



Let's Begin!

## A Visit to the Mysuru Palace

Miss Nina took students of class 5 of SMB High School to the Mysuru Palace. The children were amazed to see the beautiful palace and the life-size statue of Maharaja Krishnaraja Wadiyar IV.

**Nitish:** Teacher, this statue is so magnificent!

**Miss Nina:** It is the statue of Maharaja Krishnaraja Wadiyar IV, who ruled the Kingdom of Mysore from 1902 to 1940, i.e., during the 20th century.

**Tanya:** What is a century?

**Miss Nina:** A century is a period of 100 years. From the year 1 to 100 is the 1st century, year 101 to 200

is the 2nd century. Now, we are in the year 2023. So, which century are we in?

**Aksha:** Twenty-first century.

**Miss Nina:** That's right!

You will learn more about time in this lesson.





## Days, Weeks, Months, and Years



### Grasp

Study these examples.

1. Jeet's semester exam began on 3 March and ended on 15 March. How many days did it last?  
(Hint: Include the starting and ending days.)

**Solution:** Count forward from 3 March till you reach 15 March.

**Ans.** His exam lasted for 13 days.

2. Irish was on vacation for 2 weeks from 12 May. When did her vacation end?

**Solution:** 2 weeks means 14 days. So Irish's vacation was for 14 days. Hence, we count 14 days from 12 May. We get 25 May.

**Ans.** Her vacation ended on 25 May.

3. Dimple is born on 12 January. When will she be eight months old?

**Solution:** Dimple will complete one month in February. Count eight months from February. We will get September month.

**Ans.** She will be eight months old on 12 September.

4. Bhushan was born on 15 March 2002. How old was he on 15 March 2023?

**Solution:** Bhushan was one year old on 15 March 2003. Count years from 2003 till 2023.

$$(2023 - 2002 = 21)$$

**Ans.** He was 21 years old on 15 March 2023.



### Work Out

Answer these questions.

Mrs Sudha's family left for a two-week vacation on 4 December. On which day did they return home?

Angela was nine years old on 2 July 2022. Rashmi was nine years old on 23 July 2022. How many weeks older is Angela?

- c Mary will check in at the hotel on 10 October. She will stay there for three nights. What date will she check out from the hotel?
- d Mina had an appointment with the dentist on 10 February. The dentist wants to see Mina again in six months. In which month does Mina have the next appointment?
- e Trishul was born on 8 August 1981. How old was he on his birthday in 2001?
- f Jemmy was 9 years old on 2 November 2015. When was he born?
- g The World Cup started on 4 March 2003 and ended on 6 April 2003. For how many days did the World Cup go on?



### Math in Daily Life!

This is a circular from the Principal of Krishna Valley School to the parents. Read the circular.

**Krishna Valley School**  
RMD Road, Talavli D & N H

Date: 04. 04.2023

Dear Parents / Guardians,

This is to inform you that the school will remain closed from 1st May 2023 to 11th June 2023 for summer vacation. All the students must report to the school on 12th June 2023.

Wishing all students enjoyable and safe holidays.

Regards,  
Principal

**Find the number of days the school remained closed.**

- i. 1st May 2023 to 31st May 2023: \_\_\_\_\_ days
- ii. 31st May 2023 to 11th June 2023: + \_\_\_\_\_ days
- iii. Total number of days the school remained closed \_\_\_\_\_ days



## HOTS

Anuja's exams begin on 14 April which is a Friday. There are five papers in all. There is a gap of two days after each paper. Sunday is a holiday. Think and complete the table.

Paper	First	Second	Third	Fourth	Fifth
Date	14 April				
Day	Friday				

- a) When is her last paper? \_\_\_\_\_
- b) How many Sundays are there during the exam? \_\_\_\_\_

## The 24-hour Clock



## Grasp

The **24-hour** clock is used to state the arrival and departure of trains, planes, and long route buses. It helps us to know the correct time of arrival and departure without confusion.

