quotient is 107 and the remainder is 12, what is the dividend?

7. If a 2304-meter-long wire is divided into 96 equal parts, how many meters is the length of each part?

8. From 500 pencils if 12 pencils are kept in each box, how many boxes will be needed and how many pencils will be left over?

9. If 182 Lychees are distributed among 36 people, how many Lychees will each person get?

10. If the price of 15 notebooks is 975 taka, what is the price of 30 notebooks?

11. There are 1175 flowers in a shop. If it takes 25 flowers to make a garland, how many such garlands can the shopkeeper make?

12. Let us make up a story for the following mathematical sentence.

97 × 8 ÷ 4 = ☐

Chapter 5

Mathematical Sentence

Mathematical symbols

Let us find out known mathematical symbols.

+	A	2	=	×
( )	≮	>	–	9
{ }	<	▭	[ ]	≠
0	1	≯	6	÷

Let us look at the mathematical symbols above. It includes various mathematical symbols. Let us try to classify them.



I have found many symbols.

Let us try to know the names of these symbols.



The symbols used for expressing numbers are called numeral symbols.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9

The symbols used for expressing four basic operations are called operation symbols.

+ , – , × and ÷

The symbols used to indicate the mutual relation between the numbers are called relation symbols. $>$, $<$, $=$, $\not>$, $\not<$ and $\neq$

The symbols used to group numbers together and indicate the order of operation of numbers are called parentheses.

( ), { }, [ ]

The symbols used to indicate unknown numbers are called variables.

$\square$, $\bigcirc$, A

We should take care about the nominal issues of relation symbols.

$=$ Equal	$>$ Greater than	$<$ Less than
$\neq$ Not equal	$\not>$ Not greater than	$\not<$ Not less than
( ) First bracket	{ } Second bracket	[ ] Third bracket

1. Ratul had 42 taka. He kept 12 taka for himself and distributed the remaining amount among 6 people equally. Let us present it using different symbols.

I wrote it this way,
$(42 - 12) \div 6$



Here, the numbers are connected with relation symbols and parentheses.

Mathematical expression is formed by combining several numbers with operation symbols and parentheses, if necessary.





So, (42-12) ÷ 6 is a mathematical expression.

1. Let us make the following mathematical expressions using mathematical symbols.

(1) Division of forty-nine by seven.

(2) Multiplication of nine by nine and then addition by nineteen.

(3) Subtraction of five from thirty five and division of subtrahend by six.

(4) Division of twenty-five by five and then subtraction of the quotient from fifty five.

(5) Multiplication of fifty five by twelve and division of the product by five.

2. Let us put '=' and '≠' in the blanks.

(1) 4 × 5 ☐ 20 (3)36 ÷ 12 ☐ 4

(3) 14 × 3 ☐ 39+2 (4) 57 ÷ 3 ☐ 23−2

3. Let us put '≮' and '≯ ' in the blanks.

(1) 65 ☐ 56+7 (2) 32 + 8 ☐ 50

(3) 15 ×5 ☐ 85 (4) 94 ÷ 2 ☐ 45

4. Let us make the following mathematical expression using ☐ as the unknown number.

(1) What number is subtracted from 50 to make subtrahend 35.
(2) What number is multiplied by 8 to make a product 48.
(3) What number is added to 12 to make 180.
(4) What number is multiplied by 15 to make the product 270.

Let us compare the two mathematical expressions using suitable relation symbols.

First mathematical expression $(48 - 8) \div 4$

Second mathematical expression $48 - (8 \div 4)$



From the first one I have got 10.

From the second one I have got 46.



$(48 - 8) \div 4 \square 48 - (8 \div 4)$



Let us put relation symbols in blanks.

I have put $\neq$ and got $(48 - 8) \div 4 \neq 48 - (8 \div 4)$





I have put $\not>$ and got $(48 - 8) \div 4 \not> 48 - (8 \div 4)$

I have put $<$ and got $(48 - 8) \div 4 < 48 - (8 \div 4)$





Mathematical sentence can be made using relation symbols between two expressions.

1. Let us write the description of mathematical sentence in the blanks.

Mathematical sentence	Description
$6 + 2 = 8$	addition of 6 and 2 is equal to 8.
$3 < 9$	
$10 \div 5 \neq 3$	
$(28 + 11) \div 3 \not> 15$	

1. Let us put the symbols in empty box after calculating left side and right side separately.

(1) $7 + 3 \times 6$ ☐ $(7 + 3) \times 6$

(2) $52 - 15 + 13$ ☐ $52 - (15 - 13)$



If +, –, ×, ÷ are in a mathematical sentence, multiplication and division must be done first.

(1) [Left side] [Right side]

$7 + 3 \times 6$ $(7 + 3) \times 6$

$= 7 +$ ☐ $=$ ☐ $\times 6$

$=$ ☐ $=$ ☐

Here ☐ ☐ ☐

Therefore, $7 + 3 \times 6$ ☐ $(7 + 3) \times 6$



The symbol '∴' is used to mean 'so' or 'therefore'.

(2) [Left side] [Right side]

$52 - 15 + 13$ $52 - (15 - 13)$

$=$ ☐ $+ 13$ $=$ ☐ $-$ ☐

$=$ ☐ $=$ ☐

Here ☐ ☐ ☐

$\therefore\ 52 - 15 + 13$ ☐ $52 - (15 - 13)$

2. Let us put suitable relation symbols in the blanks.

(1) $142 - 65$ ☐ $57 + 12$

(2) $63 \div 7 \times 5$ ☐ $63 \times 5 \div 7$

Let us determine whether the mathematical sentences are true or false.

1. Which of the following mathematical sentences is true? Which is false?

(1) $18 + 9 = 27$

(2) $27 \div 4 = 8$

(3) $14 \times 3 < 35 + 4$



Let us calculate the left side and the right side of the mathematical sentence and compare them, carefully.

(1) [Left side] $18 + 9 = 27$ [Right side] 27 ∴ true sentence

Because 27 is equal to 27.

(2) [Left side] $27 \div 4 = \square$ remainder $\square$ [Right side] 8

∴ The sentence is $\square$

Because quotient $\square$ remainder $\square$ which is not equal to 8

(3) [Left side] $14 \times 3 = \square$ [Right side] $35 + 4 = \square$

∴ The sentence is $\square$

Because $\square$



The mathematical sentence may be true or false.

1. Which of the following mathematical sentences is true or false?

(1) $56 - 7 = 50$ (2) $72 \div 9 \not> 10$

(3) $12 \times 7 \neq 168 \div 2$ (4) $45 + 15 < 65$

2026

Is the mathematical sentence $\square + 8 = 21$ true?



The problem is a little bit complex, isn't it?

[Left side] $(\square + 8)$

[Right side] (21) True sentence? False sentence?



We cannot determine immediately whether the above mathematical sentence is true or false. It may be true or false.

The sentence is either true or false. It depends on the value used in the box.



In this case, if 13 is put in the blank, the mathematical sentence will be true, otherwise it will be false.

$13 + 8 = 21$ True sentence

$12 + 8 = 21$ False sentence

Any value can be used in $\square$. The sentence is either true or false.

It depends on the value which is put in $\square$.

1. Shafik has some books and Bina has 8 books. They have18 books in total. Let us make a mathematical sentence to know how many books Shafik has.

Let Shafik has $\square$ books.

∴ The mathematical sentence is $\square + 8 = 18$





We can do it by putting different numbers in the blank.

□ + 8 = 18 ×

9 + 8 = 18 ×

10 + 8 = 18 √

11 + 8 = 18 ×

Using the relation between addition and sbtraction we can also solve it.

□ + 8 = 18

□ = 18 – 8

□ = 10



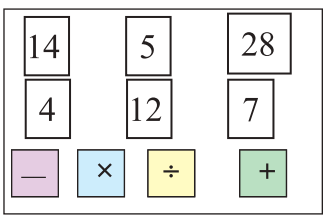
1. Let us write the mathematical sentence from the following description by using □ as unknown number and find the value of □

(1) The sum of a number and 12 is equal to 180

(2) The multiplication of a number by 15 is equal to 270

Mathematical Sentence Making Game.

There are two teams and each team has two players. Each team is given a set of cards (6 number cards and 4 operation symbol cards). They will make a mathematical sentence by using the cards. They will have to use at least 3 operation symbols. The team that gets the largest value from their mathematical sentence will win.



Sequence of Operations

How can we calculate?

1. The price of a singara is 10 taka. I bought 12 singaras and gave the shopkeeper a 200 taka note. How much money will I get back?



$200 - (10 \times 12)$
$= 200 - 120$
$= 80$
I have done it in this way.

$200 - 10 \times 12$
$= 200 - 120$
$= 80$
I have done it in this way.



Multiplication or division will get first preference if a mathematical sentence contains addition or subtraction and multiplication or division. In this case, the calculation has to be done from left to right.

For this reason, it is not necessary to use '( )' in the above mathematical sentence. We can write it in the following way.

$200 - (10 \times 12) \longrightarrow 200 - 10 \times 12$

1. The price of a Hilsa is 1200 taka and the price of a pair of Pigeons is 330 taka. How much does it cost to buy a Hilsa and a Pigeon?

☐ + (☐ ÷ ☐)

2. The price of a cabbage is 45 taka and the price of a pumpkin is 78 taka. What is the total price of 2 cabbages and 3 pumpkins?

(☐ × ☐) + (☐ × ☐)

2. The price of a pair of plants is 130 taka. If you buy 11 pairs of plants and give the shopkeeper 1500 taka, how much money will you get back?



1 pair = 2 pieces.
First, we need to find the price of 11 pairs.

For this calculation, we must multiply first and then subtract.



The price of a pair is 130 taka.

The price of 11 pairs ☐ × ☐

= ☐ taka.

The shopkeeper will return ☐ – ☐

= ☐ taka.

Let us think about other ways.



The mathematical sentence is ☐

3. The price of a watermelon is 375 taka and the price of a papaya is 150 taka. How much does it cost to buy 2 watermelons and 3 papayas?

The price of 2 watermelons and 3 papayas is

= {(☐ × ☐) + (☐ × ☐)}

= ☐ + ☐

= ☐ taka.



If there are brackets, we have to work on the first bracket first and then the second bracket.

4. The monthly salary of Mr Mamun is 30000 taka. Every month he spends 15000 taka for house rent and 14500 taka for buying other things. How much money does he deposit after 7 months?

He spends on house rent and other things = ☐ + ☐ = ☐ taka

Every month he deposits = ☐ − ☐ = ☐ taka.

He deposits after 7 months = ☐ × ☐ = ☐ taka.

Alternative solution:

His total deposit of 7 months is = { ☐ −(☐ + ☐)} × ☐

= { ☐ − ☐ } × ☐

= ☐ × ☐

= ☐ ∴ He deposits ☐ taka after 7 months.

5. The total price of a dozen bananas and a hali of eggs is 196 taka. The price of an egg is 13 taka. What is the price of a banana?



One dozen=12 pieces and one hali=4 pieces. We will find the price of 4 eggs by multiplying the price of an egg by 4.







We will find the price of a banana dividing the price of 12 bananas by 12.

We will find the price of 12 bananas from the total price of 12 bananas and 4 eggs by subtracting the price of 4 eggs.



The price of an egg is 13 Taka.

The price of 4 eggs ☐ × ☐ = ☐ taka.

The price of 12 bananas ☐ − ☐ = ☐ taka.

The price of a banana ☐ ÷ ☐ = ☐ taka.

We can also solve the problem in the following way.

The price of a banana {☐ −(☐ × ☐)} ÷ ☐

= { ☐ − ☐ } ÷ ☐

= ☐ ÷ ☐ = ☐

The price of a banana ☐ taka.



6. Mr. Gias had 5500 taka. He kept 1500 taka for himself and distributed the remaining amount between 2 children equally. Their mother gave each child 1800 taka more. How much money does each child have now?

We can solve the problem in the following way.

The mathematical sentence (☐ − ☐) ÷ ☐ + ☐

= ☐ ÷ ☐ + ☐

= ☐ + ☐

= ☐

∴ Each child will have ☐

7. To help cyclone affected families, each of 185 families donated 250 taka and there was a 10000 taka government aid. The total amount was distributed among 30 families. How much money does each family get?

Let us solve the problem by mathematical sentence.

Mathematical sentence {(☐ × ☐) + ☐ } ÷ ☐

= { ☐ + ☐ } ÷ ☐

= ☐ ÷ ☐ = ☐

∴ Each family gets ☐ taka.

3. Let us write a story with the mathematical sentence (36 − 18) ÷ 3 + 6 = ☐

4. Let us put numbers in the blanks and make a story with the mathematical sentence.

{ ☐ − (☐ × ☐)} ÷ ☐ = ☐

Let us try

1. Let us put operation symbols in the blanks so that the mathematical sentence should be true.

(1) 69 ☐ 13 = 7 ☐ 8 (2) 58 ☐ 29 = 96 ☐ 9

2. Let us see which is true and which is false.

(1) 56 – 24+ 20 = 56 – (24 – 20) (2) 200 – 25 × 4 ≠ (200 – 25) × 4

3. Sumi's height is 132cm. Mitu's height is 5 cm more than Sumi's. Rita's height is 141cm. What is the difference between Mitu's and Rita's height?

Mitu's height = ☐ ☐ ☐ cm

= ☐ cm

The difference between Mitu's and Rita's height= ☐ ☐ ☐ cm

= ☐ cm

4. The total price of 2 tables and 4 chairs is 8200 taka. The price of a chair is 800 taka. What is the price of a table?

The price of a table= {☐ − (☐ × ☐)} ÷ ☐

5. Let us solve the following problem by writing a mathematical sentence.

The price of 7 pencils is 84 taka. A geometry box is bought by the double price of 9 pencils. What is the price of the geometry box?

Let us do

1. Let us express using mathematical symbols.
   (1) subtraction of twenty five from one hundred twenty seven is not equal to one hundred.
   (2) The product of twenty four and twenty five is greater than five hundred.

2. Let us put operation symbols in the blanks so that the mathematical sentence should be true.

(1) 9 ☐ 7 = 1260 ☐ 20 (2) 87 ☐ 38 = 7 ☐ 7

3. Let us check which is true and which is false.
   (1) $32 \div 4 \div 2 < 32 \div (4 \div 2)$
   (2) $4 \times 6 + 3 \times 5 = 4 \times (6+ 3) \times 5$

4. Let us put numbers in the blanks so that the mathematical sentence should be true.
   (1) $49 \div$ ☐ $= 56 \div 8$ (1) $5 + 8 \times$ ☐ $= 53$

5. Amina bought a packet of balloons. She kept 20 balloons for herself and distributed the rest of the balloons equally among her 12 friends. If every friend got 10 balloons, how many balloons were in the packet?

6. Mr. Monir went to market with 8000 taka. He spent 3750 taka for grocery items and with the rest of the money he bought beef at 850 taka per kg. How many kilos of beef did he buy?

7. An egg seller sells 25 taka dozen of eggs by 150 taka per dozen. He pays the electricity bill of 1050 taka and buys 5 hens with the rest of the money. How much money does each hen cost?

8. Let us make a story.
   (1) $\{3000 - (480 \times 3)\} \div 4 =$ ☐ (2) $(2450 \div 5) \times (4 \times 7) =$ ☐

Chapter 6

Multiples and Factors

Multiples

Riya, Rony and Raisa are three siblings. Father wants to buy litchis for them. If they take 1, 2, 3, 4, 5, ... litchis, how many litchis should be bought?



Let us calculate how many litchis should be bought if they want to take litchis equally.



3 people can take litchis

- $1 \times 3 = 3$ — If 3 litchis are bought, each will get 1.
- $2 \times 3 = 6$ — If 6 litchis are bought, each will get 2.
- $3 \times 3 = 9$ — If 9 litchis are bought, each will get 3.
- $4 \times 3 = 12$ — If 12 litchis are bought, each will get 4.
- $5 \times 3 = 15$ — If 15 litchis are bought, each will get 5.
- $\square \times 3 = 18$ — If 18 litchis are bought, each will get $\square$

Multiplying 3 by 1, 2, 3, 4, 5, … we get 3, 6, 9, 12, 15, ... All the numbers obtained by multiplying 3 by whole numbers are multiples of 3

3, 6, 9, 12, 15, ... etc. are multiples of 3

We usually do not calculate multiples of 0.

1. Let us mark the multiples of 2 and 3 with ◯ from the list below.

Multiples of 2

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Multiples of 3

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1. A shop shelf has some boxes of chocolates. The height of each box is 4 cm. Let us arrange the boxes one on top of another to find the numbers according to their heights.





The numbers are the multiples of 4.

It's easy. If we arrange the boxes in the picture, we get $4\times1=4$, $4\times2=8$, $4\times3=12$, $4\times4=16$, $4\times5=20$ and $4\times6=24$.



2. How do we find the multiples of a number?

When a number is multiplied by a whole number, the product is a multiple of that number. The multiples of any number are infinite.



To find the multiples of a number, the number should be multiplied by 1, 2, 3, 4, . . . The products will be the multiples of that number.

2. In the chart below, let us mark the multiples of 5 with ☐ and the multiples of 7 with ◯.

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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

3. Write the first 10 multiples of 3, 4, and 6

Multiples of 3										
Multiples of 4										
Multiples of 6										

4. Riyad plucked 8, 10, 12, 16, 24, 28, 32 and 36 mangoes respectively from 8 trees in their mango garden. From the numbers of mangoes, find the multiples of 8 and write them in the blanks.

☐ , ☐ , ☐ , ☐

5. In a class assessment, the scores of 7 students in Mathematics are 15, 37, 25, 36, 40, 18 and 30 respectively. Which of the scores are the multiples of 9? Write them in the blanks.

☐

6. Let us mark the multiples of 10 with ◯ from the list below.

9	40	26	70	10	65
35	90	25	50	45	100

7. Let us mark the multiples of 4 with ◯ and the multiples of 8 with ☐ and the multiples of 9 with △.

6	8	14	16	21	27	36
42	46	48	50	52	55	59
58	63	68	72	81	88	90

8. Let us put the correct numbers in the blanks.

(1) $3\times7=21$; so, 21 is the multiple of ☐ and ☐

(2) $8\times9=72$; so, ☐ is the multiple of 8 and ☐

(3) $3\times4\times5=60$; so, 60 is the multiple of ☐ , ☐ and ☐

(4) 13 is the multiple of ☐ and ☐

Factors

Rumi has 8 sweets. She wants to divide the sweets equally among her friends. To how many friends can she give the sweets without any remainder?



Let's try to find a solution by giving the sweets to one person first. Then, let's find how many people can be given the sweet to.





8 sweets can be given to 1, 2, 4 or 8 friends equally.

Number of friends	1	2	3	4	5	6	7	8
Possible/not possible to give	✓	✓		✓				✓

If there is only 1 friend, 8 sweets can be given.

If there are 2 friends, 4 sweets can be given.

If there are 6 friends, 6 sweets can be given and 2 sweets will remain.

1, 2, 4 and 8 are called the factors of 8. That means 8 can be divided by 1, 2, 4 and 8 without leaving any remainder.

1. Find the factors and put a tick (√) mark on them and discuss with classmates what and how you have found out.

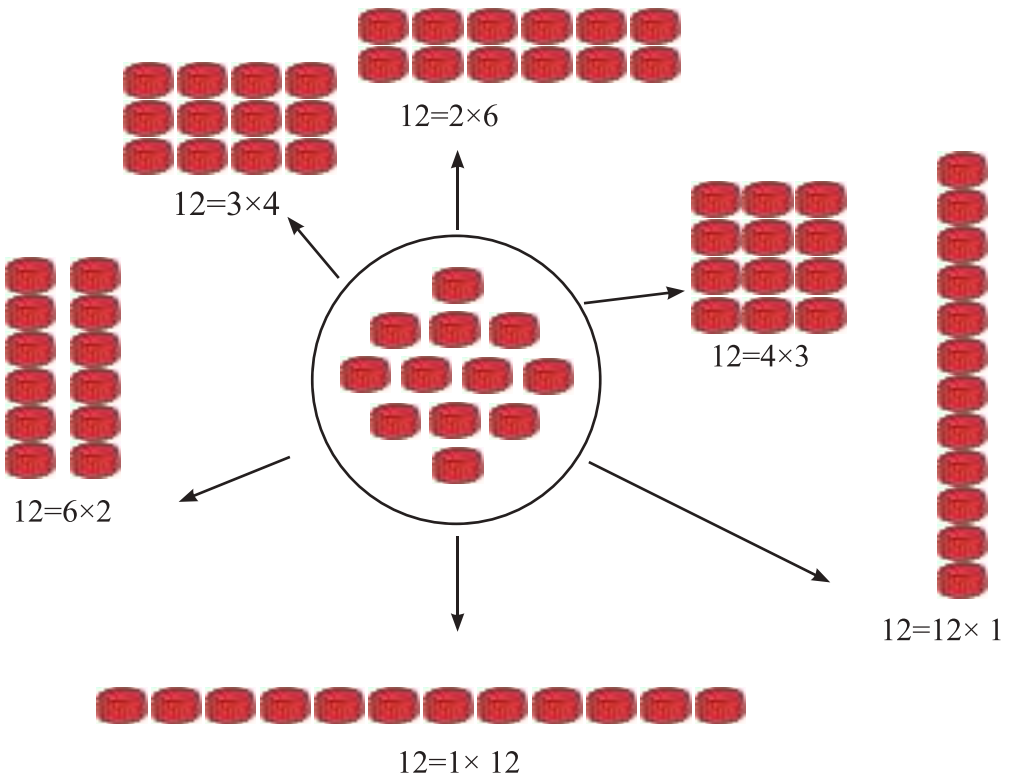
Factors of 4	1√	2√	3	4√												
Factors of 5	1	2	3	4	5											
Factors of 6	1	2	3	4	5	6										
Factors of 7	1	2	3	4	5	6	7									
Factors of 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Factors of 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

2. Sorting Games

The teacher divided us into different groups and gave each group 12 bottle caps. He instructed us to arrange the caps in one or more rows as desired in such a way that there were an equal number of caps in each row and no caps were left.



Let's arrange the caps according to the instructions.



By arranging the caps, we see that 12 can be divided by ☐, ☐, ☐, ☐, ☐ and ☐. These 6 numbers are the factors of 12

The number of factors of any number is fixed.





I find a relationship between multiples and factors. For example, 3 and 4 are the factors of 12 and 12 is a multiple of 3 and 4

$12 = 4 \times 3$

I also find a relationship among the factors.