Say, Anita is travelling to Delhi by Rajdhani Express. If the departure time of the train written on the ticket is 3:00 (3 o'clock), Anita will be confused because she does not know whether the train is leaving at 3:00 (3 o'clock) in the night or 3:00 (3 o'clock) in the afternoon.

To avoid this confusion, the 24-hour clock is used. The train ticket shows **15:00 h**. It means the departure time is 3 o'clock in the afternoon (i.e. 3 p.m.).

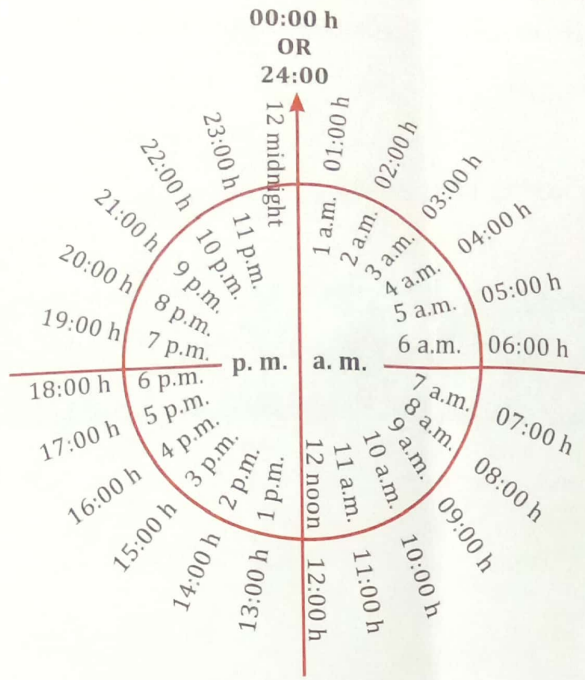
**The 24-hour clock has the following features:**

- It starts at 0 hours and ends at 24 hours.
- Four digits are used in this clock (00:00).
- The first two digits (00:00) show the hour.
- The next two digits (00:00) show the minutes.
- At the end of the four digits, we write h (hours). **a.m.** or **p.m.** is not used.



# Work Out

Observe the clock. Write the 24-hour time for the timings given below.



- a 1 a.m. \_\_\_\_\_
- d 7 p.m. \_\_\_\_\_
- g 2 p.m. \_\_\_\_\_

- b 7 a.m. \_\_\_\_\_
- e 2 a.m. \_\_\_\_\_
- h 12 midnight \_\_\_\_\_

- c 1 p.m. \_\_\_\_\_
- f 12 noon \_\_\_\_\_
- i 10 p.m. \_\_\_\_\_



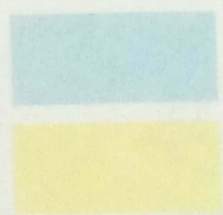
## Challenge

Jasmin is travelling from Mumbai to Ahmedabad by a luxury coach bus. Observe the timetable of the bus and complete the table.

Stop	Mumbai Central	Borivali	Valsad	Surat	Vadodara	Nadiad	Ahmedabad
Time in 24-hour clock time	16:00 h	17:30 h	22:00 h	23:30 h	03:00 h	04:30 h	05:30 h
Time in 12-hour clock time							

Answer the following questions.

- a For how many hours did she travel from Mumbai to Ahmedabad?
- b How many hours did the bus take to reach Surat from Mumbai?



c If Jasmin boarded the bus on 1 January 2024, on what date did she arrive at Ahmedabad?

d Jasmin's friend boarded an express train from Mumbai Central at 22:00 h on 1 January 2024. She reached Ahmedabad at 06:00 h the next day. The train took \_\_\_\_\_ hours to reach Ahmedabad from Mumbai Central.

e In a 12-hour clock, 06:00 h is expressed as \_\_\_\_\_.

## Addition / Subtraction (without Regrouping between Minutes and Hours)



### Grasp



Study these examples.