1	2	3	4	6	12

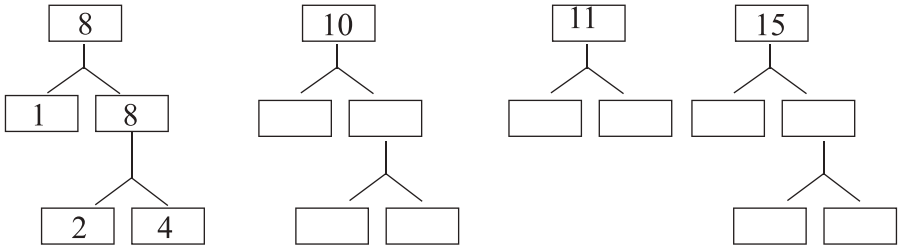
Each factor has pairs whose product is 12





The multiples of any number can be divided without leaving any remainder by its factors.

3. Fill in the blanks to find the factors of the following numbers.



Factors of 8 | Factors of 10 | Factors of 11 | Factors of 15

1. Let us mark the factors of 16 with ◯.

4	5	6	7	8	9	12	16

2. Let us mark the factors of 18 with □.

3	4	6	8	9	12	15	18

3. Let us mark the factors of 24 with △.

3	4	6	8	9	12	15	24

2026

Prime numbers

Which numbers are prime?

Let us look at the table below and mark the factors of the given numbers with ◯.

Factors of 2	①, ②,
Factors of 3	①, 2, ③
Factors of 4	①, ②, 3, ④
Factors of 5	1, 2, 3, 4, 5
Factors of 6	1, 2, 3, 4, 5, 6
Factors of 7	1, 2, 3, 4, 5, 6, 7
Factors of 8	1, 2, 3, 4, 5, 6, 7, 8
Factors of 9	1, 2, 3, 4, 5, 6, 7, 8, 9
Factors of 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10



Some of the numbers in the table have 2 factors, some numbers have 3 and some others have 4 factors.

In the table, 2, 3, 5 and 7 have no factors other than 1 and the number itself. These are called prime numbers. Numbers greater than 1 that are not prime are called composite numbers.



So, what number is 1?

For example, 4, 6, 8, 9 and 10 in the table are composite numbers.



1 has only 1 factor. Therefore, 1 is neither a prime number nor a composite number.

1. Let us play a game to find the prime numbers up to 100

1. Cross out 1
2. Circle 2. Cross out all multiples of 2 greater than 2
3. Circle 3. Cross out all multiples of 3 greater than 3
4. In the same way, cross out the multiples of the other numbers.

We do not have to cross out the multiples of 4 because they are also the multiples of 2



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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

The prime numbers up to 100 are 2, 3, 5 ..., ...



Can we express composite numbers as a product of prime numbers?

Among the prime numbers, the only even number is 2



2026

We can express composite numbers as a product of prime numbers, which are called prime factors.

Example : $10 = 2\times5$, $12 = 2\times2\times3$, $20 = 2\times2\times5$, $24 = 2\times2\times2\times3$



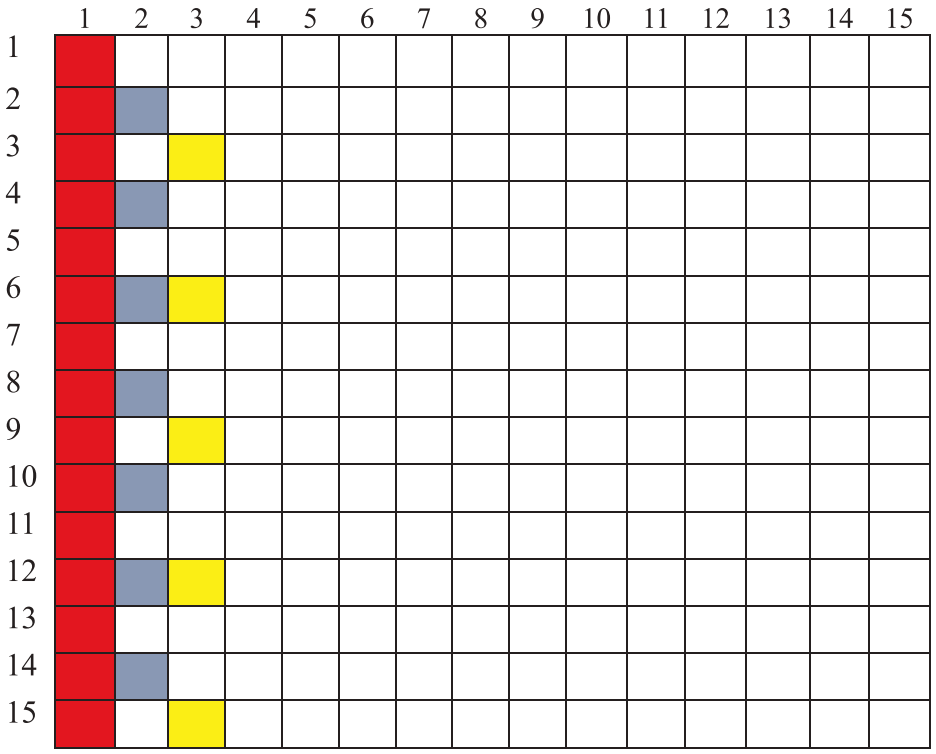
1. Let us put prime numbers in the blanks.

(1) $9 = \square \times \square$ (2) $30 = \square \times \square \times \square$

(3) $18 = \square \times \square \times \square$ (4) $70 = \square \times \square \times \square$

2. Let us find multiples, factors and prime numbers.

Let us take a sheet of paper with square boxes on it and write the numbers from 1 to 15 on the top and the left side of the paper.



1. Let us colour the numbers from 1 to 15 vertically as shown in the picture.
2. Like the picture, let us colour every other square vertically.
3. In this way, let us keep colouring with different colours skipping 2 squares, then 3 squares, then 4 squares, ..., …, .



By observing the numbers and colours of the table vertically, we see

- The multiples of 1 are 1, 2, 3, 4, 5, …
- The multiples of 2 are 2, 4, 6, 8, 10, 12, ...
- The multiples of 3 are 3, 6, 9, 12, ...
- The multiples of 4 are of 4, 8, 12, ...

By observing the numbers and colours of the table side by side, we see

- The factor of 1 is 1
- The factors of 2 are 1, 2
- The factors of 3 are 1, 3
- The factors of 4 are 1, 2, 4





By colouring paper, we can easily find multiples, factors and prime numbers.

2. Let us find the factors of 5, 6, 7 by colouring paper.

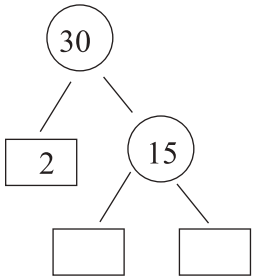
3. Let us find the multiples of 5 and 6 by colouring paper.

4. Let us write with reasons which numbers from 1 to 15 are prime and which are composite.

Prime numbers	Reasons	Composite numbers	Reasons

2026

3. Let us find the prime factors.



30 = 2×15; again 30 =2 × 3 × 5

30 = 2×15; here, one factor is prime and one factor is composite.
But in 30 = 2 × 3 × 5; all factors are prime.

This is called prime factorization.





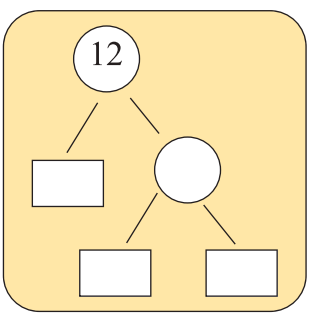
If 30 = 1 × 2 × 3 × 5, will 1, 2, 3, 5 be the prime factors of 30?

As 1 is not a prime number, 1 will not be a prime factor.

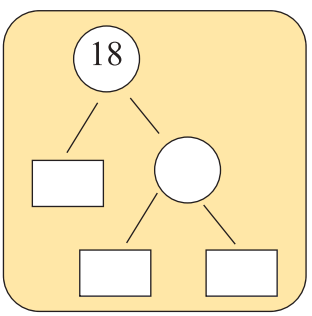
Prime factors must be prime numbers.
So, the prime factors of 30 will be 2, 3, 5



5. Let us find the prime factors of 12 and 18



12= ☐



18= ☐

6. Let us find the prime factors of 14 and 25

Which numbers are divisible by 2, 5 and 10?

Divisibility by 2

Multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, …



We know that all the numbers whose ones digit is 0 or even, are the multiples of 2.
What pattern do we find in the multiples of 2?

Some numbers have even digits in their ones place. For example, 2, 4, 6, 8, 12, 14, 16, 18, 22, 24, 26, 28, ...





Some numbers have 0 in their ones place.
For example, 10, 20, 30, …

Let us check.

2 ÷ 2=1	divisible by 2	3 ÷ 2 = 1, remainder 1	not divisible by 2
4 ÷ 2=2		5 ÷ 2 = 2, remainder 1	
6 ÷ 2=3		7 ÷ 2 = 3, remainder 1	
8 ÷ 2= ☐		13 ÷ 2= ☐ remainder 1	

We see that, for large numbers which have 0 or even digits in ones place are also divisible by 2. So, all the numbers which have 0, 2, 4, 6, 8 in ones place are divisible by 2

1. Which numbers in the blank below are divisible by 2 and which are not divisible by 2?

	divisible by 2	not divisible by 2
18, 30, 35, 42, 44, 50, 48, 100, 119, 226, 235, 286, 312		

2026

Divisibility by 5

The multiples of 5 are 5, 10, 15, 20, 25, 30, 35, 40, ...

We see that all the numbers which have 0 or 5 in their ones place are multiples of 5. So, they are divisible by 5



1. Let us fill in the multiplication table of 5

×	1	2	3	4	4	6	7	8	9	10	11	12	13	14	15
5	5	10	15										65		
×	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
5	80	85				105			120			135			

In the table, we see ☐ or ☐ in ones place of the multiples of 5. So, if ☐ or ☐ is found in ones place of any number, it is divisible by 5

2. In the box below, write which numbers are divisible by 5 and which are not.

	Divisible by 5	Not divisible by 5
18, 35, 50, 77, 105, 110, 224, 235, 285, 312, 355, 468, 505, 565		

Divisibility by 10

2. A card game of 10

Reza and Riya are playing a card game of 10. Reza is giving Riya one card at a time and Riya is counting.

10	10 × 1	10
10 10	10 × 2	20
10 10 10 10 10	10 × 5	50
10 10 10 10 10 10 10 10 10 10	10 × 10	100

After counting the cards of 10, it was found that ☐ is in the ones place of the multiples of 10. The numbers that have 0 in ones place leave a remainder of 0 when divided by 10. So, they are ☐ by 10

9. Look at the box below. Let us mark the numbers that are divisible by 10 with ◯.

28, 40, 110, 115, 138, 150, 185, 190, 225, 230, 360, 400, 425, 430, 454, 460, 489, 499, 510, 560, 545, 680

3. There are 2 red and 5 yellow bags for keeping 324 mangoes and 465 litchis. Each bag of the same colour must contain an equal number of mangoes or litchis. Which coloured bag should be used for the mangos and which for the litchis? Explain why.



The digit in ones place of 324 is ☐. So, the number is divisible by ☐ and here we have 2 red bags.

We can use ☐ bag for the mangoes.

The digit in ones place of 465 is ☐. So, the number is divisible by ☐ and here we have 5 ☐ bags.

We can use ☐ bags for the litchis.

4. Let us make a story about divisibility using three numbers 142, 245 and 350

Let us try

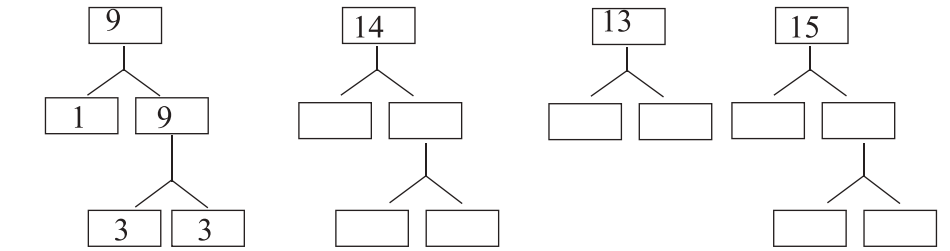
1. Which of the following numbers are the multiples of 7?

7	14	21	27	35	37

2. Molly picked 6, 8, 14, 16, 24, 25, 30 and 32 flowers from 8 trees respectively in their flower garden. Which numbers of flowers are the multiples of 8?

☐ , ☐ , ☐ , ☐

3. Let us fill in the blanks to find the factors of the numbers below.



Factors of 9 | Factors of 14 | Factors of 13 | Factors of 15

4. Let us separate the prime and composite numbers from the following numbers.

	Prime numbers	Composite numbers
7, 9, 17, 21, 29, 33, 35, 45, 47, 55, 57, 63, 68, 71, 81, 83, 85, 91, 95		

5. Let us express 10 and 15 as products of their prime factors.

10 = 15 =

6. Find out which numbers in the box below are divisible by 2, which are divisible by 5 and which are divisible by 10. Let us write them in the blanks.

12, 25, 30, 36, 48, 50, 55, 110, 224, 235, 280, 312, 362, 468, 505, 600	divisible by 2	divisible by 5	divisible by 10

Let us do

1. Put a tick mark (√) on the correct answer.

(1) What are the multiples of 5?

(a) 0, 5, 10 (b) 0, 5, 12 (c) 5, 15, 18 (d) 5, 15, 20

(2) How many factors does 6 have?

(a) 1 (b) 2 (c) 3 (d) 4

(3) Which pair of numbers are prime numbers?

(a) 51, 53 (b) 51, 55 (c) 53, 57 (d) 53, 59

(4) How many factors does 18 have?

(a) 3 (b) 4 (c) 5 (d) 6

(5) Which of the following numbers are all prime numbers?

(1) 7, 9, 13, 17 (b) 13, 17, 21, 23 (c) 17, 23, 29, 31 (d) 19, 23, 27, 31

2. Let us write the first 10 multiples of the following numbers.

(1) 3 (2) 4 (3) 6 (4) 7 (5) 8 (6) 10

3. Let us write the factors of the following numbers.

(1) 9 (2) 12 (3) 15 (4) 18 (5) 24 (6) 30

4. Let us write the prime factors of the following numbers.

(1) 10 (2) 12 (3) 15 (4) 18 (5) 24 (6) 28

5. Let us look at the numbers in the box and write the prime and composite numbers separately.

24, 31, 35, 39, 41, 47, 51, 56, 61, 68, 73, 75, 81, 83, 88, 91, 95, 97, 99, 100	Prime numbers	Composite numbers

6. Let us find the multiples of 2, 5 and 10 from the numbers in the box.

248, 355, 122, 515, 480, 912, 555, 838, 810, 950, 725, 900, 414, 780, 945	Multiples of 2	
	Multiples of 5	
	Multiples of 10	

7. Russel bought 24 chocolates for his birthday. Among how many friends can he distribute the chocolates equally?

8. Let us make stories about the divisibility of the numbers 28, 30 and 35

Chapter
7

Common Fractions

What did we learn about fractions in class 3?

Let us recall and write the names of different parts of a fraction.

$\frac{2}{5}$ → ☐ / ☐

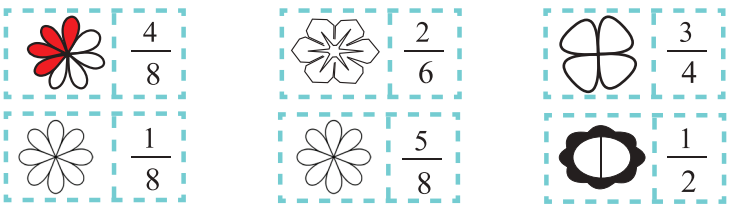


How do we express a part of an object by dividing it into equal parts?

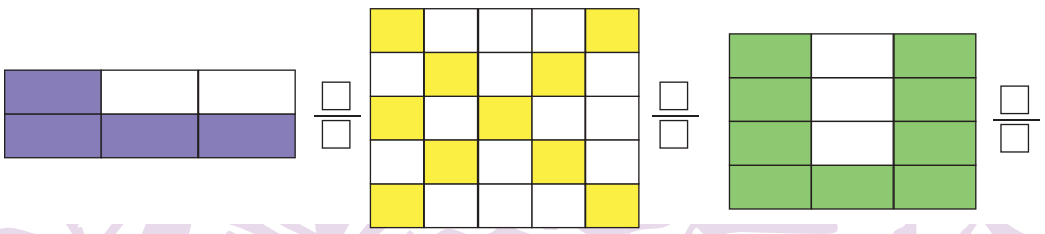
We can express it in fractions.



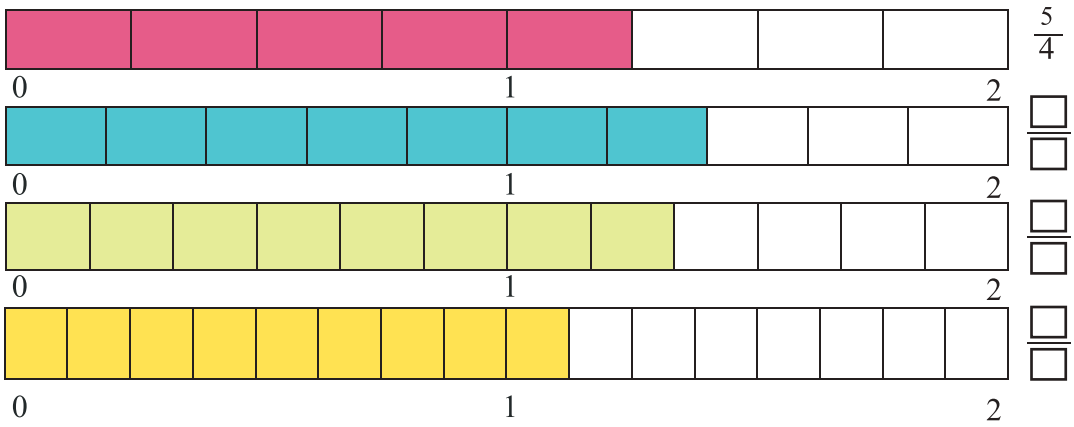
1. To express the fractions given next to the picture, colour the specified part of the picture.



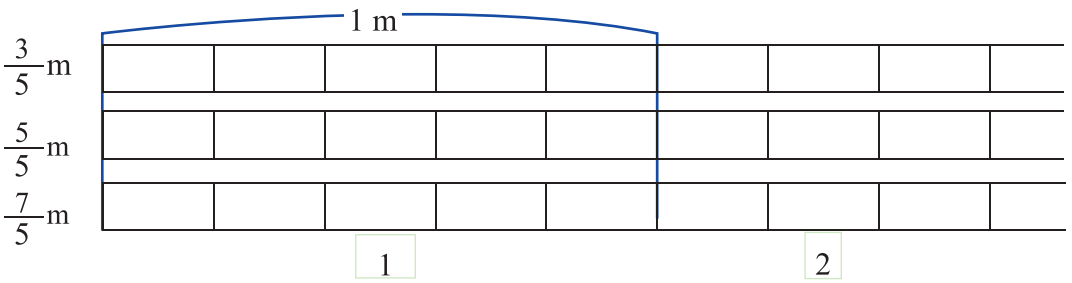
2. Let's express the coloured part of the picture below in fractions.



3. Write the fraction in the blanks.



4. Let us colour the fractions below.



We can see various types of fractions such as less than 1, equal to 1 and greater than 1

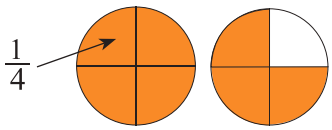


These various types of fractions can be divided into two groups as shown below.

Fractions less than 1 (numerator < denominator)	Fractions equal to 1 (numerator = denominator)	Fractions greater than 1 (numerator > denominator)
$\frac{3}{5}$ → Smaller / Larger	$\frac{5}{5}$ → Equal	$\frac{7}{5}$ → Larger / Smaller
$\frac{3}{5}, \frac{3}{4}, \frac{1}{2}, \frac{2}{3}, \frac{6}{7}$ etc.	$\frac{5}{5}, \frac{4}{4}, \frac{2}{2}, \frac{3}{3}, \frac{7}{7}$ etc.	$\frac{7}{5}, \frac{5}{4}, \frac{3}{2}, \frac{4}{3}, \frac{9}{7}$ etc.
Proper fraction	Improper fraction	

Fractions smaller than 1 are called proper fractions and fractions equal to or greater than 1 are called improper fractions.

Let's express the amount of bread as a fraction.



There are seven $\frac{1}{4}$ here.

$\frac{4}{4} + \frac{3}{4} = \frac{7}{4}$

The numerator 7 is greater than the denominator 4.

$\frac{7}{4}$ is an improper fraction.

On the other hand

It is '1 and $\frac{3}{4}$' and can be written as $1\frac{3}{4}$.

We read it as one and three fourths.

$\frac{7}{4} = 1\frac{3}{4}$

A whole number and a proper fraction together are mixed fractions.

small → large → $\frac{2}{5}$ — proper fraction

large (or equal) → small (or equal) $\frac{7}{5}$ — improper fraction

$1\frac{2}{5}$ — whole number → proper fraction — mixed fraction

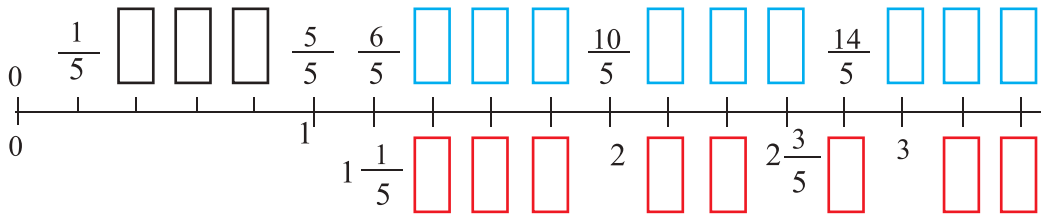
Improper fractions can be expressed as mixed fractions and mixed fractions as improper fractions.

1. Fill in the blanks above the number line with the proper and improper fractions and the blanks below with the mixed fraction.



We can also convert mixed fractions into improper fractions. For this, we multiply the denominator by the whole number and add the numerator to the product and set it as the numerator. Keep the denominator the same.

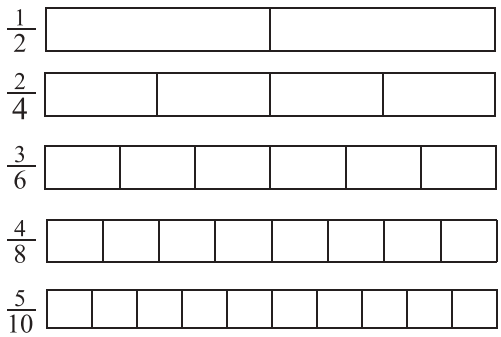
For example, $2\frac{1}{4} = \frac{(2\times4)+1}{4}$



Equivalent Fractions

How do we know if two fractions are equivalent?

1. Let's colour and compare to find out what equivalent fractions are.





What do we find?

After coloring the picture in the fraction grid we see,

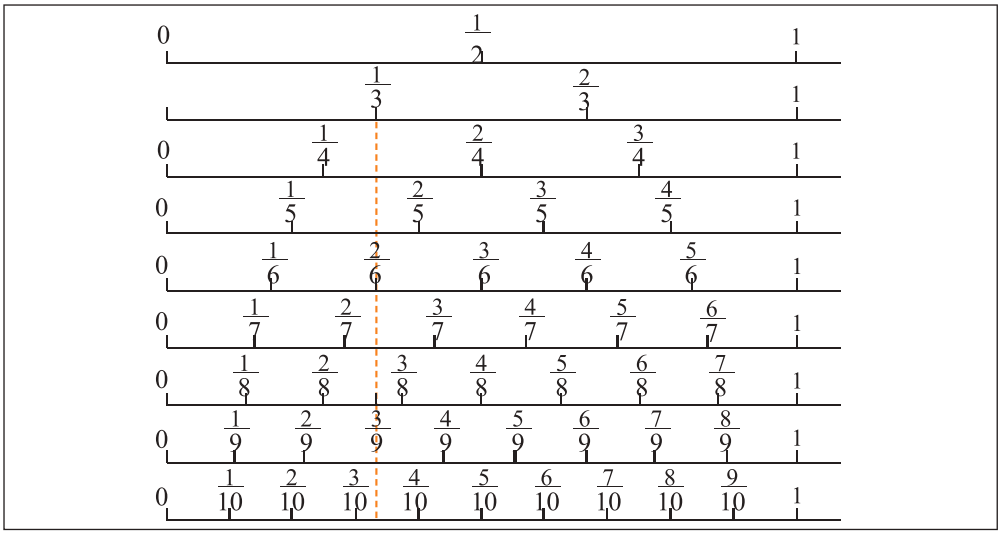
$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$

So, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$ and $\frac{5}{10}$ have the same value, so they are all equivalent fractions.

So a fraction has many equivalent fractions.



2 Let us mark different fractions on the number line.



(1) Find the equivalent fractions of $\frac{1}{3}$, $\frac{2}{3}$ and other fractions

(2) Fill in the blanks with the correct numbers.

(1) $\frac{1}{4} = \frac{2}{\square}$ (2) $\frac{4}{10} = \frac{\square}{5}$ (3) $\frac{6}{9} = \frac{\square}{3}$ (4) $\frac{6}{8} = \frac{3}{\square}$

How to make equivalent fractions?

Let us think about how to make equivalent fractions of $\frac{1}{2}$



$\frac{\bullet}{\blacksquare} = \frac{\bullet \times \blacktriangle}{\blacksquare \times \blacktriangle}$

If the denominator and numerator of a fraction are multiplied by the same number, an equivalent fraction is found.

$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$ (×2, ×□, ×□ / ×2, ×□, ×□)

1. Now, using this method of multiplying the denominator and numerator, we can find the numbers in the blanks.

(1) $\frac{1}{2} = \frac{\square}{12}$ (×?, ×6) (2) $\frac{5}{6} = \frac{10}{\square}$ (3) $5 = \frac{5}{1} = \frac{15}{\square}$ (×3, ×?) (4) $3 = \frac{\square}{4}$



Okay, we have found $\frac{6}{12}$ as an equivalent fraction of $\frac{1}{2}$ Now, let's find the equivalent fraction of $\frac{6}{12}$

Now, let's see what happens if we divide the denominator and numerator of $\frac{6}{12}$ by the same number.



$\frac{6}{12} = \frac{3}{6} = \frac{2}{4} = \frac{1}{2}$ (÷2, ÷□, ÷□ / ÷2, ÷□, ÷□)

If we divide the denominator and numerator of any fraction by the same number, we get an equivalent fraction.

$\frac{\bullet}{\blacksquare} = \frac{\bullet \div \blacktriangle}{\blacksquare \div \blacktriangle}$

1. Now, with the help of this method of dividing the denominator and numerator, we can find the numbers in the blanks.

(1) $\frac{3}{9} = \frac{\square}{3}$ (২) $\frac{6}{8} = \frac{3}{\square}$ (3) $\frac{5}{15} = \frac{1}{\square}$ (4) $\frac{4}{8} = \frac{\square}{2}$

How can the fraction $\frac{15}{18}$ be expressed in the lowest form?



Converting any fraction to its lowest form means dividing the denominator and numerator by the same number

Both 15 and 18 can be divided by 3



$\frac{15}{18} = \frac{5}{6}$ (÷3 above and below)

$\frac{\cancel{15}^{5}}{\cancel{18}_{6}} = \frac{5}{6}$

As a simple way, we can do this.



1. Let us express $\frac{16}{20}$ in the lowest form.

$\frac{16}{20} = \frac{8}{10} = \frac{4}{5}$ (÷2 twice)

$\frac{\cancel{16}^{\cancel{8}^{4}}}{\cancel{20}_{\cancel{10}_{5}}} = \frac{4}{5}$

$\frac{\cancel{16}^{4}}{\cancel{20}_{5}} = \frac{4}{5}$

Dividing by 2 twice in a row and dividing by 4 once are the same. So we need to know the largest factor by which the numerator and denominator can be divided. Then we can divide it all at once.



When expressing fractions in their lowest form, we try to make them as small as possible and get the smallest possible form of the fraction. For this, the denominator and numerator have to be divided by the same number.

1. Express the following fractions in their lowest form.

(1) $\frac{6}{12}$ (2) $\frac{3}{21}$ (3) $\frac{9}{36}$ (4) $\frac{16}{48}$ (5) $\frac{8}{12}$ (6) $\frac{9}{12}$

(7) $\frac{20}{25}$ (8) $\frac{32}{36}$ (9) $\frac{18}{30}$ (10) $\frac{16}{28}$ (11) $\frac{28}{49}$ (12) $\frac{24}{40}$

Comparison of fractions

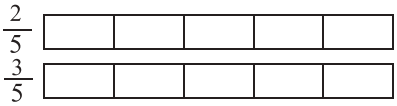
Let us find the larger and smaller fractions.

1. Let us find the larger and smaller and use the symbol '<' or '>'.

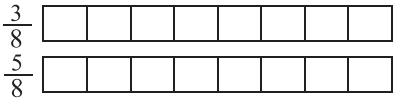


Let us color and compare.

$\frac{2}{5} \square \frac{3}{5}$



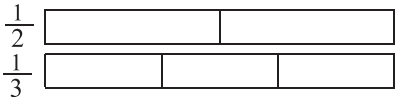
$\frac{3}{8} \square \frac{5}{8}$



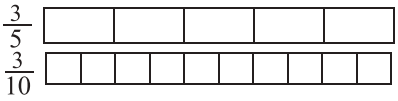
In every pair of fractions, the denominators are the same.



$\frac{1}{2} \square \frac{1}{3}$



$\frac{3}{5} \square \frac{3}{10}$



In every pair of fractions, the numerators are the same.



If the denominators of the fractions are equal, the fraction with the larger numerator is larger. If the numerators of the fractions are equal, the fraction with the smaller denominator is larger.

1. Let us put the '<' or '>' symbol

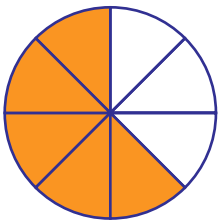
(1) $\frac{1}{4} \square \frac{3}{4}$ (2) $\frac{2}{5} \square \frac{1}{5}$ (3) $\frac{5}{7} \square \frac{5}{6}$ (4) $\frac{8}{9} \square 1$

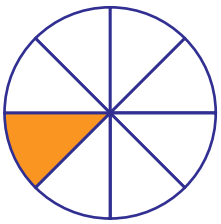
2. Let us arrange the following fractions from the smallest to largest and use mathematical symbol.

(1) $\frac{2}{3}, \frac{2}{9}, \frac{2}{8}, \frac{2}{5}$ (2) $\frac{3}{7}, \frac{3}{10}, \frac{3}{3}, \frac{3}{5}$ (3) $\frac{5}{10}, \frac{5}{6}, \frac{5}{15}, \frac{5}{9}$ (4) $\frac{5}{7}, \frac{3}{7}, \frac{4}{7}, \frac{2}{7}$

Addition and Subtraction of Fractions

Rocky got $\frac{5}{8}$ pieces of a cake. Rocky's sister Rima got $\frac{1}{8}$ pieces of the cake. How many pieces of cake did they get together?





Rocky's part = $\frac{\square}{\square}$ Rima's part = $\frac{\square}{\square}$



How do we add, $\frac{5}{8} + \frac{1}{8} = ?$

Let's think about how many $\frac{1}{8}$ parts are in $\frac{5}{8}$ and $\frac{1}{8}$





There are five $\frac{1}{8}$ and one $\frac{1}{8}$ parts.

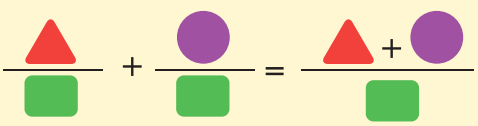
$\frac{5}{8} + \frac{1}{8} = \frac{\square}{\square}$

$= \frac{\square}{\square}$

We can express it in the lowest form after adding the fractions.



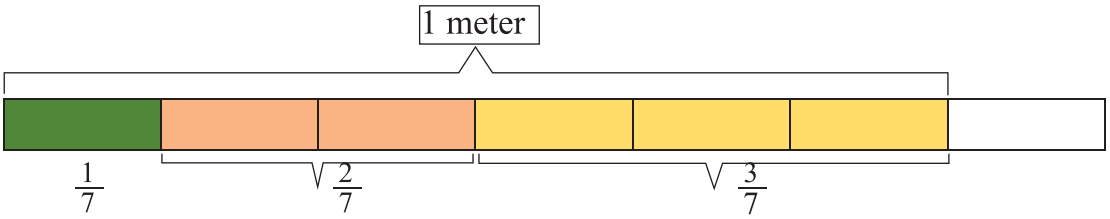
When we add two fractions with the same denominator, the denominator of the resulting fraction = the common denominator of the fractions, the numerator of the resulting fraction = the sum of the numerators of the fractions.



1. Let us add.

(1) $\frac{3}{7} + \frac{2}{7}$ (2) $\frac{3}{9} + \frac{4}{9}$ (3) $\frac{5}{12} + \frac{4}{12}$

1. There are ribbons of lengths $\frac{1}{7}$ meters, $\frac{2}{7}$ meters and $\frac{3}{7}$ meters. How many meters are the total length of the ribbons?



Mathematical sentence $\frac{1}{7} + \frac{2}{7} + \frac{3}{7} =$ ☐ meters

2. Let us add.

(1) $\frac{3}{7} + \frac{2}{7} + \frac{1}{7}$ (2) $\frac{3}{9} + \frac{2}{9} + \frac{2}{9}$ (3) $\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$

2. There is $\frac{3}{8}$ litres of water in Ria's bottle, $\frac{2}{8}$ litres in Mina's bottle and $\frac{1}{8}$ litres in Urmi's bottle. How many litres of water are there in the bottles of all three of them?

$$\frac{3}{8} + \frac{2}{8} + \frac{1}{8}$$

$$= \frac{\square + \square + \square}{\square} = \frac{\square}{\square}$$

$$= \frac{\square}{\square} \text{ (Lowest form)}$$

When we add three fractions with common denominators, the denominator of the resulting fraction is the common denominator of the fractions and the numerator is the sum of the numerators of the fractions.

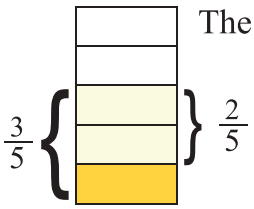


2026

You have $\frac{3}{5}$ litres of milk from which you drink $\frac{2}{5}$ litres. How many litres of milk are left?



How can we find the quantity of remaining milk from this problem?



The mathematical sentence is $\frac{3}{5} - \frac{2}{5} = \square$

$\frac{3}{5} - \frac{2}{5} = \frac{3-2}{5} = \frac{\square}{\square}$

The remaining milk is $\square$ litres

1. Rajib has $\frac{6}{8}$ litres of water in his bottle. Bobi has $\frac{4}{8}$ litres of water in his bottle. How many litres more water does Rajib have than Bobi?



We can easily calculate this by subtracting.

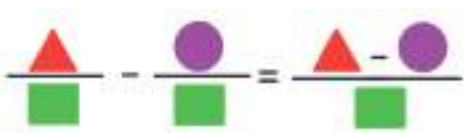
Mathematical sentence

$\square - \square = \square$

$\frac{\square}{\square} - \frac{\square}{\square} = \frac{\square - \square}{\square} = \frac{\square}{\square}$ litres

Rajib has $\square$ litres more of water

When we subtract one fraction from another with a common denominator, the denominator of the subtracted fraction = the common denominator of the fractions, the numerator of the subtracted fraction = the difference of numerators of the fractions.



1. Let us subtract

(1) $\frac{5}{8} - \frac{1}{8} = \frac{\square - \square}{\square} = \frac{\square}{\square}$ (2) $\frac{7}{12} - \frac{5}{12} = \frac{\square - \square}{\square} = \frac{\square}{\square}$

2. Rocky got $\frac{6}{13}$ meters of a ribbon, Reema got $\frac{3}{13}$ meters and Mithu got $\frac{4}{13}$ meters. How many meters less ribbon did Mithu get than Rocky and Reema got together?

	Rafi's method		Tulli's method

✓ First, we will add the first two fractions.

✓ Then, we will subtract the last fraction from the total.

Rocky's part + Rima's part

$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square + \square}{\square} = \frac{\square}{\square}$

Mithu's part $\frac{\square}{\square}$ meters

Mithu has less.

$\frac{\square}{\square} - \frac{\square}{\square} = \frac{\square - \square}{\square} = \frac{\square}{\square}$ meters

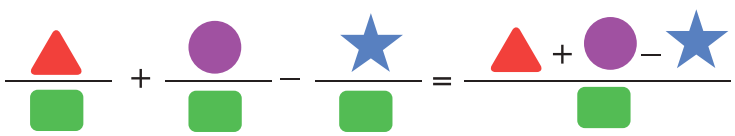
We can use the concept of addition and subtraction of fractions with common denominator.

Rafi's part + Rima's part – Mithu's part

$\frac{\square}{\square} + \frac{\square}{\square} - \frac{\square}{\square} = \frac{\square + \square - \square}{\square}$

$= \frac{\square - \square}{\square} = \frac{\square}{\square}$ meters

We can solve addition and subtraction problems with fractions in our daily lives in this way.



2. Let us do the calculations below.

(1) $\frac{2}{5} + \frac{3}{5} - \frac{4}{5}$

(2) $\frac{3}{7} + \frac{1}{7} - \frac{2}{7}$

(3) $\frac{3}{8} - \frac{1}{8} + \frac{5}{8}$

(4) $\frac{1}{6} + \frac{5}{6} - \frac{1}{6}$

Let us try

1. Following the instructions on the left, let us tick ☑ in the blanks of the fractions on the right.

The denominator of the fraction is an odd number	$\frac{1}{5}$☑, $\frac{3}{5}$☑, $\frac{1}{3}$☑, $\frac{2}{5}$☑, $\frac{1}{9}$☑, $\frac{3}{4}$☐, $\frac{5}{6}$☐, $\frac{3}{6}$☐, $\frac{12}{18}$☐, $\frac{6}{9}$☐,
The numerator of the fraction is 1	$\frac{1}{5}$☐, $\frac{3}{5}$☐, $\frac{1}{3}$☐, $\frac{2}{5}$☐, $\frac{1}{9}$☐, $\frac{3}{4}$☐, $\frac{5}{6}$☐, $\frac{3}{6}$☐, $\frac{12}{18}$☐, $\frac{6}{9}$☐,
The denominator of the fraction is between 2 to 6	$\frac{1}{5}$☐, $\frac{3}{5}$☐, $\frac{1}{3}$☐, $\frac{2}{5}$☐, $\frac{1}{9}$☐, $\frac{3}{4}$☐, $\frac{5}{6}$☐, $\frac{3}{6}$☐, $\frac{12}{18}$☐, $\frac{6}{9}$☐,
The value of the fraction is less than $\frac{1}{2}$	$\frac{1}{5}$☐, $\frac{3}{5}$☐, $\frac{1}{3}$☐, $\frac{2}{5}$☐, $\frac{1}{9}$☐, $\frac{3}{4}$☐, $\frac{5}{6}$☐, $\frac{3}{6}$☐, $\frac{12}{18}$☐, $\frac{6}{9}$☐,
The fraction is equivalent to $\frac{3}{9}$	$\frac{1}{5}$☐, $\frac{3}{5}$☐, $\frac{1}{3}$☐, $\frac{2}{5}$☐, $\frac{1}{9}$☐, $\frac{3}{4}$☐, $\frac{5}{6}$☐, $\frac{3}{6}$☐, $\frac{12}{18}$☐, $\frac{6}{9}$☐,

2. Tick (√) the equivalent fraction of $\frac{3}{4}$

$\frac{3}{8}$, $\frac{6}{8}$, $\frac{6}{12}$, $\frac{15}{16}$, $\frac{15}{20}$, $\frac{15}{24}$, $\frac{18}{24}$

3. Let us fill in the boxes below.

(1) $\frac{5}{6} - \frac{1}{6}$

$= \frac{\square - \square}{\square} = \frac{\square}{\square}$

$= \frac{\square}{\square}$ (lowest form)

(2) $1 + \frac{2}{5} - \frac{1}{5}$

$= \frac{\square + \square - \square}{\square}$

$= \frac{\square - \square}{\square} = \frac{\square}{\square}$

Let us do

1. Tick (√) the correct answers.

(1) Which of the following is a proper fraction?

a) $\frac{5}{3}$ b) $\frac{4}{3}$ c) $\frac{4}{4}$ d) $\frac{3}{5}$

(2) Which of the following fractions has the largest value?

a) $\frac{1}{5}$ b) $\frac{2}{5}$ c) $\frac{3}{5}$ d) $\frac{4}{5}$

(3) Which of the following fractions has the smallest value?

a) $\frac{3}{4}$ b) $\frac{3}{5}$ c) $\frac{3}{7}$ d) $\frac{3}{10}$

(4) Which of the following is true?

a) $\frac{2}{5} > \frac{3}{5}$ b) $\frac{3}{4} < \frac{5}{4}$ c) $\frac{2}{3} < \frac{1}{3}$ d) $\frac{1}{2} > \frac{3}{2}$

(5) What is the lowest form of $\frac{16}{48}$?

a) $\frac{8}{24}$ b) $\frac{4}{12}$ c) $\frac{2}{6}$ d) $\frac{1}{3}$

(6) Which fraction is equivalent to $\frac{2}{7}$?

a) $\frac{2}{14}$ b) $\frac{4}{14}$ c) $\frac{6}{14}$ d) $\frac{8}{14}$

(7) $\frac{3}{7} + \frac{4}{7} + \frac{5}{7} = ?$

a) $\frac{12}{21}$ b) $\frac{7}{21}$ c) $\frac{7}{14}$ d) $\frac{12}{7}$

2. Make two equivalent fractions of the following.

(1) $\frac{3}{7} = \frac{\square}{\square} = \frac{\square}{\square}$

(2) $\frac{5}{8} = \frac{\square}{\square} = \frac{\square}{\square}$

(3) $\frac{7}{4} = \frac{\square}{\square} = \frac{\square}{\square}$

(4) $\frac{9}{9} = \frac{\square}{\square} = \frac{\square}{\square}$

3. Express the following fractions in their lowest form.

(1) $\frac{15}{25} = \frac{\square}{\square}$ (2) $\frac{20}{12} = \frac{\square}{\square}$

(3) $\frac{35}{49} = \frac{\square}{\square}$ (4) $\frac{25}{25} = \frac{\square}{\square}$

4. Let us solve the problems related to addition and subtraction of fractions.

(1) $\frac{1}{5}+\frac{2}{5}$	(2) $\frac{2}{7}+\frac{3}{7}$	(3) $\frac{4}{7}-\frac{2}{7}$	(4) $\frac{7}{12}-\frac{3}{12}$
(5) $\frac{1}{5}+\frac{2}{5}+\frac{1}{5}$	(6) $\frac{1}{7}+\frac{2}{7}+\frac{3}{7}$	(7) $\frac{4}{7}-\frac{2}{7}+\frac{1}{7}$	(8) $\frac{7}{12}-\frac{3}{12}+\frac{1}{12}$

5. Rima and Lima bought $\frac{1}{7}$ and $\frac{2}{7}$ meters of coloured ribbon from a shop respectively. How many meters of ribbon did they buy together?

6. Priya eats $\frac{1}{5}$ parts of a pie and Ripa $\frac{4}{5}$ parts. How many parts do they eat together?

7. Prami has 2 meters of ribbon. If she gives Mina $\frac{1}{5}$ meters of ribbon, how many meters of ribbon will she have?

8. What do I do in a day, that is, in 24 hours? How much time does each task take?

Name of task	Time	How much time of a day do I spend?	Numerator of fraction	Denominator of fraction
Play	☐ hours	$\frac{\square}{24}$ parts	☐	☐
Sleep	☐ hours	$\frac{\square}{24}$ parts	☐	☐
Study	☐ hours	$\frac{\square}{24}$ parts	☐	☐
	☐ hours	$\frac{\square}{24}$ parts	☐	☐
	☐ hours	$\frac{\square}{24}$ parts	☐	☐

Now, from the information in the table above, let us find the answers to the following questions.

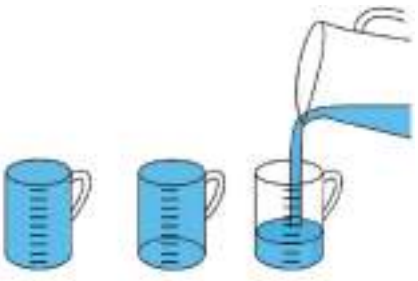
(1) Which task do I do the largest part of the day?
(2) Which task do I spend the least time on?
(3) How much time do I spend on playing in a day?
(4) Which task takes up more time during the day, playing or studying?
(5) How much more time is spent on sleeping than playing?
(6) How much time is spent on studying, sleeping and playing together?

Chapter
8

Decimal Fractions

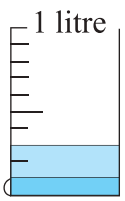
Let us learn another way to express fractions.

There are some water in a jug. Water is poured into each of three mugs of one litre capacity. According to the picture, the third mug is partially filled with water. What is the amount of water in the third mug?



To express a part of something we often divide it into ten. A quantity equal to $\frac{1}{10}$ parts of 1 litre is called 0.1 litre. This is read and written as 'zero decimal one litre'.

$\frac{1}{10}$ litre = 0.1 litre



The amount of water in the third jug is $\frac{3}{10}$ litres.

$\frac{3}{10}$ liters is '3 times of 0.1 liters'. Therefore, it is '0.3 liters'.

There are '2 liters and 0.3 liters' of water in the mugs which we can express as 2.3 and say in words '2 decimal 3 liters'.

Numbers like 0.1, 0.3, and 2.3 are called decimal fractions.
The dot (.) in the middle of the number is the decimal point.