1. 4 h 35 min + 2 h 15 min

	h	min
		1
	4	35
+	2	15
	6	50

- Write the hours and the minutes in their respective columns.
- Add / subtract minutes.
- Add / subtract hours.

Ans. 6 h 50 min

2. 8 h 35 min - 3 h 18 min

	h	min
		2   15
	8	<del>35</del>
-	3	18
	5	17

Ans. 5 h 17 min



### Work Out

  Solve.

a

	h	min
	3	40
+	2	15

b

	h	min
	3	25
+	4	25

c

	h	min
	19	52
-	3	27

d

	h	min
	5	39
+	3	19








e

	h	min
	5	32
-	4	16



## Quick Calculation

Rima, Radha, Raghav, Binaz, and Tinaz are friends. They take lessons to train themselves in different hobbies and activities every week. Observe the table.

Hobby/ Activity							
	music	tennis	drawing	cricket	dancing	swimming	gardening
Training duration for the activity per week	5 h 30 min	10 h 10 min	6 h 45 min	12 h 10 min	4 h 15 min	3 h 15 min	4 h 30 min

Answer the following questions.

- What is the total time spent by Radha on music and dance lessons? **Ans.** \_\_\_\_\_ h \_\_\_\_\_ min
- How much more time does Radha spend on music lessons than on dancing lessons?  
**Ans.** \_\_\_\_\_ h \_\_\_\_\_ min
- What is the total time spent by Rima on tennis and drawing lessons? **Ans.** \_\_\_\_\_ h \_\_\_\_\_ min
- How much more time did Raghav spend on cricket lessons than the time spent by Binaz on tennis lessons? **Ans.** \_\_\_\_\_ h \_\_\_\_\_ min
- How much more time did Tinaz spend on gardening lessons than on swimming lessons?  
**Ans.** \_\_\_\_\_ h \_\_\_\_\_ min

## Addition / Subtraction (with Regrouping between Minutes and Hours)



### Grasp



Study these examples.

1. Find the sum of 6 h 40 min and 2 h 30 min.

Solution:

h	min
1	
6	40
+ 2	30
9	10

- Write the hours and the minutes in their respective columns.
- Add the minutes:  $40 + 30 = 70$  min  
 $70 > 60$ , so convert 70 minutes to hour and minutes.  
 $70 \text{ min} = (70 \div 60) \text{ h} \rightarrow 1 \text{ h } 10 \text{ min}$
- Write 10 in the minute column and carry 1 hour to hour column.
- Add the hours:  $1 + 6 + 2 = 9$  h

$$\begin{array}{r}
 1 \rightarrow \text{h} \\
 60 \overline{) 70} \\
 \underline{- 60} \\
 10 \rightarrow \text{min}
 \end{array}$$

**Ans.** 9 h 10 min



2. Subtract 2 h 48 min from 10 h 15 min

Solution:

h	min
9	75
10	15
- 2	48
7	27

- Write the hours and the minutes in their respective columns.
- $15 < 48$ , hence regroup 1 hour (60 min) from 10 hours. Write 9 above 10 hours.
- Add:  $60 \text{ min} + 15 \text{ min} = 75 \text{ min}$
- Write 75 above 15 min.
- Subtract:  $75 - 48 = 27 \text{ min}$ . Write 27 in the minute column.
- Subtract hours:  $9 - 2 = 7 \text{ h}$ . Write 7 in the hour column.

Ans. 7 h 27 min



### Work Out

Add / subtract the following.

a

h	min
8	46
+ 3	50

b

h	min
15	06
- 11	58

c

h	min
7	45
+ 2	56

d

h	min
9	05
- 2	26

e

h	min
19	38
- 11	49

f

h	min
14	27
+ 3	37

## Story Problems (All Four Operations)

Solve these story problems.