Place names	Ones		One-tenths
	3	.	2
Rules for reading	three	decimal	two

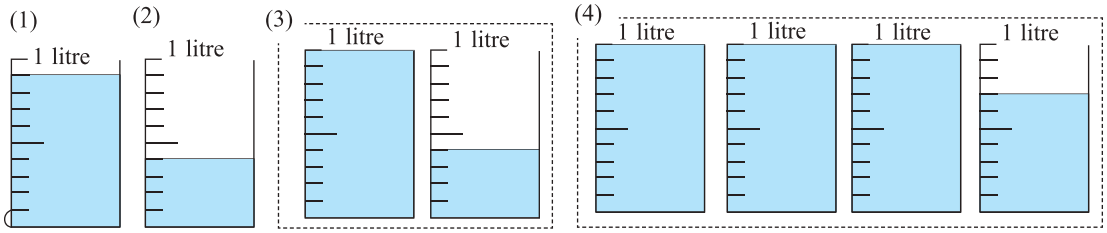
The first digit to the right of the decimal point is the tenths place.

One tenth = $\frac{1}{10}$ = 0.1

Except for fractions 0, 1, 2 etc. which we have already read, we call them whole numbers.



1. Let us express the volumes mentioned in the figure as decimal fractions and write them in words.



(1) 0.9 litre In words zero decimal nine liters

(2) ____ litre In words ____

(3) ____ litre In words ____

(4) ____ litre In words ____

1. Let us classify the following numbers into decimals and whole numbers.

0.6 61.7 2

8 11.3 36.8

Decimal number	
Whole number	

What is the length of the red ribbon in centimeters?





Remember, 'cm' is the abbreviation of 'centimeter' and 'mm' is the abbreviation of 'millimeter'.

(1) What is the length of the ribbon? ☐ cm ☐ mm

(2) How many cm are there in 1 mm? ☐ cm $1\text{ mm} = \frac{1}{10}\text{cm} = 0.1\text{ cm}$

(3) How can 4 mm be written in cm? $4\text{ mm} = \frac{\square}{10}\text{ cm} = 0.4\text{ cm}$

(4) How can 7 cm and 4 mm be written in cm?

$7\text{ cm and }4\text{ mm} = \square\text{ cm} + \frac{\square}{10}\text{ cm}$

$= (7 + \square)\text{ cm} = \square\text{ cm}$

1. Using the ruler, let us measure the length of the items below and fill in the blanks.



Our ruler has markings in centimeters as well as millimeters.

We can easily do the calculation by adding them together.



My items	Measured length	Decimal fraction
Pencil	☐ cm ☐ mm	☐ cm
Pen	☐ cm ☐ mm	☐ cm
Length of the book	☐ cm ☐ mm	☐ cm
Water bottle	☐ cm ☐ mm	☐ cm

2. The weight of the oranges in the picture is 1 kg 500 grams. Let us express the weight of the oranges in kilograms.





'Kg' is 'kilogram' and similarly 'gm' is the abbreviation of 'gram'.



1000 g =1 kg



So,
1 gram $= \frac{1}{1000}$ kg

(1) How can 100 grams be written in kilograms? ☐ kg

(2) How can 500 grams be written in kilograms? ☐ kg

(3) How can 1 kg 500 grams be written in kilograms? ☐ kg

In our daily life, we often use decimals. For example, we say that 1 kg 200 grams of rice is 1.2 kg of rice.



3. Let us put the number 1.3 on the number line.



A small interval is equal to $\frac{1}{10}$ or 0.1. So we put the number by counting the three small intervals after 1

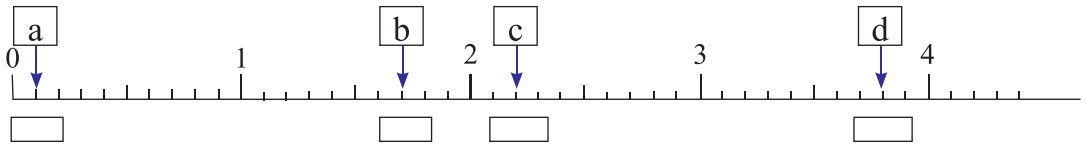




We can put 1.3 on the number line in the same way as common fraction.

2026

1. What numbers do the letters a, b, c and d represent on the number line?



2. Place the numbers 0.9, 0.5, 2.6 and 3.2 on the number line.

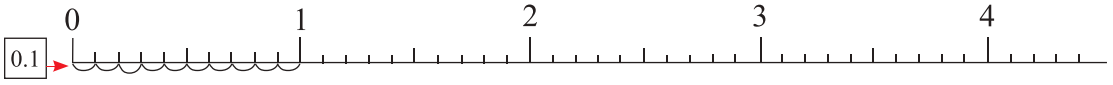
4. How many 0.1s are there in 0.5, 1.8 and 3.3?



There are ten 0.1s in the number 1.

Then, how many 0.1s are there in the number 1.8?





0.5 has ☐ 0.1s.

1.8 has ☐ 0.1s.

3.3 has ☐ 0.1s.

5. Answer the questions below.

(1) Write the number formed by 28 units of 0.1s. ☐

(2) Write the number formed by 30 units of 0.1s. ☐

(3) How many 0.1s make 4.7? ☐

(4) How many 1s and 0.1s make 5.3? ☐

2 can be expressed as 2.0



6. Between 2.1 and 1.3 which one is larger?



To compare numbers, I put them on number line. The number to the right on the number line is larger.



The number 2.1 is made up of 21 units of 0.1s.
The number 1.3 is made up of 13 units of 0.1s. Therefore, 2.1>1.3



3. Let us express larger number by using the symbol '<' or '>'.

(1) 2.4 ☐ 1.8 (2) 3 ☐ 4.8 (3) 2.1 ☐ 6.8 (4) 0 ☐ 0.1

7. Which is larger between $\frac{3}{10}$ and 0.4?



Oh... How can we compare common fractions and decimal fractions?



I am thinking about the number made up of 0.1.

I am thinking about the number made up of $\frac{1}{10}$

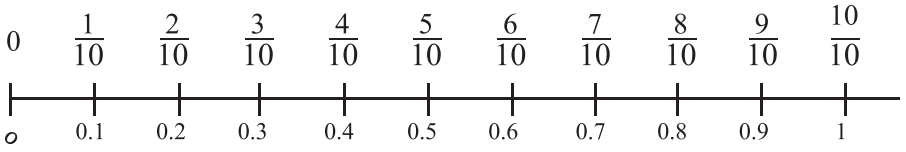


The number $\frac{3}{10}$ is made up of 3 units of 0.1.
The number 0.4 is made up of 4 units of 0.1. $\therefore \frac{3}{10} < 0.4$

The number $\frac{3}{10}$ is made up of 3 units of $\frac{1}{10}$.
The number 0.4 is made up of 4 units of $\frac{1}{10}$ $\therefore \frac{3}{10} < 0.4$

Let us know the relationship between common fractions and decimal fractions by using the number line.





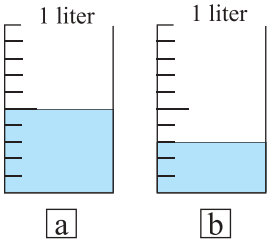
4. Let us put the relation symbol (<, > or =) in the empty box.

(1) $\frac{7}{10}$ ☐ 0.9 (2) 0.5 ☐ $\frac{5}{10}$ (3) 0.2 ☐ $\frac{6}{10}$ (4) $\frac{10}{10}$ ☐ 0.8

2026

Addition and subtraction of decimal fractions

Container A contains 0.5 liters of water and container B contains 0.3 liters of water. How many litres of water are there in the two containers?





We can add to get the total amount of water.

The mathematical sentence is ____



Let us think about how many 0.1s there are in the two numbers.

The calculation is

The number 0.5 is made up of 5 units of 0.1s and the number 0.3 is made up of 3 units of 0.1s.
There are a total of (5+3) = 8 units of 0.1s, which makes the number 0.8.
∴ There is a total of 0.8 litres of water.

1. How much more water is there in container A than in container B?



To find the difference in the amount of water, we need to subtract.

The mathematical sentence is ____
The calulation is

(Five 0.1) – (three 0.1). Therefore, the difference is
(5-3) = 2 units of 0.1 ∴ The difference is 0.2 liters

1. Let us add and subtract horizontally.

(1) 0.5 + 0.2 (2) 0.6+ 2.3 (3) 0.5 + 0.5 (4) 1.7 +0.5
(5) 0.9 – 0.4 (6) 2.8 – 0.3 (7) 1 – 0.4 (8) 1.5 –0.7

2. Let us add and subtract.

(1)

	1	.	8
+	2	.	4

(2)

	2	.	3
−	0	.	7



Let's think about how many 0.1s there are in the numbers.



Then we can calculate the sum of the numbers above as whole numbers.

	1	.	8
+	2	.	4
	4	.	2

	2	.	3
−	0	.	7
	1	.	6



Yes, and in this case it is very important to keep the numbers in the correct order (top and bottom).

Rules for vertical addition and substraction of decimal numbers

1. Place the numbers vetically based on the place values.
2. Calculate in a similar way to adding and subtracting whole numbers.
3. Place the decimal point in the result along the decimal point of the decimal numbers.

3. Check the accuracy of the addition and subtraction.

(1) 1.4+ 2.6

√ 1 . 4
+ 2 . 6
4 . 0

(2) 8 + 4.5

× 8
+ 4 . 5
5 . 3

√ 8. 0
+ 4 . 5
3 . 5

Think 8 as 8.0

(3) 6 − 0.2

× 6
− 0 . 2
0 . 4

√ 6. 0
− 0 . 2
5 . 8

Think 6 as 6.0

(4) 3.6− 2.8

3 . 6
− 2 . 8
× 8

3 . 6
− 2 . 8
√ 0 . 8

'.' We have to remember to put 0 in the ones place.

2026

Let us try

1. Express the following using the relation symbol (<, > or =).

(1) 0.4 ☐ 0.7	(2) 5.6 ☐ 6.5	(3) 0.1 ☐ 0	(4) 11 ☐ 1.1
(5) $\frac{5}{10}$ ☐ 0.5	(6) 0.7 ☐ $\frac{3}{10}$	(7) 0.1 ☐ $\frac{3}{10}$	(8) $\frac{10}{10}$ ☐ 1

2. Measure the length and width of the math book and express it as a decimal fraction.

length = ☐ cm width = ☐ cm

3. Find the sum of 0.8 and 0.2.

The number 0.8 is made up of ☐ 0.1s

and the number 0.2 is made up of ☐ 0.1s

There are ☐ + ☐ 0.1s in total.

0.8 + 0 .2 = ☐

4. Find the difference of 1.9 and 0.6.

The number 1.9 is made up of ☐ 0.1s

and the number 0.6 is made up of ☐ 0.1s

The difference between '1.9 and 0.6' is made up of ☐ − ☐ = ☐ .01s

1.9 - 0.6 = ☐

5. Fill in the blanks below.

$$\begin{array}{r} 7.6 \\ +\ 2.8 \\ \hline \square \end{array} \qquad \begin{array}{r} 7.5 \\ -\ 4.8 \\ \hline \square \end{array}$$

Let us do

1. Write in digits.

(1) Five decimal seven (2) Eighteen decimal three (3) Zero decimal eight

2. Write in words.

(1) 1.4 (2) 17.6 (3) 0.9

3. Put the relation symbol (<, > or =) in the blanks between the pairs below.

(1) 2.5 ☐ 4.9 (2) 11.2 ☐ 23.4 (3) 2.1 ☐ 2 (4) 2 ☐ 1.9

(5) 3.4 ☐ 3.8 (6) $\frac{1}{10}$ ☐ 0.3 (7) $\frac{5}{10}$ ☐ 0.2 (8) $\frac{7}{10}$ ☐ 1.2

4. Let us add and subtract.

(1) 0.7+ 0.9	(2) 1.8 + 1.2	(3) 2.5 + 1.7	(4) 3 + 4.6
(5) 0.9 – 0.4	(6) 2 – 0.6	(7) 5 –3.8	(8) 7.6 – 2.6

5. Let us add vertically.

(1) 3.7 + 2.8 (2) 5.9 + 2.6 (3) 4 + 1.4 (4) 3.1 + 4.9 (5) 0.9 +0.4

6. Subtract vertically.

(1) 4.1 – 2.8 (2) 7.7 – 4.2 (3) 9 –5.5 (4) 8.1 – 7.9 (5) 0.7 –0.7

7. Sanjay's house is 3.1 kilometers (km) west of the school. Shampa's house is 2 kilometers (km) east of the school.



(1) What is the distance between Sanjay's house and Shampa's house?

(2) How many kilometers is Sanjay's house farther from the school than Shampa's house ?

Chapter
9

Measurement

Length

The length of a road is 16 kilometers. What will be the length of the road in meters?





Let us remember the relationship among the units of length.

km (Kilometer)	m (Meter)	cm (Centimeter)	mm (Millimeter)
1 km =	1000 m		
	1m =	100 cm	
		1cm =	10 mm

1 kilometer = 1000 meters

16 kilometers = 16 × 1000 meters

= 16000 meters

∴ 16 kilometers = 16000 meters

1. The length of a bridge is 4 kilometers 800 meters.



(1) Let us express the length of the bridge in meters.

1 Kilometer = 1000 meters
4 kilometers = 4 × 1000 meters
= 4000 meters

4 kilometers 800 meters = 4000 meters + 800 meters
= 4800 meters

The length of a bridge is 4 kilometers 800 meters = 4800 meters

1. Let us express in 'meters' and 'centimeters'.

(1) 3 km 250 m = ☐ m

(2) 4 m 25 cm = ☐ cm

2. The height of Ushaton Chakma is 1 m 60 cm.



(1) Let us express in 'cm'

1 m = ☐ cm

∴ 1 m 60 cm = ☐ cm

(2) Let us express in 'mm'.

1 cm = ☐ mm

160 cm = ☐ × ☐

= ☐ mm

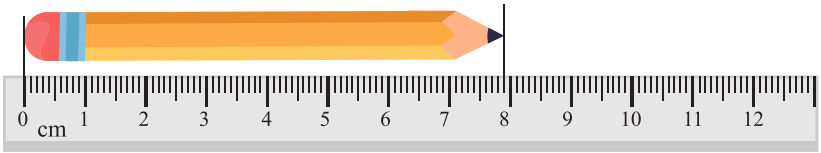
∴ 1 m 60 cm = ☐ mm

2. Let us express in 'cm'.

(1) 4 m 58 cm = ☐ cm

(2) 5 m 7 cm = ☐ cm

3. Let us express the length of the pencil in ‘cm’ and ‘mm’.





The length of the pencil is 7 cm and 9 mm

1 cm = 10 mm



Length of the pencil = ☐ cm ☐ mm

= ☐ mm + ☐ mm

= ☐ mm

3. Let us measure different objects in our environment (for example: book, note book, eraser, table, bricks, etc.) and express them in ‘ m ’, ‘cm’, and ‘mm’.

4. Let us express 589 m 75 cm in ‘cm’.

589 m = 589 × ☐ cm = ☐ cm

75 cm = ☐ cm

589 m 75 cm = ☐ cm

4. A person runs 42 km 195 m in a marathon. Let us express the distance run by him in meters.

5. Masud travels 2 km 360 m by rickshaw and 575 m on foot to go to school. Find the distance of Masud's school from his house.



To find out the total distance, we have to add. But how the mathematical statement will be formed, I can't understand.

I think we have to add by maintaining the same units of length.



The mathematical statement will be 2 km 360 m + 575 m = ☐

2 km 360 m + 575 m 2 km 935 m		By adding horizontally. 2 km 360 m + 575 m = 2 km 935 m

5. Let us do the following addition and subtraction

(1)	55 cm	9 mm	(2)	735 m	43 cm	(3)	73 km	199 m
	+ 8 cm	5 mm		– 277 m	37 cm		– 49 km	78 m

(4) 33 cm 6 mm + 21 cm 3 mm (5) 56 m 55 cm + 18 m 65 cm

(6) 45 km 250 m – 24 km 500 m (7) 5 km 320 m – 2 km 480 m

6. Sadid goes to his school after travelling 280 meters on foot and 550 meters by rickshaw from his house. How many cm did he travel to reach his school?

7. The distance of the market and the post office from the hospital is 845 m and 1 km 200 m respectively, in the same direction. Find the distance of the market from the post office and express it in 'cm'.



Perimeter

What do we call the total length around a table?



Let's measure the total length of all four sides of the top of our classroom table.



The total length of all four sides of the table

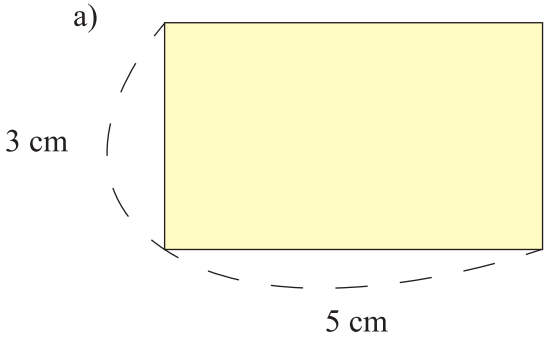
= ☐ cm + ☐ cm + ☐ cm + ☐ cm = ☐ cm

The total length of all the sides of a shape is called the perimeter of that shape.

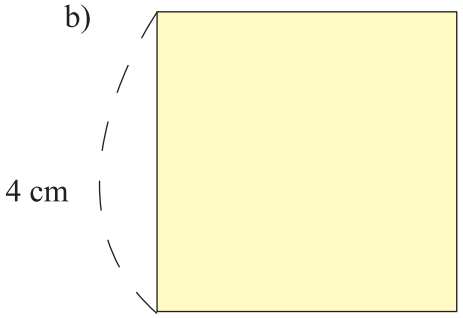


1. Let us find the perimeter of the following rectangle and square.

a)



b)



2. Let us measure the objects of the classroom and calculate their perimeter.

Objects	Length	Width	Perimeter
Bench			
Board			
Book			
Classroom			

Weight

How do we express the weight of a 25 kilogram bag of rice in grams?



Let us remember the units of weight.



25 kg

Units of Weight

1 Kilogram (kg) = 1000 grams (g)



Then, the weight of the rice bag

1 kg = 1000 grams,
25 kg = (25 X 1000) grams
= 25000 grams



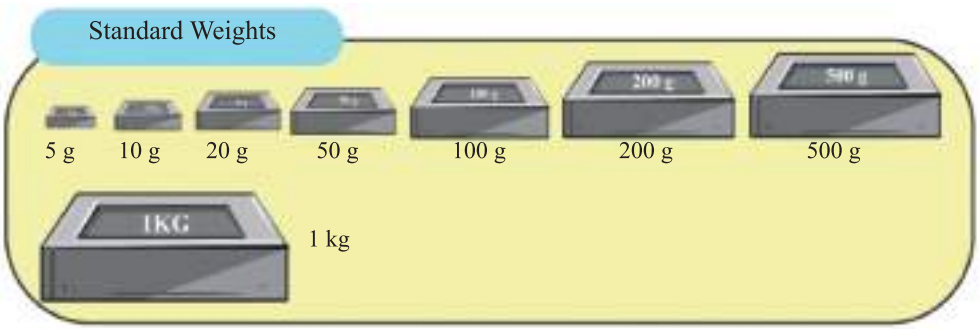
1. A bag full of vegetables weighs 6 kg 258g. Let us express this weight in 'grams'.

6 kg = (6 X 1000) grams = ☐ grams
258 grams = ☐ grams
Weight of the bag full of vegetables = ☐ grams

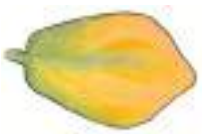
2. Which standard weights are required for weighing the following objects and express the weight of those objects in grams.

[One is done]

Goods	weight	Weights scale	Expressed in grams
	1 kg 575 grams	1 kg, 500g, 50g, 20g,5g	1575 grams
	2 kg 500 grams		grams
	3 kg 325 grams		grams
	4 kg 815 grams		grams



3. The weight of a watermelon is 3 kg 400 grams, and that of a papaya is 900 grams. How much more does the papaya weigh compared to the watermelon?

The mathematical statement will be: 3 kg 400 grams – 900 grams = ☐



To find how much greater the weight is, we have to subtract.

We have to subtract the smaller number from the greater number and also have to be careful about the unit.



2 kg		☐	g
3 kg		400	g
	–	900	g
2kg		☐	g

[900 grams cannot be subtracted from 400 grams. So, 1 kilogram (=1000 grams) has to be taken from the kilograms place and shifted to the grams place for subtraction.]

The weight of the watermelon is 2 kg 500 grams more.

1. Let us do the following addition and subtraction.

(1)

2 kg	450 grams	
+ 3 kg	800 grams	

(2)

1 kg	655 grams	
+ 4 kg	750 grams	

(3)

5 kg	220 grams	
– 2 kg	650 grams	

(4) 2 kg 380 grams + 1 kg 550 grams

(5) 7 kg 670 grams + 880 grams

(৬) 8 kg 785 grams – 2kg 450 grams

(7) 12 kg 425 grams – 835 grams

2. Let us add the weights of the following goods and express them in 'kg' and 'g'.



2 kilograms 135 grams



920 grams



1 kilogram 650 grams

3. 3 kg 650g – 1kg 400g = ☐

Let us make a story with the mathematical sentence and solve.

2026

Volume of liquids

Which units do we use for measuring the volume of liquid?



1 liter
or
1000 milliliters



500 milliliters
or
5 deciliters



250 milliliters
or
2.5 deciliters



200 milliliters
or
2 deciliters



5 milliliters
or
0.05 deciliter

Liter	Deciliter (dl)	Milliliter (ml)
1L	10 Deciliter	1000 mL
	1 dL	100 mL

For measuring the smallest amount of liquid, we use 'liter(L)', 'Deciliter (dL)', and 'Milliliter (mL)'.

1. Let's use a measuring cup to see how much water is in each of our bottles.





Amount of water in the bottle ☐ mL



Let's find out whose bottle contains most amount of water in our class.

2. Sajal bought one liter of milk and drank 300 mL. Let us discuss with our friends how much milk is left with Sajal.



1 L = 1000 mL
Therefore,
1000- 300 = 700
Remaining: 700 mL

300 ml = 0.3 L
Therefore,
1 – 0.3 = 0.7
Remaining: 0.7 L



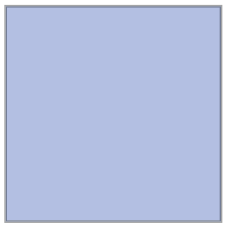
Both methods are correct. Mumu expressed it in millimeters, and Mithun expressed it in Liters.

Area

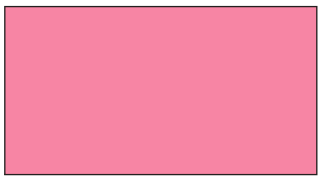
How to describe the size of a shape?