- a Tina takes tennis lessons twice a week, for 1 h 45 min on Saturdays and 1 h 30 min on Tuesdays. How much time does she spend on her tennis lessons in a week?
- b Mitali exercises for half an hour every day. How many minutes in total does she exercise for over 5 days?

- c Heena spends 8 h 30 min in school. She spends 3 h 45 min on her badminton lessons. How much more time does she spend in school?
- d It takes 3 hours to clean all the windows of a bungalow. There are 10 windows in the bungalow. How many minutes does it take to clean one window?
- e Tanmay drove 60 km in one hour. At the same speed, how far can he drive in 180 minutes?
- f Jenny swims 20 laps every day. How many laps will she swim in six weeks?
- g Pinaz completed her homework on Saturday and Sunday in 4 h 45 min and 3 h 35 min respectively. How much time did she spend in all?
- h Reshma could run 20 km in four hours. At the same speed, how far did she run in 60 minutes?
- i How many centuries do 300 years make?
- j Anu travelled for 2 h 55 min by bus and then 3 h 25 min by train to reach Mumbai from Kolhapur. What is the total time taken by her to reach Mumbai from Kolhapur?



## Project

For My Portfolio!

### Five most important events of the 21st century

Collect information on the five most important events of the past 10 years. Prepare a chart with the details of the time and place of the event. Stick a picture and write a few lines on each event. Put up your chart on the display board in your classroom.

Then, add this chart to your portfolio!



### Do you know?

This iconic Clock Tower, London's most famous landmark, houses a massive bell known as the Big Ben. The tower is located at the north end of the Palace of Westminster. Big Ben first rang on 31 May 1859. The Big Ben or the Clock Tower was renamed the Elizabeth Tower in 2012, to mark the Diamond Jubilee of Queen Elizabeth II.

- a. How many decades old is this clock tower?
- b. How many years have passed since it was renamed Elizabeth Tower?



## APPLICATION BASED QUESTIONS

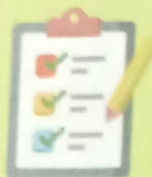
- [1] Mina says, "Years 1000 and 2000 are millennium years." How many centuries will be there till the next millennium year?
- [2] Zinta has a question. Suppose a monument is built in 1650. Is it more or less than 7 centuries old? Explain your answer to Zinta. [HOTS]
- [3] Minaxi was travelling to Baroda on 10 May 2023. The time of departure of her flight was at 23:45 h. The flight got delayed by 30 minutes. What date and time did the flight take off? [HOTS]
- [4] Tini and Mini are cousin sisters. Tini is 10 months old and Mini is  $\frac{3}{4}$  of a year old. Who is older - Tini or Mini? Explain.
- [5] Nirmala works for  $\frac{1}{3}$  of a day. Her friend Nili works for 4 hours a day. Who works for more time? Explain.
- [6] Muskan is 8 years 12 weeks old and her friend Nisha is 8 years 81 days old. Who among them is older and by how many days?
- [7] Reyansh begins his vacation on 1 May 2023. His school reopens after 31 days. He told Bimla that the school will reopen on 2 June 2023. But Bimla did not agree with him. Who is right - Bimla or Reyansh? Justify your answer.
- [8] Derek was 4 years and 2 months old when he joined the school. Now he is 10 years and 4 months old. For how long has he been studying in the school?
- [9] Rebecca had taken 20 days leave from her office to go to her native town. Her leave started on 16 February 2024. On which date did her leave end?
- [10] Anna spends 2 h 30 min for her drawing lessons and 1 h 45 min for her elocution lessons in a week. How much time does she spend on her hobbies in a week?
- [11] A superfast train takes 16 h 30 min to reach New Delhi from Mumbai. But a mail train takes 22 h 15 min to cover that same distance. What is the difference in their travel time?
- [12] Anita lived for 80 years. How many decades did she live?