1. Let us compare which one takes more space, ‘A’ or ‘B’?

(A)

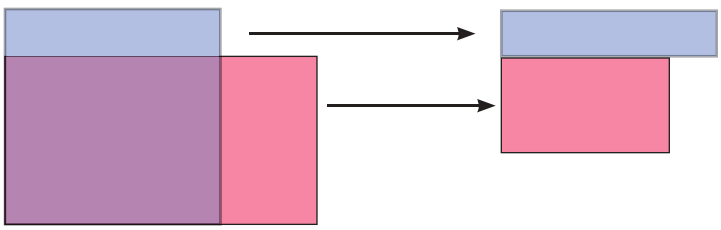


(B)





I think, we can compare them by drawing them on thin paper or cutting them, or by placing one on top of another.



Shape ‘A’ takes up more space than shape ‘B’.



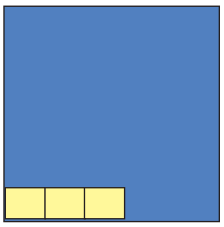
The amount of space a shape occupy is called its area.

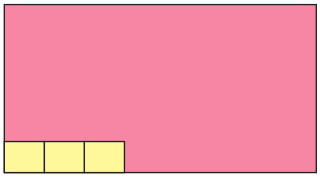
So, the space that a rectangle occupy is called its area.





If we cannot cut or draw, we can place an object on the shapes, by which we can compare how much space the object occupies.





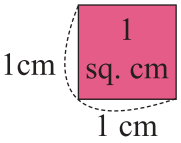


Yes, you are correct, but I don't think these are sufficient. It requires a standard unit.



The amount of space a shape occupy is called its area. It is expressed by square units.

The area of a square of side 1 cm is 1 square cm, and it is written as 1 square cm.



1 square centimeter is a unit of measuring area.

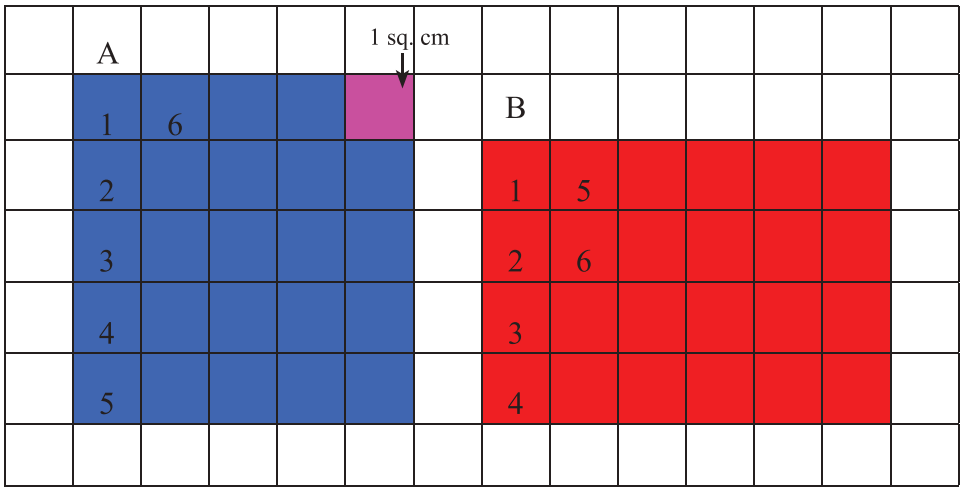


To find the area, we can place squares of area 1 square cm on that plane and count their number.



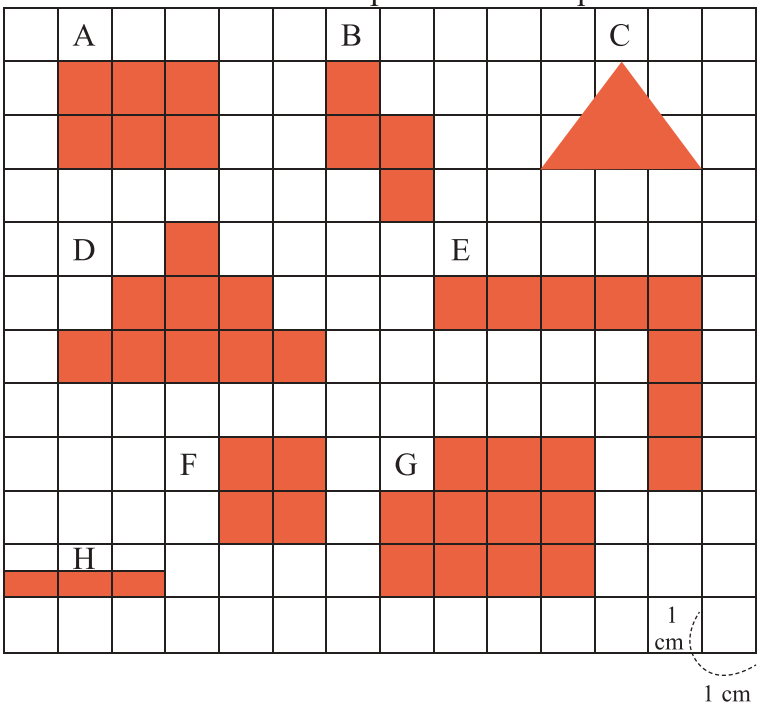
Yes. We can also consider a grid paper's 1 cm × 1cm boxes as well.

2. Which one is larger, 'A' or 'B'? What is the difference in their areas in square centimeters?

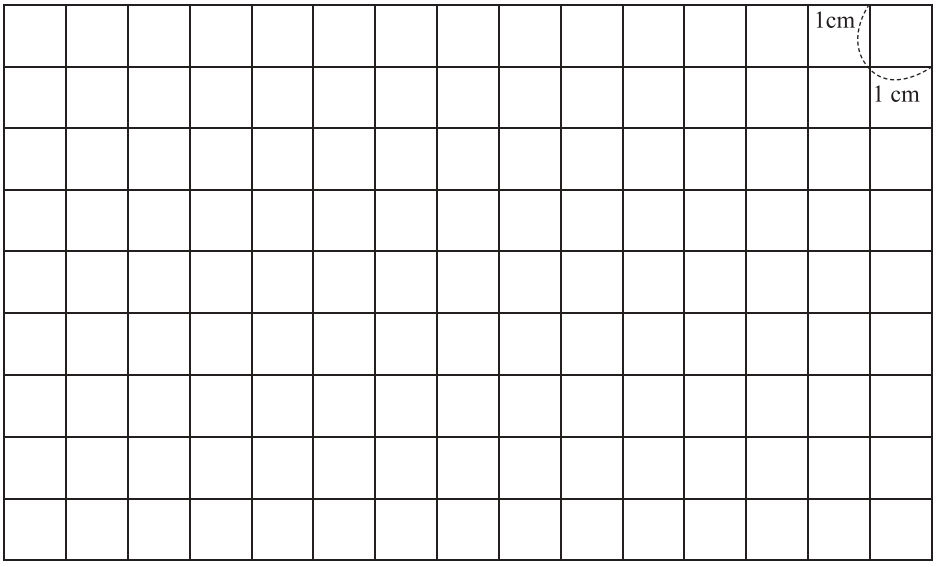


The area of A is 25 units of 1 square cm. So, its area is ☐ square cm.
The area of B is ☐ units of 1 square cm. So, its area is ☐ square cm.
☐ is bigger than ☐ and the difference between their area is ☐ square cm.

1. What is the area of each of the shapes below in square centimeters?



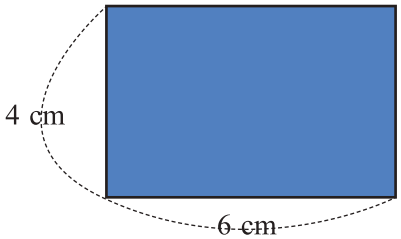
2. Let us draw and colour a few shapes with areas of 6 square cm and 8 square cm.

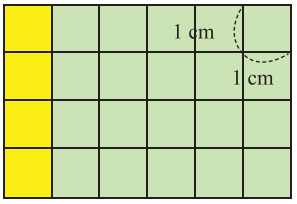


To find the area, we count the number of squares, each of 1 square cm.
Let's calculate some areas in that way.



3. Let us calculate and think about how to find the area of the rectangle below.





We divide the rectangle into 1 square cm squares and count the total number of squares. There are 24 squares here. So, the area of the rectangle is 24 square cm.

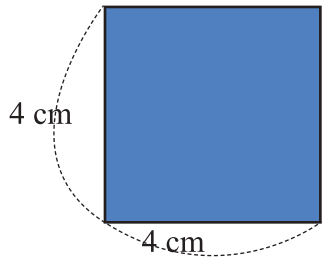




The area of the rectangle is also 24 square cm by multiplying its length, 6 cm, and width, 4 cm.

The area of the rectangle is ☐ square cm.

4. Let us find the area of the following square.



Mathematical sentence

Area of the square = ☐ square cm

The formulas for finding the area of a rectangle and a square are as follows

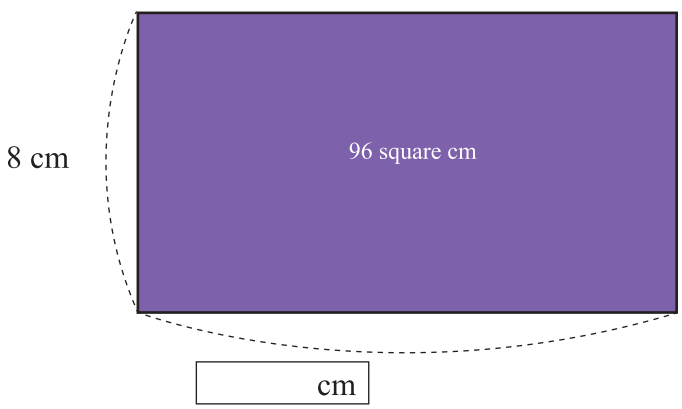
Area of a rectangle = Length × Width

Area of a Square = length of 1 side × length of 1 side

3. Let us find the area by using the formula.

(1) A rectangle with 18 cm length and 13 cm width.
(2) A square with a side of 9 cm.
(3) Let us draw a rectangle of length 9 cm and width 6 cm and find its area.

4. What is the length of the rectangle below?



5. The length of Nipa's classroom is 800 cm, and the width is 700 cm. Let us find the area of the floor.



Let us use a formula to find the area. Here,

Width 700 cm

Length 800 cm

Area ☐ × ☐ = ☐ square cm

Area ☐ square cm

But, the number is very big……



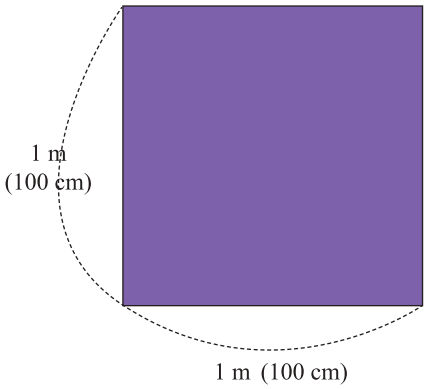
Exactly! Here, we can use meters as the unit.

In this case, we can also use another unit.



We can use squares whose sides are 1 meter.

It will be 1 m × 1 m = 1 square meter.
A square meter is the fundamental unit of area.



So, first, let us express the length and width of the classroom from centimeters into meters.

700 cm = 7 m 800 cm = 8 m

∴ The area of the classroom: 7 m × 8 m = 56 square m.



560000 square cm = 56 square m
Because, 1 square m = 10000 square cm
(100 cm × 100 cm)

5. Let us find the area of our classroom by measuring its length and width with a meter scale.

Time

Shabnam exercises for 30 minutes, paints for 45 minutes, and studies for 1 hour and 45 minutes every day. How many seconds does it take her to do all three activities?



To find out the total amount of time, first we have to add the amount of time required for all three activities to be completed. Then, we have to convert the time into seconds.



Let's review the relationship between the units of time.



Year	Month	Week	Day	Hour	Minute	Second
1 year ↔	12 months					
	1 month ↔	4 weeks (or 4 weeks and 1 or 2, or 3 days)				
		1 week ↔	7 days			
			1 day ↔	24 hours		
				1 hour ↔	60 minutes	
					1 minute ↔	60 seconds

1. Let us express 1 hour, 1 day, and 1 week in seconds.

(1) 1 hour = 60 minutes = 60 × 60 seconds = 3600 seconds (1 minute = 60 seconds)

(2) 1 day = 24 hours = 24 × 3600 seconds = 86400 seconds (1 hour = 3600 seconds)

(3) 1 week = 7 days = 7 × 86400 seconds = 604800 seconds (1 day = 86400 seconds)

1. Let us convert days and weeks into minutes.



We know that
1 hour = 60 minutes.

(1) 1 day = 24 hours = ☐ × ☐ = ☐ minute

(2) 1 week = ☐ days = ☐ × ☐ = ☐ minute

2026

2. Let us express the following times in hours.

(1) 4 days (2) 1 week (3) 8 weeks 5 days



Because 1 day equals 24 hours and 1 week equals 7 days .....

(1) 4 days = 4 × 24 hours = 96 hours

(2) 1 week = 7 days = 7 × 24 hours = 168 hours

(3) 8 weeks and 5 days = 8 × 7 days + 5 days

= 56 days +5 days

= 61 days

= 61 days × 24 hours

= 1464 hours

2. Let us convert the following times into the units described beside them.

(1) 3 minutes(seconds) (2) 4 hours (minutes) (3) 9 hours and 25 minutes (seconds)

(4) 21 days (weeks) (5) 38 days (weeks, days) (6) 5 weeks (hours)

3. In one day, Safin studies for 2 hours 5 minutes 58 seconds and Sneha studies for 1 hour 14 minutes 35 seconds. How much time in total do both of them study?



Let's add their study times to find the total time they study.

	Hour	Minute	Second
	2	05^{+1}	58
	1	14	35
+			
	3	20	33

[Second]
58 + 35 = 93 seconds, and 93 = 60 +33
Therefore, 60 seconds = 1 minute remains in hand

[Minute] 5 + 14 + 1 = 20

[Hour] 2 + 1 = 3

Total time: 3 hours 20 minutes and 33 seconds

3. Let's perform addition and subtraction of time.

(1)

	Hour	Minute	Second
	3	40	25
+	1	15	32

(2)

	Hour	Minute	Second
	8	38	42
	2	26	35
+	1	10	23

(3)

	Hour	Minute	Second
	10	37	28
	3	15	19
+	7	25	25

(4)

	Hour	Minute	Second
	6	45	37
–	2	34	12

(5)

	Hour	Minute	Second
	13	55	14
–	4	00	47

(6)

	Hour	Minute	Second
	18	23	39
–	9	48	55

(7) 6 hours 25 minutes + 2 hours 10 minutes 35 seconds

(8) 20 hours 24 seconds + 1 hour 50 minutes

(9) 16 hours 42 minutes 10 seconds – 3 hours 28 minutes

(10) 7 hours 15 seconds – 4 hours 46 minutes 35 seconds

4. Let us find the difference in time by looking at the clock.



afternoon ☐



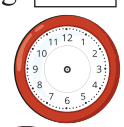
evening ☐ hours ☐ minutes

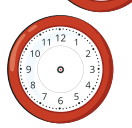
Time difference

= ☐ hours ☐ minutes

4. Let us place the hands and write down the time.

I woke up at  in the morning. ☐

I got ready and went out from home  ☐ hour ☐ minute

I reached school at 20 past eight. 

My friend Rita reached school 10 minutes after me.

Rita reached school at ☐ hour ☐ minute 

Our school started at  in the morning ☐

On which date is our glorious Victory Day?



We know that our glorious Victory Day is on 16th December. We achieved our independence on this day in the 1971 Liberation War.





There is a traditional way of writing the date. The teacher writes the date on the board in the classroom every day in this way.

We will write the date of victory in the liberation war in this way: 16/12/1971 AD or, 16.12.1971 AD.



There are three parts to writing a date. The first part is the day, the second part is the month, and the final part is the year. Symbols like '/', '-', '.', etc., are used to separate each part.

1. Let us write on which dates 'Shaheed Day' and 'Independence Day' were observed this year in the school.





(1) 'Shaheed Day' was observed in the school on ☐

(2) 'Independence Day' was observed on ☐

1. Let us write the marked dates from the calendar in the traditional way.

June 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
01	02	03	04	05	06	07
08	09	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	(30)					

September 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	01	02	03	04	05	06
07	(08)	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

January 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				(01)	02	03
04	05	06	07	08	09	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

2026

Let us try

1. Let us fill in the blanks.

650 g = ☐ kg

1.40 L = ☐ ml = ☐ dl

8 minutes = ☐ seconds

2.7 km = ☐ m

1275 g = ☐ kg ☐ g

4 days = ☐ minutes

2. Let us add and subtract.

(1)

	7 kg	250 g
+	5 kg	650 g

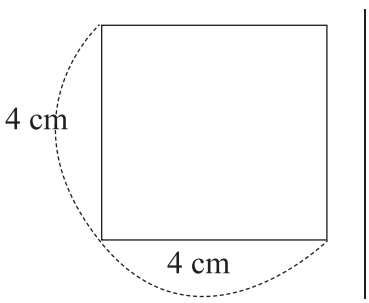
(2)

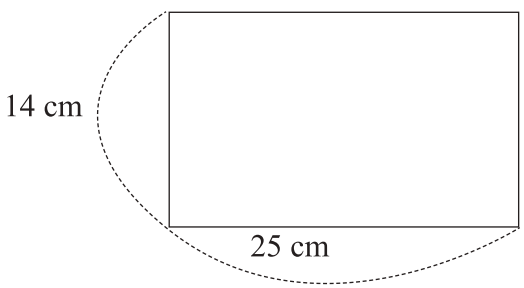
	15 kg	435 g
	2 kg	720 g
+	12 kg	365 g

(3)

	17 m	55 cm	4 mm
−	10 m	74 cm	8 mm

3. Let us find the area.





4. Laiju's age is 12 years 7 months, and Masud's age is 9 years 9 months. What is the sum of Laiju and Masud's ages?

Let us do

1. Put a tick mark (√) next to the correct answer.

(1) 1 kilometer = how many meters?

a) 10 m b) 100 m c) 1000 m d) 10000 m

(2) 1 meter 60 centimeters = how many centimeters?

a) 61 cm b) 70 cm c) 160 cm d) 1060 cm

(3) 8 kilograms = how many grams?

a) 80 g b) 800 g c) 8000 g d) 80000 g

(4) 1 liter = how many milliliters?

a) 10 ml b) 100 ml c) 1000 ml d) 10000 ml

(5) A wall is 12 m long and 8 m wide. What is its perimeter?

a) 20 m b) 32 m c) 40 m d) 96 m

(6) A square floor has a side of 8 meters. What is the area of the floor?

a) 8 square m b) 16 square m c) 64 square m d) 32 square m

(7) Which of the following could have an area of 400 square cm?

a) Classroom floor b) Book cover c) Table d) Geometry box

2. Fill in the blanks.

(1) 9 mm = ☐ cm (2) 4 m 7 cm = ☐ cm

(3) 5.3 km = ☐ m (4) 12 kg = ☐ grams

(5) 2.65 L = ☐ ml (6) 1350 g = ☐ kg ☐ g

(7) 120 hours = ☐ days (8) 2 days = ☐ minutes

3. Let us add and subtract.

(1)
4 m 65 cm 18 mm
7 m 58 cm 9 mm
\+ 1 m 23 cm 10 mm

(2)
15 kg 785 grams
3 kg 453 grams
\+ 12 kg 200 grams

(3)
24 L 650 ml
16L 350 ml
\+ 5 L 000 ml

(4)
5 hours 48 minutes 25 seconds
\+ 1 hour 35 minutes 40 seconds

(5)
21 m 32 cm 9 mm
– 16 m 68 cm 6 mm

(6)
8 kg 320 grams
– 3 kg 865 grams

(7) 9 liters + 4 liters 487 ml

(8) 14 hours 15 minutes + 5 hours 35 minutes 40 seconds

(9) 6 m 28 cm – 4 m 45 cm

(10) 8 kg 380 grams – 3 kg 700 grams

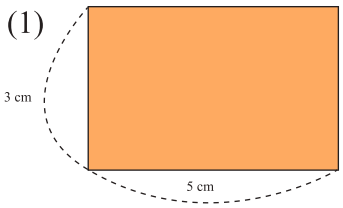
4. The length and width of Dipu's table are 52.7 cm and 43.6 cm. What is the perimeter of the table? Express it in 'cm' and 'm'.

5. Mr. Reza bought 2.5 kg fruit for his family. After eating some of it, 985 grams were left. Let us express how much fruit they ate.

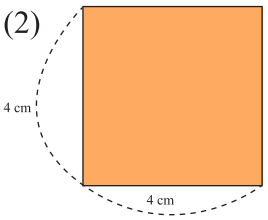
6. Shanta drank 380 ml of water during breakfast, 410 ml of water during lunch, and 290 ml of water during dinner. In total, how much water did she drink?

7. Let us find the area.

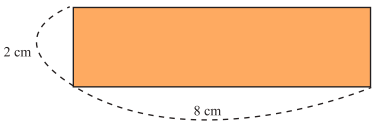
(1)



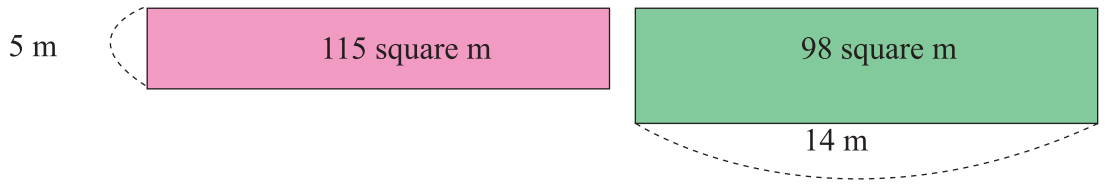
(2)



(3)



8. (1) What is the length of the garden? (2) What is the width of the garden?



9. Arif reads books for 2 hours and 10 minutes in the morning and 1 hour and 55 minutes at night. Let us express the total amount of time he studies, in seconds.

10. Laila's age is 10 years 9 months, and Mridul's age is 12 years. What is the age difference of Laila and Mridul?

11. With the help of the school's little doctor, let us measure our weight and express it in 'kg' and 'grams'.

12. Game to find the date and month of birth.

[I will ask a classmate to write his date of birth and month on a white paper without showing it to anyone. Then, I will ask him to multiply the birth date by 2 and add 5 to the product. Again, I ask him to multiply the sum by 50, add the birth month to the result, and tell me the final sum. I will listen the number and mentally subtract 250 from it. The digits of hundreds and thousands of places of the difference will be his birth date, and the digits of ones and tens places will be his birth month.]

Chapter
10

Geometry

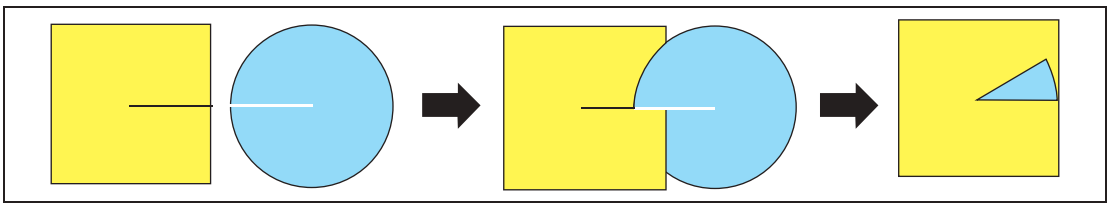
Angle Measurement

What is an angle, and how is it produced?

1. Let us find out whether there are any corners or angles in the following pictures.



2. Let us take a circular and a square piece of paper and rotate one on top of the other to make different angles.

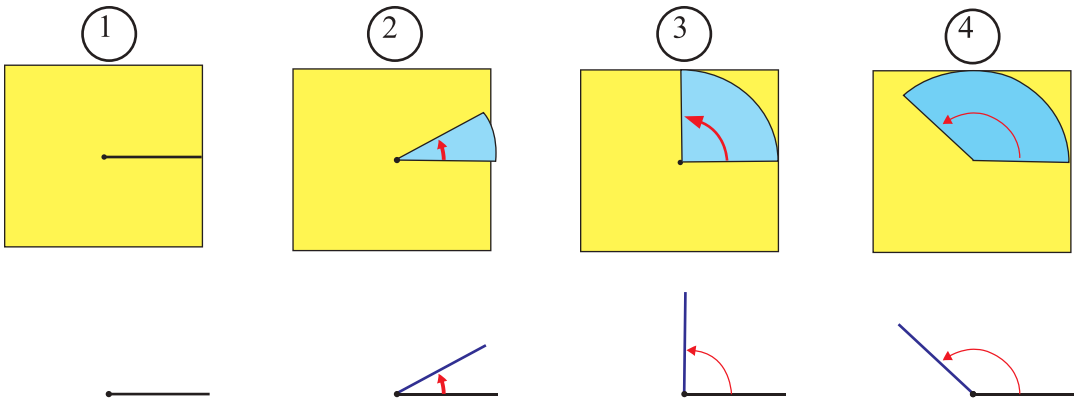




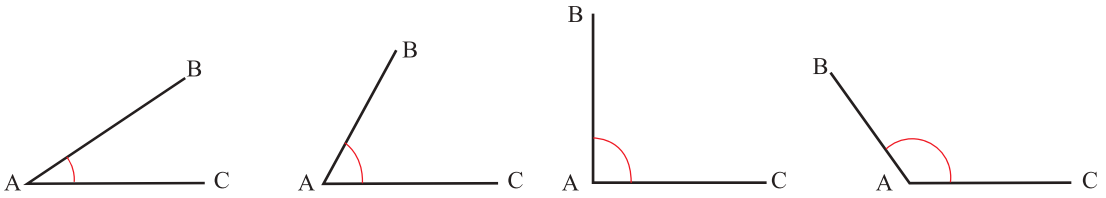
As shown in the picture, let us cut the circular paper up to the center and the square one to the middle.

As shown in the picture, place the circular paper inside the square paper and rotate it to make different angles.





By naming the angles A, B, C and arranging them together, we get.



1. In the same way, let us make some more angles using paper and draw them.



The size of an angle doesn't depend on the length of the two lines forming the angle. Rather, it depends on how much open the lines are.

Can we express angles in numbers?

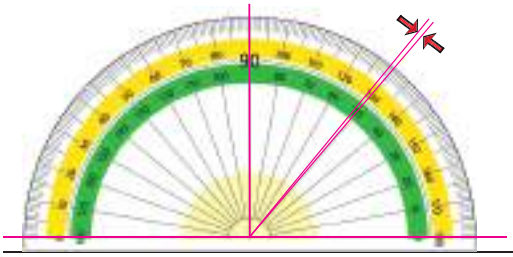


- The unit of measurement of the size of an angle is 'Degree' and is represented by '°'. The size of the angle indicates the measurement of the angle.

How to measure an angle?



We use the protractor to measure angles.

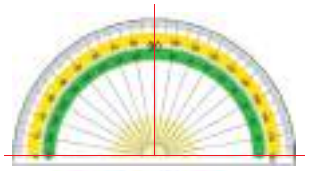


1° (1 degree)

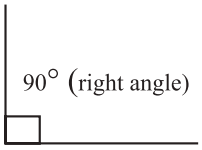
90° = right angle



Now, let us learn about some angles that are equal to or smaller than 90°.

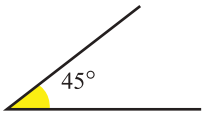


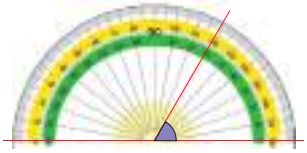
Equal to 90°



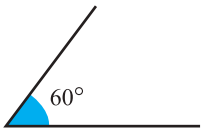


$\frac{1}{2}$ of 90°



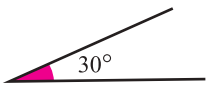


$\frac{2}{3}$ of 90°





$\frac{1}{3}$ of 90°

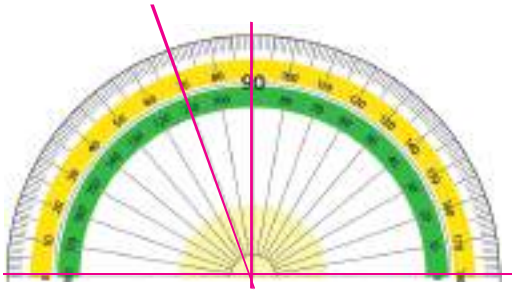


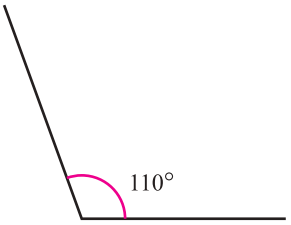


An angle smaller than 90° is called an acute angle.



Now, let us learn about angles greater than 90°.

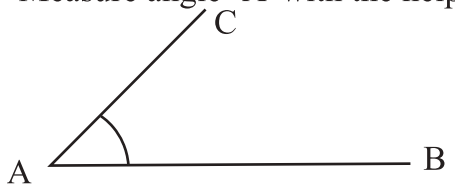






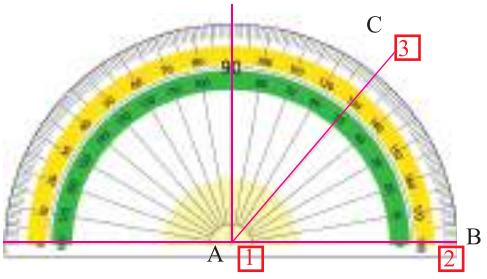
An angle greater than 90° but less than 180° is called an obtuse angle.

1. Measure angle 'A' with the help of a protractor.



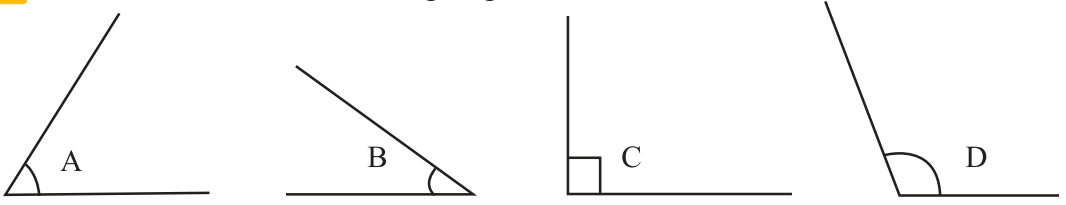
We can write angle A as ∠A or ∠BAC and we can read it out as angle BAC

(1) Place the center point of the protractor at the vertex A.
(2) Align the line AB with the 0° mark of the protractor.
(3) The number on the protractor where line AC meets indicates the measurement of the angle.



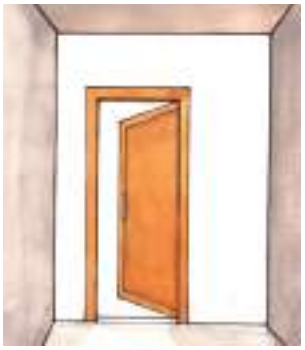
The measure of the angle A is 50° (∠A = 50° or ∠BAC = 50°).

1. Let us measure the following angles.



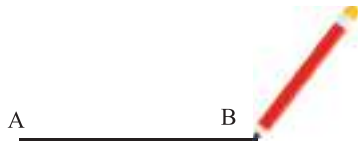
2. Using a protractor let us measure the angles of the mathematics book, blackboard, or windows, and express each angle in degrees.

3. Along the door frame of a room or classroom, when the door is opened, mark a line on the floor with chalk. Measure the angle formed with the door frame.

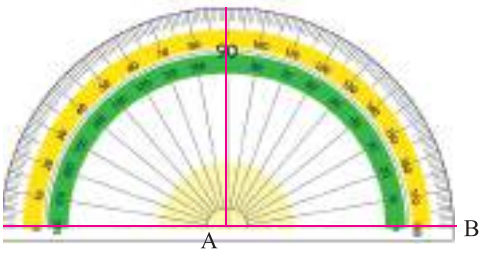


2. Let us draw an angle of 50°

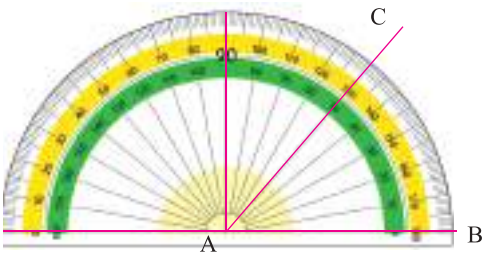
1. Let us draw a straight line AB.



2. Place the center of the protractor at point A and align the line AB with 0°.

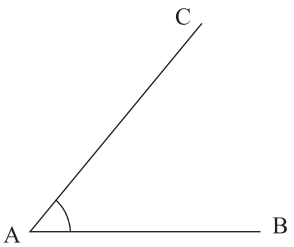


3. Mark a point C at 50°

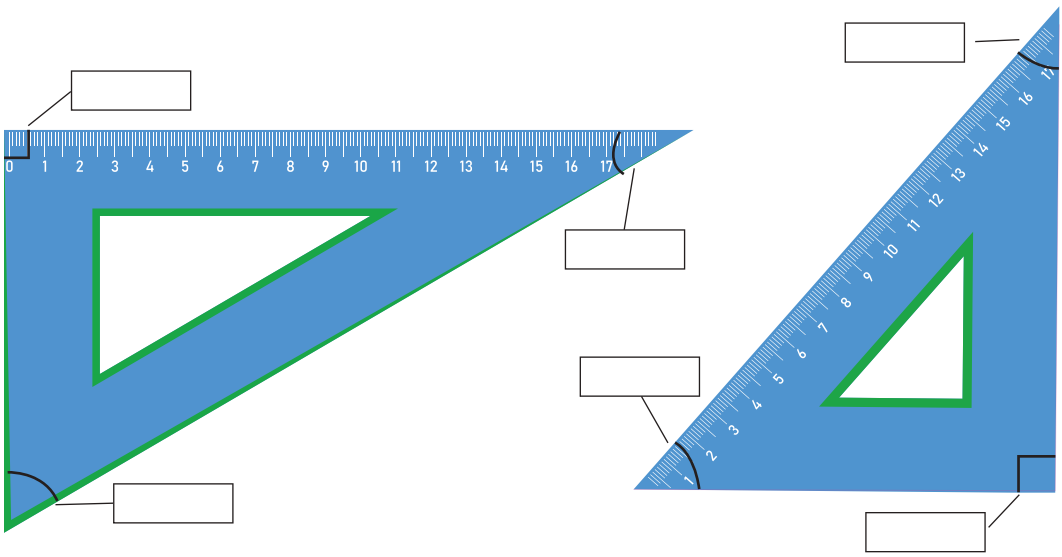


4. Remove the protractor and draw a line from point A to C using a ruler.

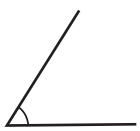
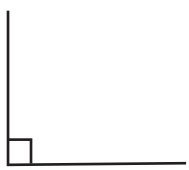
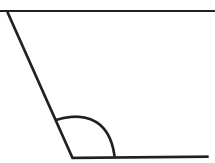
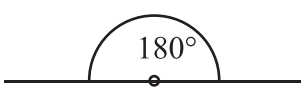
5. ∠BAC = 50°



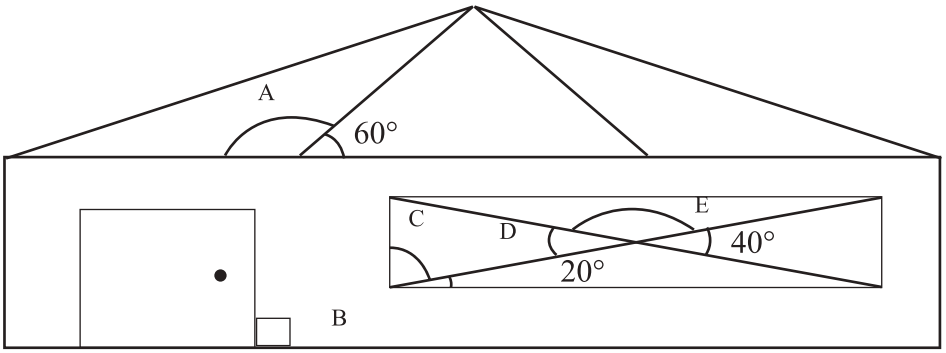
3. Let us measure the angles of the triangular set of squares below.



We can classify the angles in the following way.

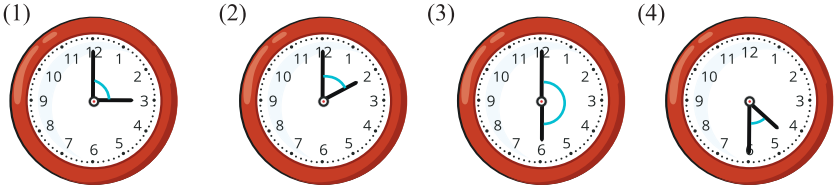
Angle	Condition	Name
	Less than 90°	Acute Angle
	90°	Right Angle
	Greater than 90° and less than 180°	Obtuse Angle
	180°	Straight Angle

4. Find the angles ∠A, ∠B, ∠C, ∠D, and ∠E without measuring them.



4. Let us measure the angles formed by the clock's hour and minute hands.

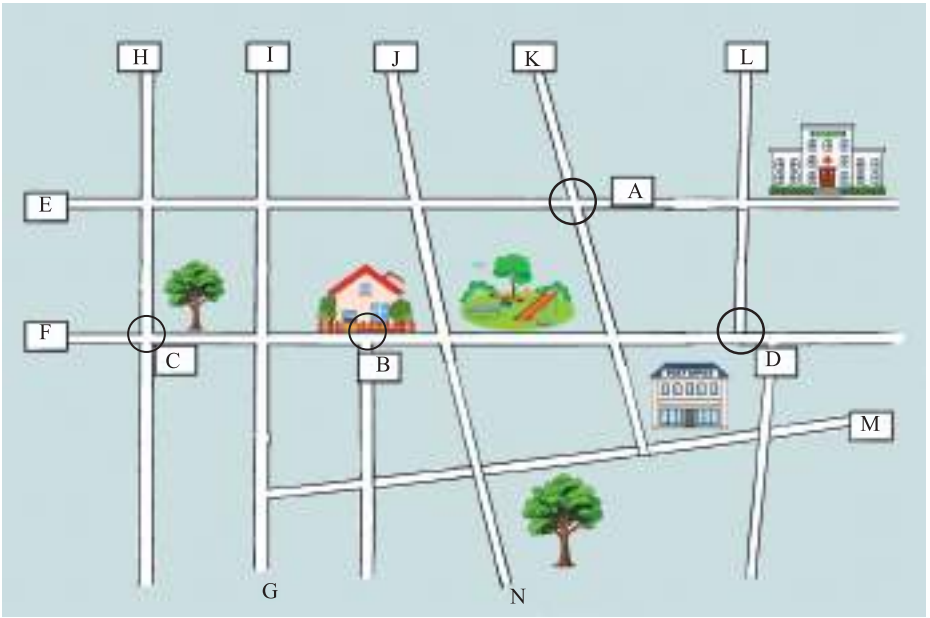
(1) (2) (3) (4)



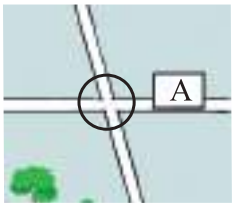
5. Name different types of angles by drawing them with pencils on a grid paper. (For example, Right Angle, Acute Angle, Obtuse Angle, Straight Angle, etc.)

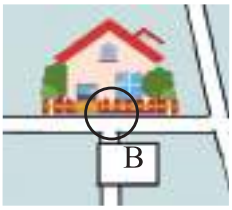
Perpendicular Line

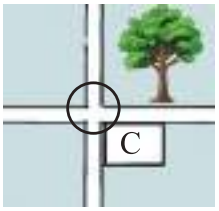
Let us discuss how the road went through each other in a criss-crossway.

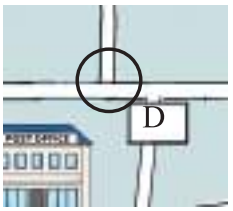


1. Among the points A, B, C, and D, which two lines meet with each other at a right angle?



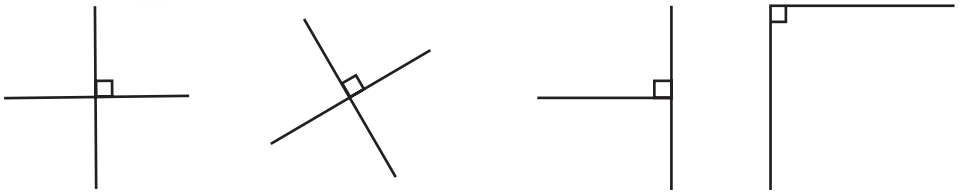




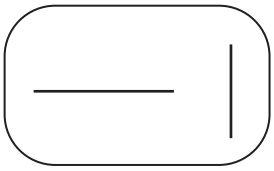




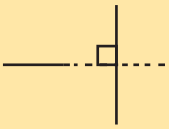
When two lines intersect or meet each other at right angles, one line is perpendicular on the other.



2. If the horizontal line in the picture is extended further, how do the two lines intersect each other?



I think it will only be perpendicular.





1. Let us find another pair of perpendicular lines from the map provided in the main question.

2. Which of the pictures below has a perpendicular line?



3. Let us think of objects in the environment that have perpendicular lines and write them down.

3. Let us observe how the roads in the following two maps are arranged.

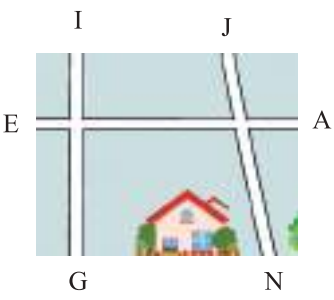


Figure 1

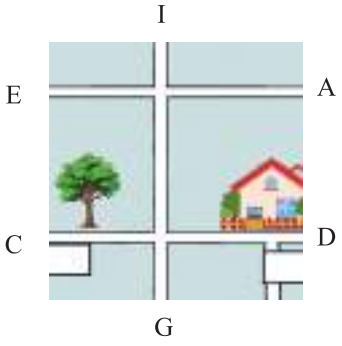


Figure 2

(A) Which lines in Figure 1 are perpendicular to each other?

(B) Which lines in Figure 2 are at an equal distance?

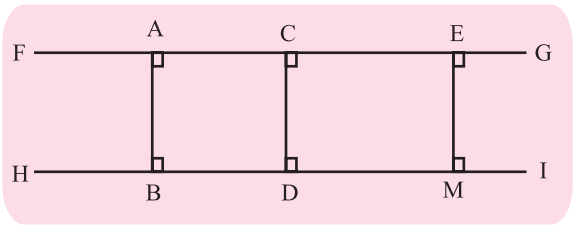
Parallel Lines

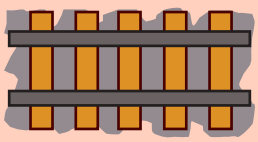
If two lines are always at an equal distance from each other, then they are parallel.



4. Let us find another pair of parallel lines in the map provided in the main question.

4. The parallel lines of 'FG' and 'HI' are provided in the following picture. Let us measure the length of AB, CD, and EM.



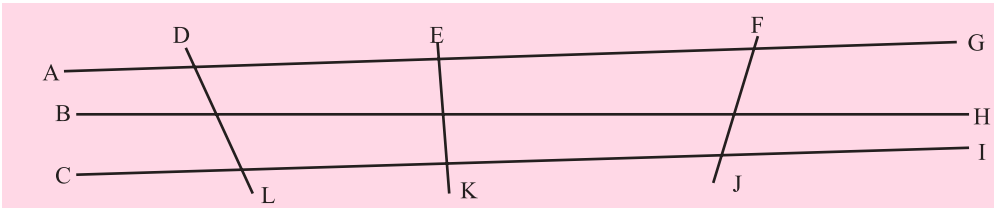


We can imagine two straight rail lines as an ideal for parallel lines.



Two parallel lines are always at an equal distance from each other. No matter how far they are extended, they never meet each other.

5. Which of the lines in the following pictures are parallel?



6. Let us draw parallel lines on the graph paper and determine the distances between them.

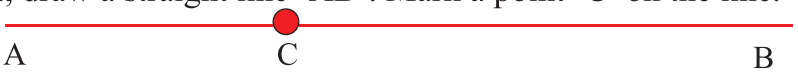


5. The horizontal lines drawn on a notebook are parallel to each other. In the figure below, a slanting line has been drawn that intersects these horizontal lines. Let us measure the angles produced by this slanting line with each horizontal line.

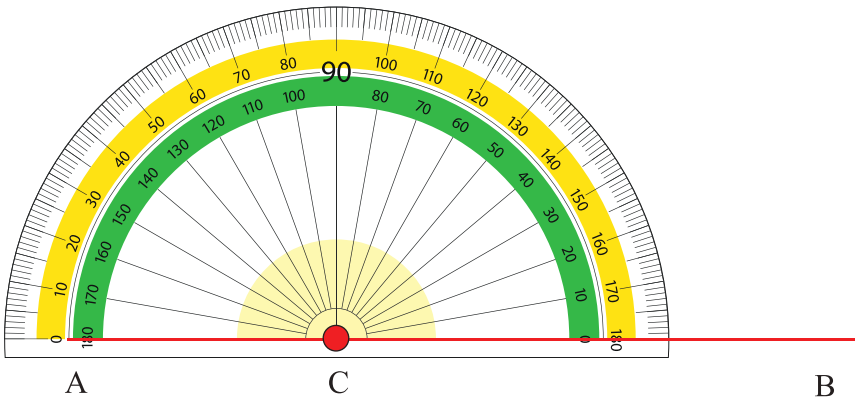


6. Let us draw a perpendicular line on a line by using a protractor.

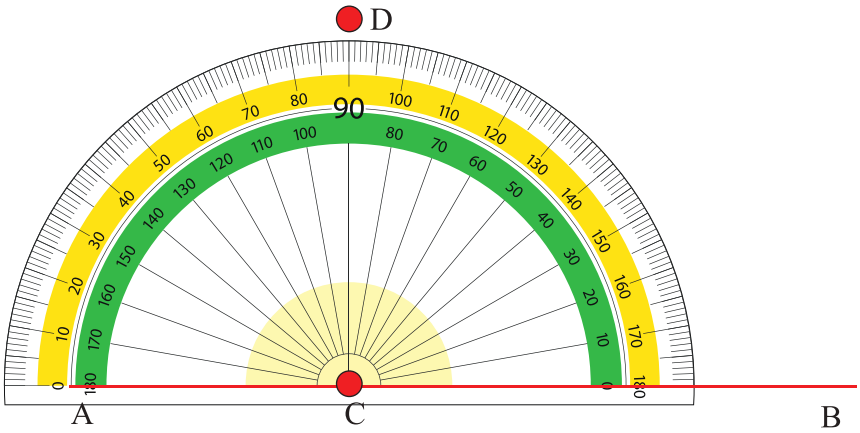
Step 1: First, draw a straight line 'AB'. Mark a point 'C' on the line.



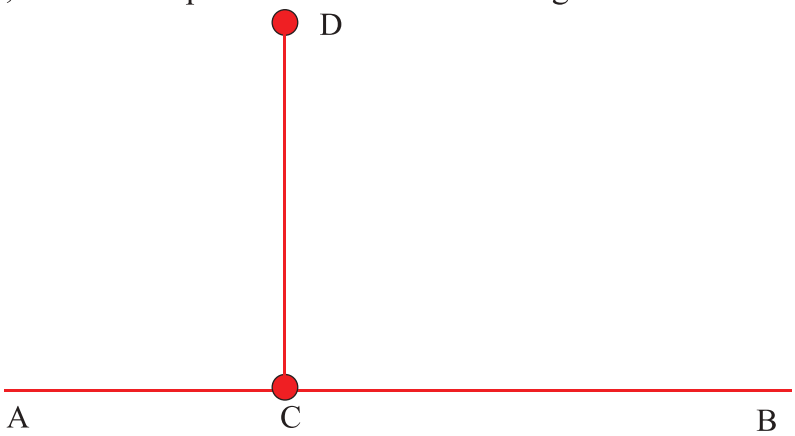
Step 2: Now, place the center point of the protractor at point 'C' and align the line 'AB' with 0°



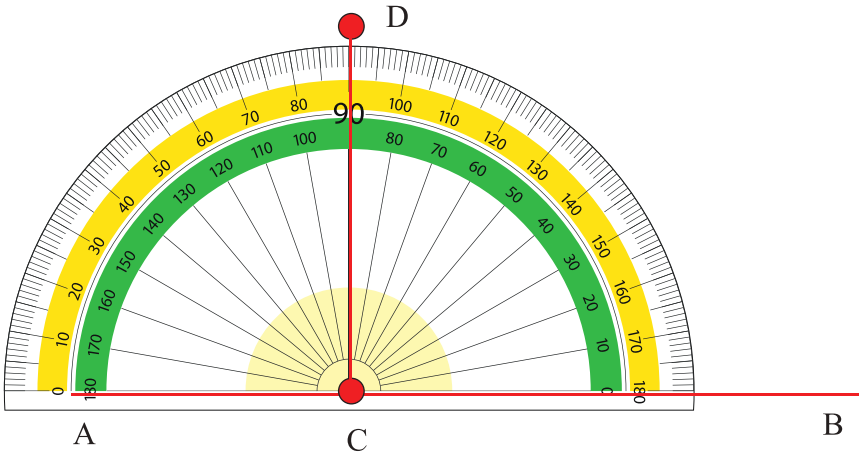
Step 3: Mark a point 'D' along the 90° line.



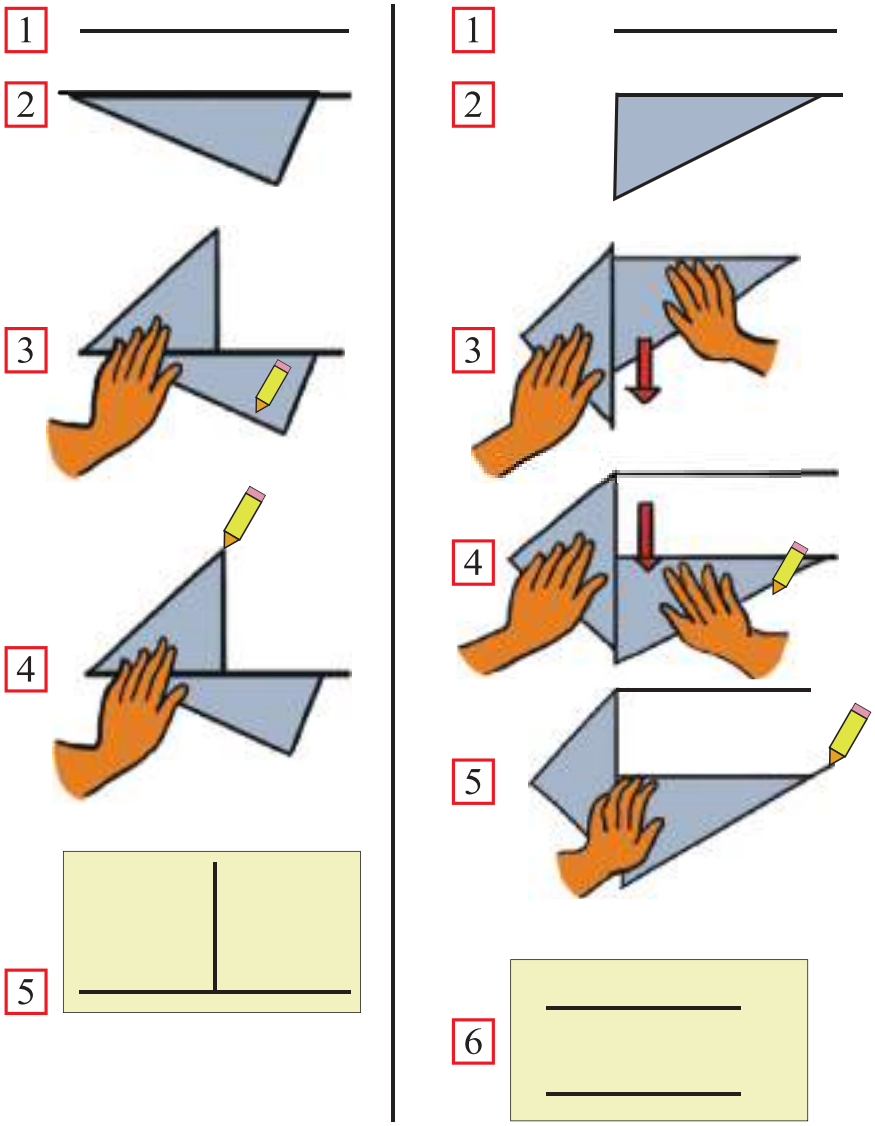
Step 4: Now, remove the protractor and draw a straight line from C to D.



Step 5: Now, place the protractor and check whether the angle has been drawn properly.



7. Let us draw perpendicular and parallel lines with the help of a tringular set square.

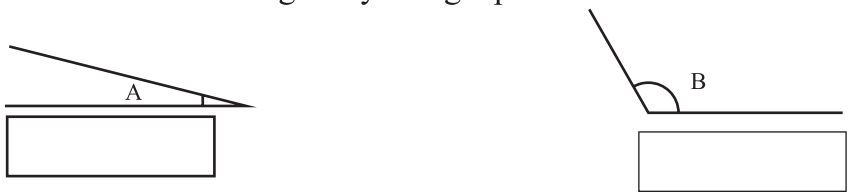


Perpendicular and parallel lines can be easily drawn using a triangular set square.

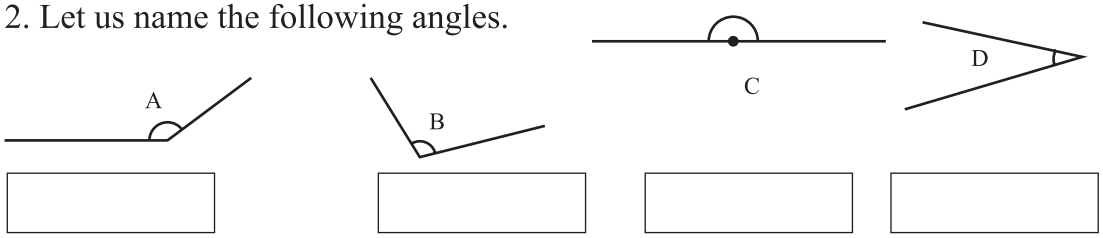


Let us try

1. Let us measure the angles by using a protractor.



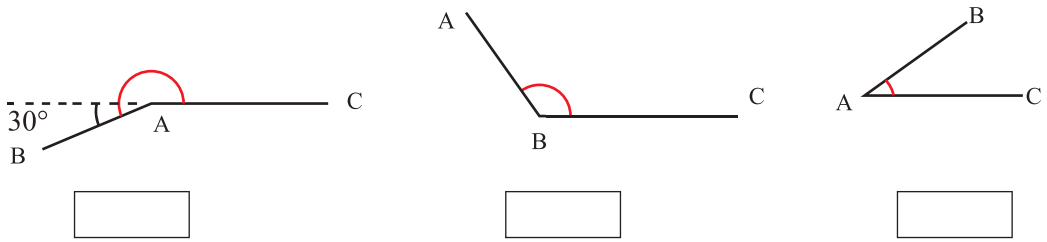
2. Let us name the following angles.



3. Let us find the following hidden angles.



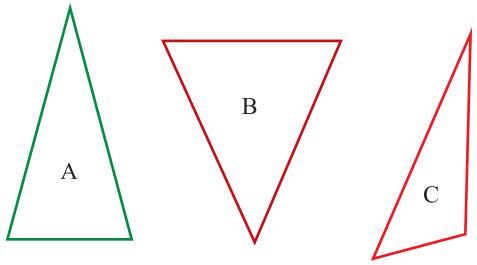
4. Let us measure the following angles and write them down.



5. Let us draw perpendicular and parallel lines.

Triangle

What similarities and dissimilarities do we find in the figures below?





We have learned about triangles in class 2. I think the three figures here are triangular. All three figures have 3 sides and 3 angles.



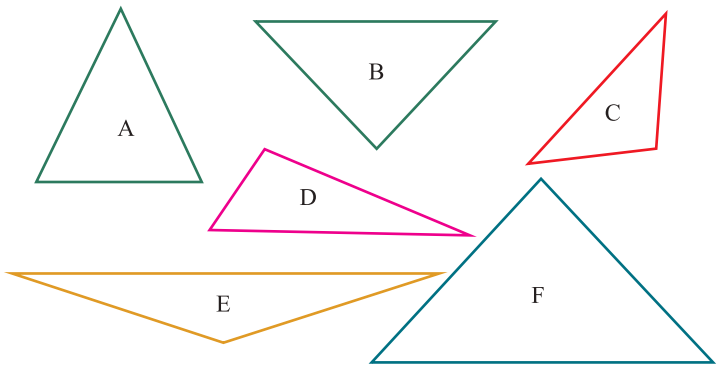
A shape enclosed by three lines is called a triangle.



Let us sort the triangles below by the lengths of their sides.

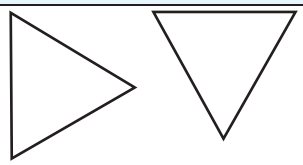
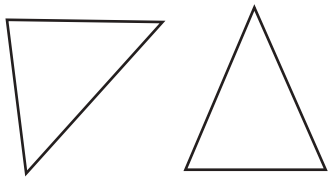
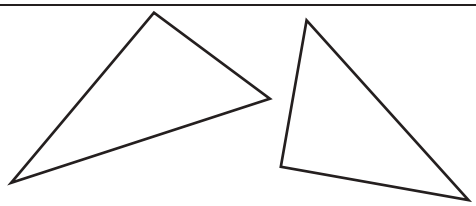
Measure the sides of the triangle using a scale to find the characteristics of the triangle.



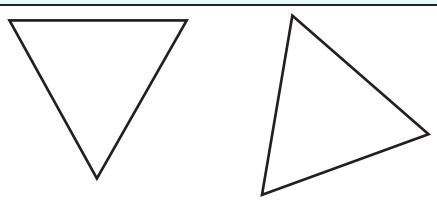
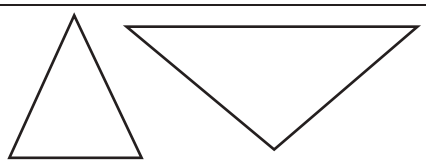
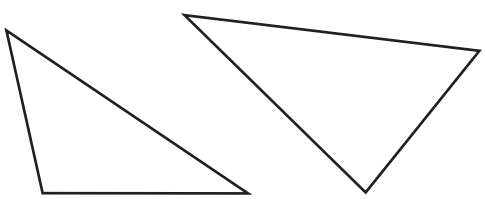


Different types of triangles.

Triangles based on sides

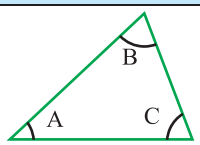
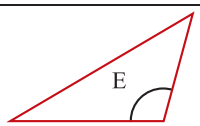
Characteristics of triangles	Triangles	Naming
Both triangles are formed by three equal sides.		Equilateral triangle
Both triangles are formed by two equal sides.		Isosceles triangle
Both triangles are formed by three unequal sides.		Scalene triangle

1. Let us use protractors and find out some more characteristics of the triangles by measuring their angles.

Naming	Triangles	Fill in the blanks (Characteristics of triangles)
Equilateral triangle		All three angles of an equilateral triangle are equal, and each of them is ☐
Isosceles triangle		An Isosceles triangle has two ☐ angles.
Scalene triangle		☐ angles of a scalene triangle are unqual.

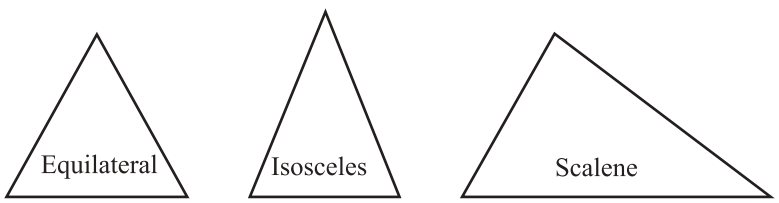
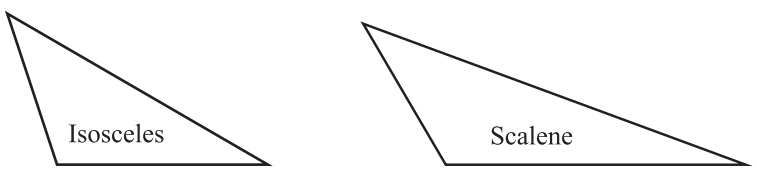
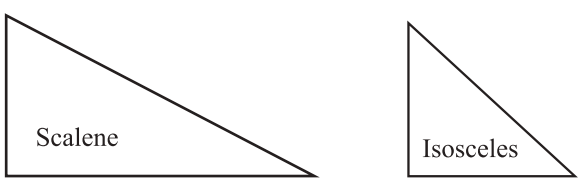
Triangles based on angles

According to the types of angles, a triangle can be of several other kinds.

Naming	Triangles	Fill in the blanks (Characteristics of triangles)
Acute Angled triangle		Each angle of an acute-angled triangle is less than 90° (A, B, and C < 90°).
Right-angled triangle		A right-angled triangle has one right angle (D = 90°).
Obtuse-angled triangle		An obtuse-angled triangle has one angle greater than 90° (E > 90°).

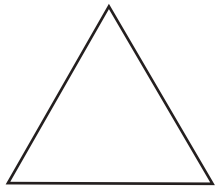
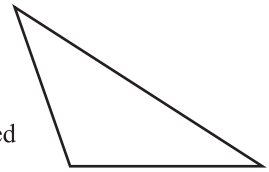
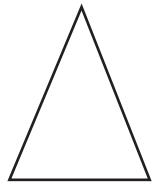
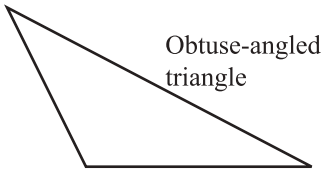
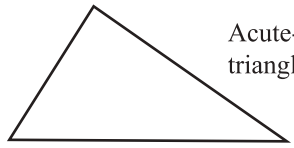


We can arrange the triangles based on angles, too.

Acute-angled	
Obtuse-angled	
Right-angled	

We can arrange the triangles based on sides.



Equilateral	Acute-angled triangle 
Isosceles	Obtuse-angled triangle  Acute-angled triangle 
Scalene	Obtuse-angled triangle  Acute-angled triangle 

2. Let us draw a triangle with sides of 7 cm, 5 cm, and 4 cm.



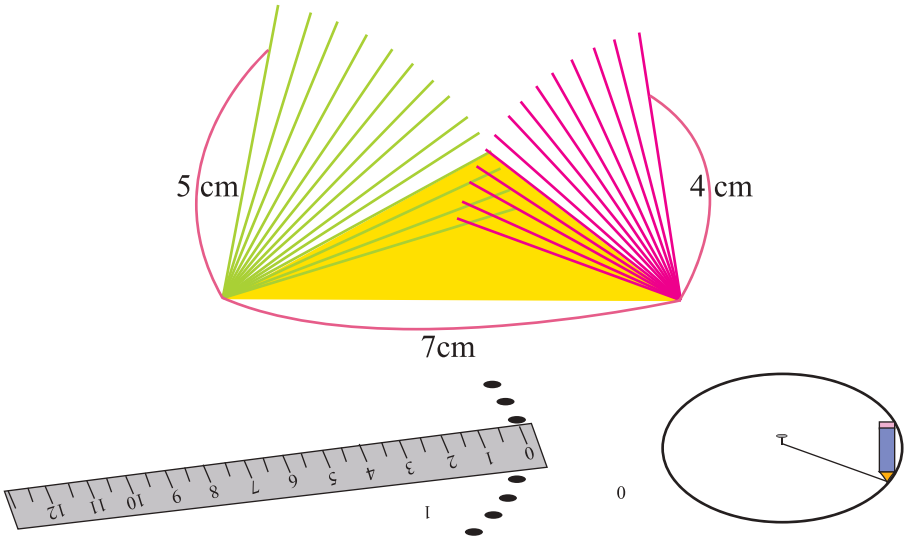
Let us start by drawing a 7cm side.



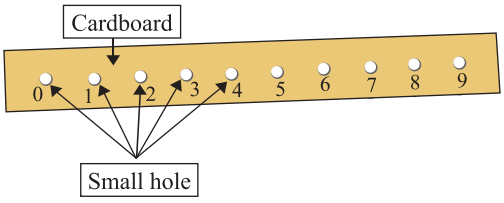
But how can we draw the second and third sides? Is there a good way to find the point where these two sides meet?

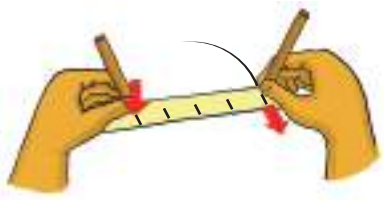
We can draw multiple sides of 5 cm from one end of the 7 cm side and 4 cm from the other end on the same side.





To draw a part of a circle without using the board pin and thread, as in the above figure, we can use small rectangular cardboard pieces with holes, like in the figure below.

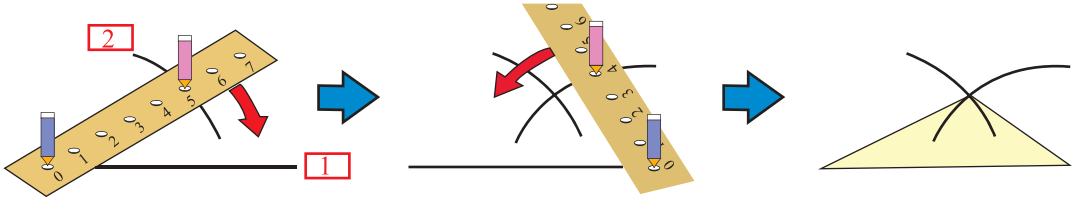




Now, let us use the cardboard pieces to draw the triangle.



(1) Let us draw one side. (The base of the triangle: 7cm)



(2) Draw a 5cm length from the left side of the base.

(3) Draw a 4cm length from the right side of the base.

(4) Let us draw the remaining two sides of the triangle using the obtained point.

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1. Let us draw the following triangles by using the above method.

(1) An equilateral triangle with sides of 6cm.

(2) An isosceles triangle with two sides of 5cm and one side of 6cm.

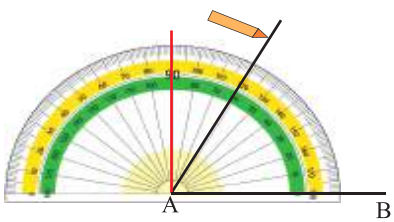
An equilateral triangle has 3 angles, which are 60°, and an isosceles triangle has two equal angles. Can we use these angles to draw a triangle?



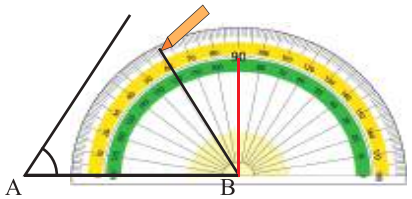
3. Let us draw an equilateral triangle with 5 cm sides by using a scale and a protractor.

(1) Let us draw one side. (AB: 5cm)

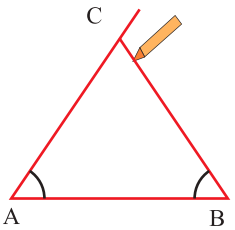




(2) We draw an angle equal to 60°at A.



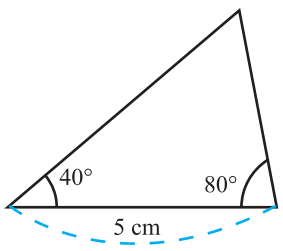
(3) We find a 60°angle at point B.



(4) Draw a line from point B and join it with point C on the side of angle A.

(5) Now, ABC is an equilateral triangle with each side of 5 cm.

2. Let us draw the following triangle.



3. Let us draw an acute-angled triangle, an obtuse-angled triangle, and a right-angled triangle by using a protractor.

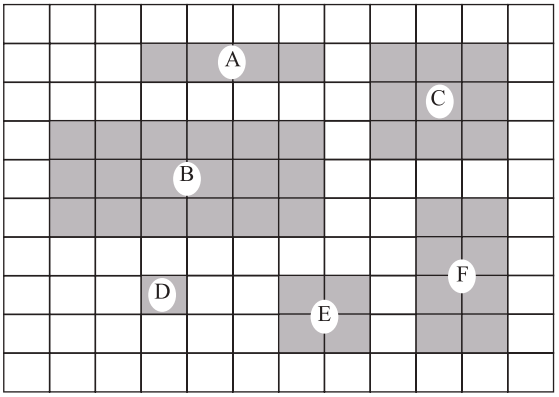
Rectangle and Square

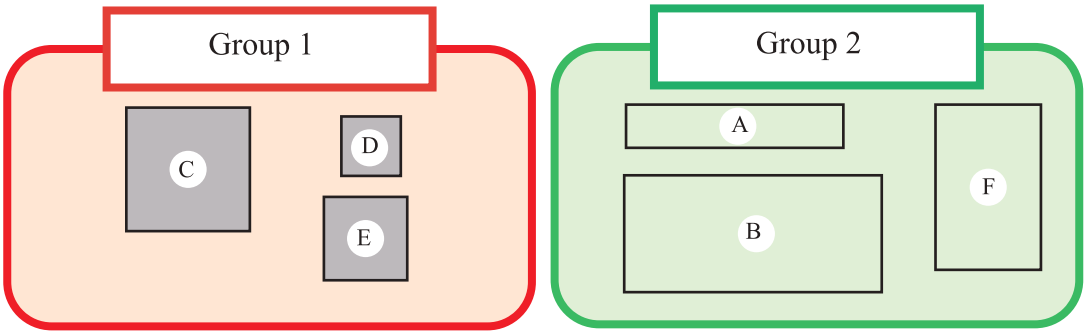
Let us observe the similarities and dissimilarities of the following shapes and arrange them into groups.

1. Let us separate the shapes based on their characteristics.



We can divide the shapes into groups.

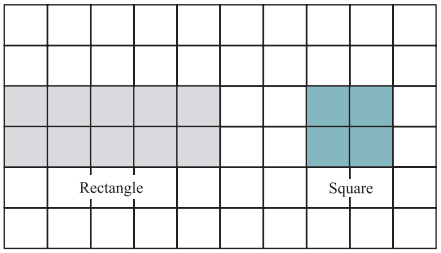




2. Let us discuss the shapes of Group 1 and Group 2 with classmates and find their similarities and dissimilarities.

Similarities	Dissimilarities
1.	1.
2.	2.
3.	3.

- A closed shape bounded by 4 straight lines is called a quadrilateral.
- The quadrilateral whose 4 angles are right angles is called a rectangle.
- A rectangle with 4 equal sides is called a square.



In the above figure, we can see that the opposite sides of a rectangle and a square are equal and parallel to each other.



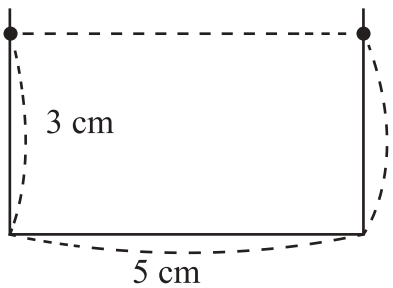
1. Write down the names of square and rectanguler objects around you by discussing with classmates.

Square objects	
Rectangular objects	

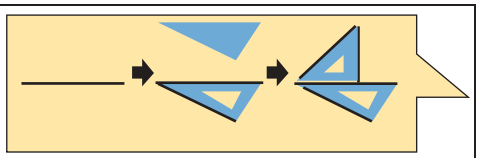
3. How can we draw a rectangle?

[1] Draw a line of 5 cm by the help of a ruler.

[2] Draw two perpendicular lines on the line drawn in step 1 using triangular set square.



Using a triangular set square, we can draw a perpendicular line as shown in the picture beside.





[3] From the two perpendicular lines, mark two points that are 3 cm apart.

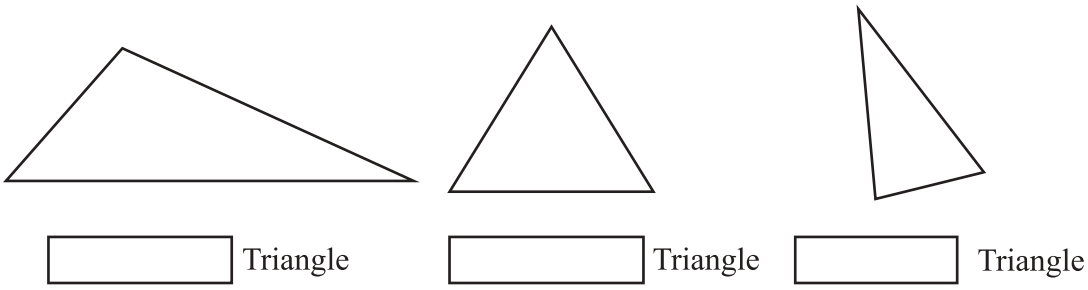
[4] In the third step, we join the two marked points to draw the rectangle.

2. Let us draw rectangles and squares.

(a) Length 6 cm, width 3 cm.
(b) Length 8 cm, width 4 cm.
(c) Length of every side is 6 cm

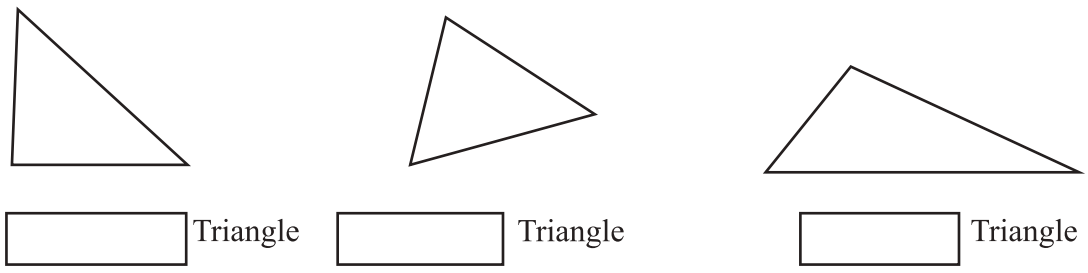
Let us try

1. Let us write down the names of the triangles based on sides.



_____ Triangle _____ Triangle _____ Triangle

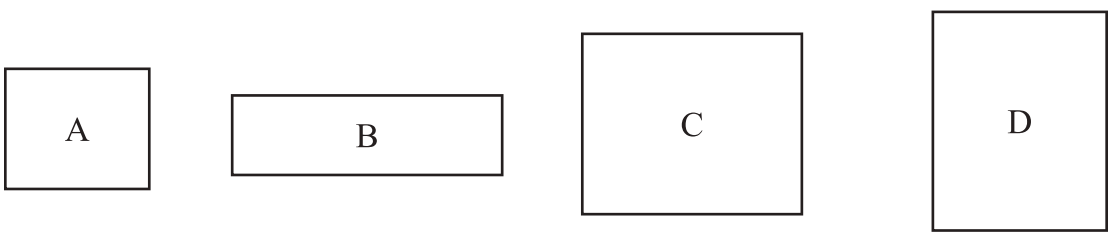
2. Let us write down the names of the triangles based on angles.



_____ Triangle _____ Triangle _____ Triangle

3. Let us draw a triangle whose sides are 4 cm, 5 cm, and 6 cm and write down their names.

4. Write which of the following quadrilaterals is a square and which is a rectangle, and mention their characteristics.

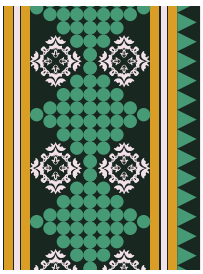


Rectangle	Characteristics	Square	Characteristics

5. Let us draw a quadrilateral whose sides are 4 cm and 5 cm and write down its name.

Geometric Pattern

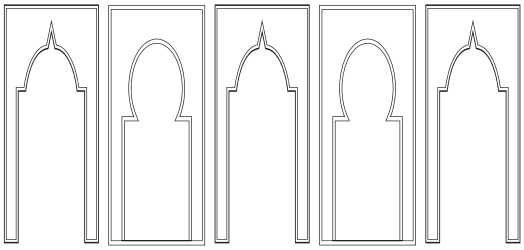
Let us find different geometric-shaped patterns in our environment.



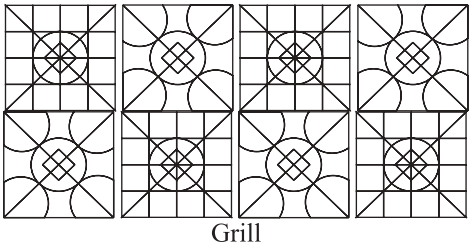
Border of the saree



Pineapple



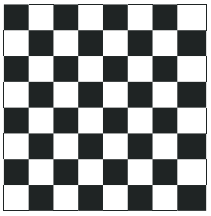
Wall of a Mosque



Grill



House floor



Chessboard

1. Let us explain why these are patterns.



Let us write where else we can notice patterns.

Carpet, ----------

1. Let us observe the patterns below and complete them.

(1) 

(2) 

(3) 

2. Let us create geometric patterns and mathematical patterns.

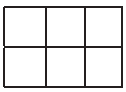
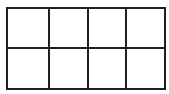
1. (Using sticks or match sticks)

			?
3	6	9	?

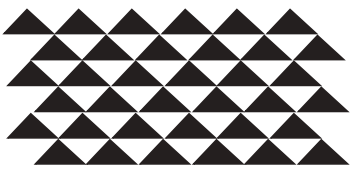
2.

			?
4	7	10	?

3.

			?
12	?	22	?

3. Patterns are created in dot paper by using equilateral and isosceles triangles. Now let us create patterns with squares, rectangles, parallelogram, rhombus, trapezium as you wish.

 Equilateral triangle pattern	 Isosceles triangle pattern	

Let us do

১. Put a tick mark (√) on the correct answer.

(1) Which one is an example of a straight angle?

a)  b)  c)  d) 

(2) At 3 o'clock in the afternoon, what angle is formed between the hour and minute hands of the clock?

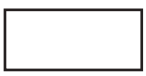
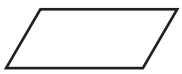
a) 45° b) 60° c) 75° d) 90°

(3) Which triangle has all equal angles?

a) Right-angled triangle b) Acute-angled triangle

c) Equilateral triangle d) Isosceles triangle

(4) Which of the following is a square?

a)  b)  c)  d) 

(5) Which of the following can be drawn using a triangle set square?

a) Circle b) Semicircle c) Curve d) Parallel lines

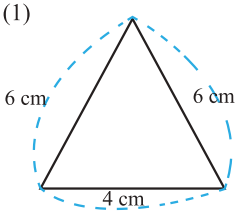
2. Let us draw the following angles using a protractor and write their names.

a) 25° b) 75° c) 90° d) 120°

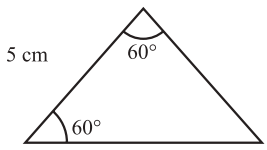
3. Let us draw perpendicular and parallel lines and express them in words.

4. Let us draw the following triangles.

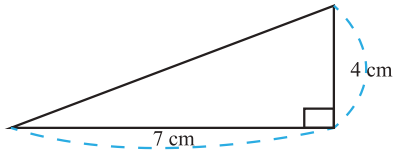
(1)



(2)



(3)



5. Let us draw a rectangle with sides 3 cm and 4 cm.

6. Let us draw a square with sides of 4 cm.

7. Let us create patterns using the shapes below.



Chapter
11

Data Collection and Arrangement

Making Table

Let us try to arrange data in a table.

1. Class Four students were taken to a zoo, where they saw different species of animal. Think of a way to count how many kinds of animal they saw.





At first we need to make a list of animals.

We used tally symbols in class Three. In this case we can count easily by using tally symbol.



Let us fill in the table on the right using tally marks and find out how many kinds of animals we saw.

Answer the following questions using the table.

1. Which animal was the largest in number?
2. Which animal was the least in number?

Animals seen in the zoo		
Name of animal	Tally mark	Number of animals
Elephant	////	4
Zebra		
Tiger		
Lion		
Giraffe		
Deer		

2026

2. Which of the five animals below is preferred by the most students? Let us make a table of how many students of our class like each animal using tally marks.

Students' favourite animals		
Name of animal	Tally mark	Number of students that preferred
Elephant		
Zebra		
Tiger		
Lion		
Giraffe		

3. Let us make a list of the school furniture, record the number of furniture using tally marks and complete the table below by expressing the tally marks as numbers.

List of furniture		
Name of furniture	Tally mark	Quantity
Total		

4. Let us list the activities of students during the holidays in the table and write down the number of students doing the same activity using tally marks.

Students' holiday activities		
Name of work	Tally mark	Quantity
Total		

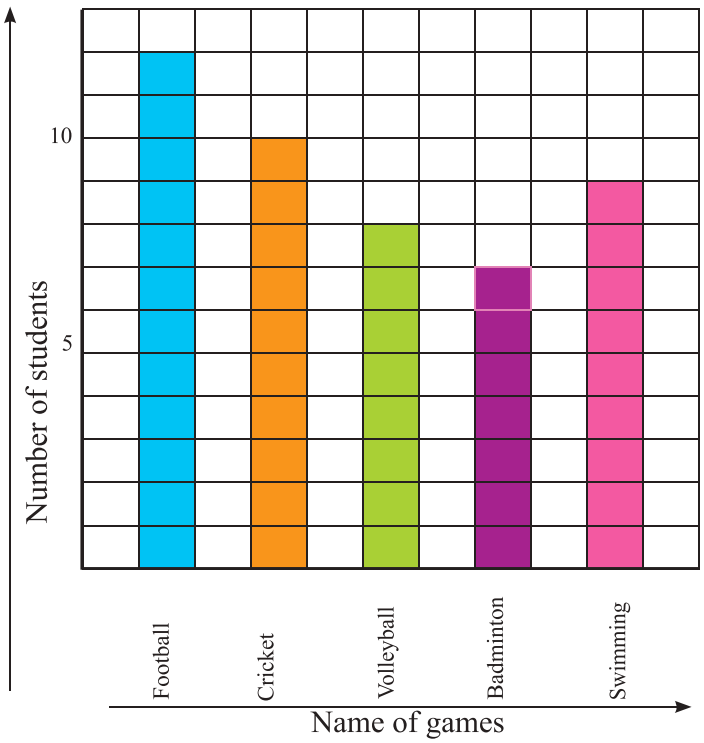
Bar Diagram

Let us express the data in a bar diagram.

1. In the table to the right and in the bar diagram below are the number of sports preferred by students of Class IV of Shubopur Government Primary School. Let us find a way to understand them.

Favourite games	Number of students
Football	12
Cricket	10
volleyball	8
Badminton	7
Swimming	9
Total	46

Favourite games of students





It is a Bar Diagram



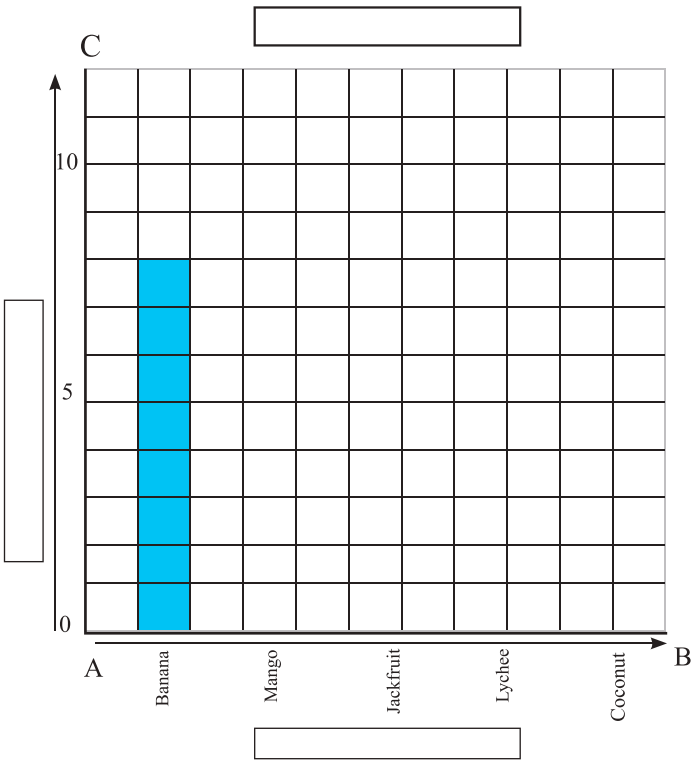
Wow, the bar diagram helps us compare the quantities very easily.

(1) What is the title of the bar diagram?
(2) How many students does 1 unit of the vertical scale represent?
(3) Which sport do the students like the most? How many students like it?
(4) Which sport do the students like the least? How many students like it?

How to draw a bar diagram?

S. The table to the right gives the details of how many students of Mina's class prefer a particular fruit. Let us draw a bar diagram.

Name of Fruit	Number of Students
Banana	8
Mango	11
Jackfruit	7
Lychee	10
Coconut	4
Total	40



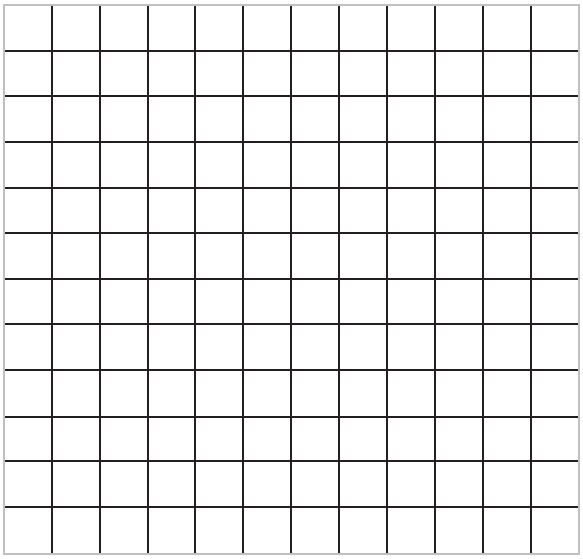


Let us complete the Bar diagram.

Steps to draw bar diagram

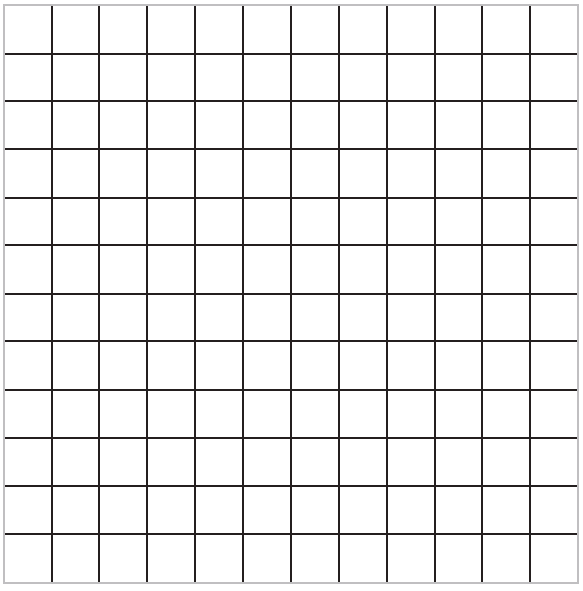
- To draw a bar diagram, first draw a horizontal AB line and a vertical AC line on a graph paper.
- Write the names of fruits along the horizontal line in every other unit.
- Determine the appropriate scale for students on the vertical AC line.
- Draw bars for each fruit on the AB line based on the number of students who like each fruit.
- Write 'Name of Fruit' below the horizontal line and 'Number of Students' next to the vertical line.
- Let us name the bar diagram 'Student's Favourite Fruit'.

2. The table to the right shows the number of absent students of class 4 in a school on different days of the week. Draw a bar diagram with the data.



Day	Number of students absent
Sunday	7
Monday	5
Tuesday	3
Wednesday	2
Thursday	9

3. Let us draw a bar diagram with the number of family members of five students of the class through random selection and find the answer to the questions mentioned on the right side.



1) What is the number of members of the largest family?

2) What is the number of members of the smallest family?

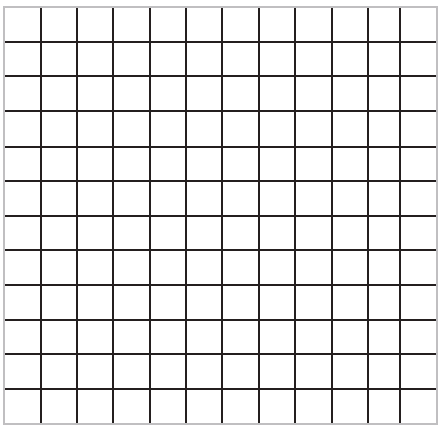
3) What is the total number of members of the five families?

Let us do

1. In a quiz competition 20 students scored the following number. Arrange these data in a table using the tally marks.

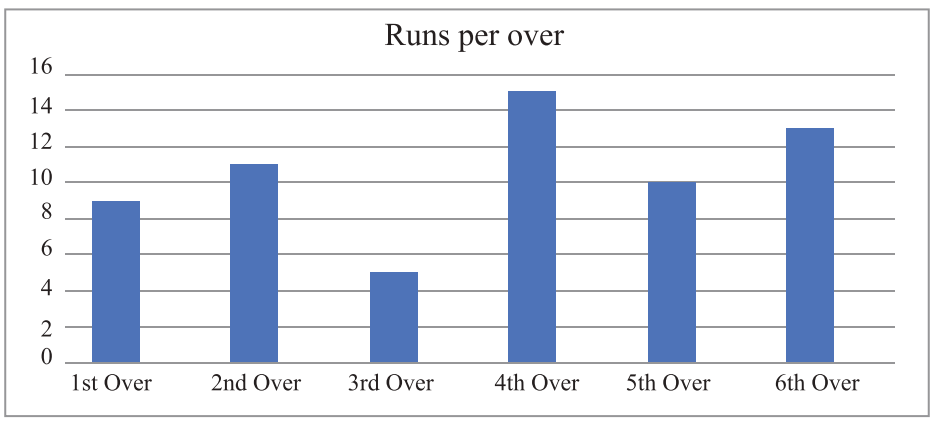
8	1	3	7	6	5	4	6	4	2
4	9	5	4	7	4	8	3	6	7

2. Here is a list of what kind of books the students of class four like to read. Express the data in bar diagram.



Book	Number of Students
Fairy tale	12
Comic	10
Travel story	11
Detective story	8
Science fiction	7

3. A bowler bowls six overs in an One Day cricket match. The number of runs scored in his different overs is shown in the bar diagram below. Answer the following questions from the bar diagram.



(1) In which over the most runs were scored?
(2) In which over the least runs were scored?
(3) How many runs were scored in six overs?

End

Academic Year 2026, Class Four–Mathematics

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