Facilitating Students with -

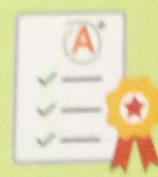


Let's Explore  
Mathematics  
Practice Book 5

Facilitating Teachers with -



Online  
Assessment  
Sheets



Online  
360-degree  
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Let's Explore Mathematics 5



Let's Begin!



## Tanya in the Cake Shop

It's Christmas time! Tanya has come to her father's cake shop to help him handle the rush at the shop. On the counter, she sees a graph drawn on a piece of paper.

Tanya: Dad, what is this?

Father: This graph shows our last week's 'best-selling cakes'. It is called a **circle graph**. It helps me plan the next batch of cakes.

Tanya: I have studied pictograph and bar graph in my class. But this circle graph is new to me. From this graph, how do I know how many cakes were sold?

Father: I sold 100 cakes last week. Half of them were carrot-walnut cakes.

Tanya: How many cakes would that be?

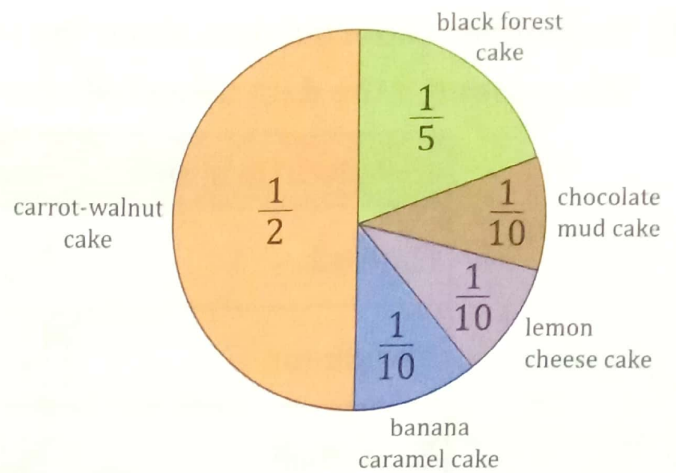
Father:  $\frac{1}{2}$  of 100 =  $100 \div 2 = 50$ . So, 50 carrot-walnut cakes were sold last week.

Tanya: Oh, that's easy! Now I can easily tell the number of other cakes sold.

Children, can you tell the number of the other types of cakes sold?

You have learnt how to read and represent data in tabular form, tally chart, and pictograph. You have also learnt to read data represented through a bar graph.

In this chapter, you will learn more about bar graphs and circle graphs.





## Recap

Collecting, sorting, and representing data in visual form is called **pictorial representation** of data. The same set of data can be represented using different methods, such as tally marks, tabular form, pictograph, vertical bar graph, horizontal bar graph, and circle graph (pie chart).

- 1 Ms Jennifer collected data about the favourite sports of Class 5 students. She presented the data using tally marks as shown below.



Favourite sport	Number of students			
Football	<table style="display: inline-table; border: none;"> <tr> <td style="border: none;">    </td> <td style="border: none;">    </td> <td style="border: none;">    </td> </tr> </table>			
Badminton	<table style="display: inline-table; border: none;"> <tr> <td style="border: none;">    </td> </tr> </table>			
Basketball	<table style="display: inline-table; border: none;"> <tr> <td style="border: none;">    </td> <td style="border: none;"> </td> </tr> </table>			
Hockey	<table style="display: inline-table; border: none;"> <tr> <td style="border: none;">    </td> </tr> </table>			

Study the above information and fill in the blanks.

- Suppose each child voted for one sport, then the total number of students in the class is \_\_\_\_\_.
- The most favourite sport of the class is \_\_\_\_\_.
- The least favourite sport of the class is \_\_\_\_\_.
- The difference between the number of students who like basketball and the number of students who like hockey is \_\_\_\_\_.
- The favourite sport of nearly half of the total number of students in the class is \_\_\_\_\_.

Represent the above information in tabular form and pictograph in your notebook.



Ice cream flavour	Vanilla	Chocolate	Strawberry	Mango	Black currant
Ice cream cones sold	20	35	40	25	45

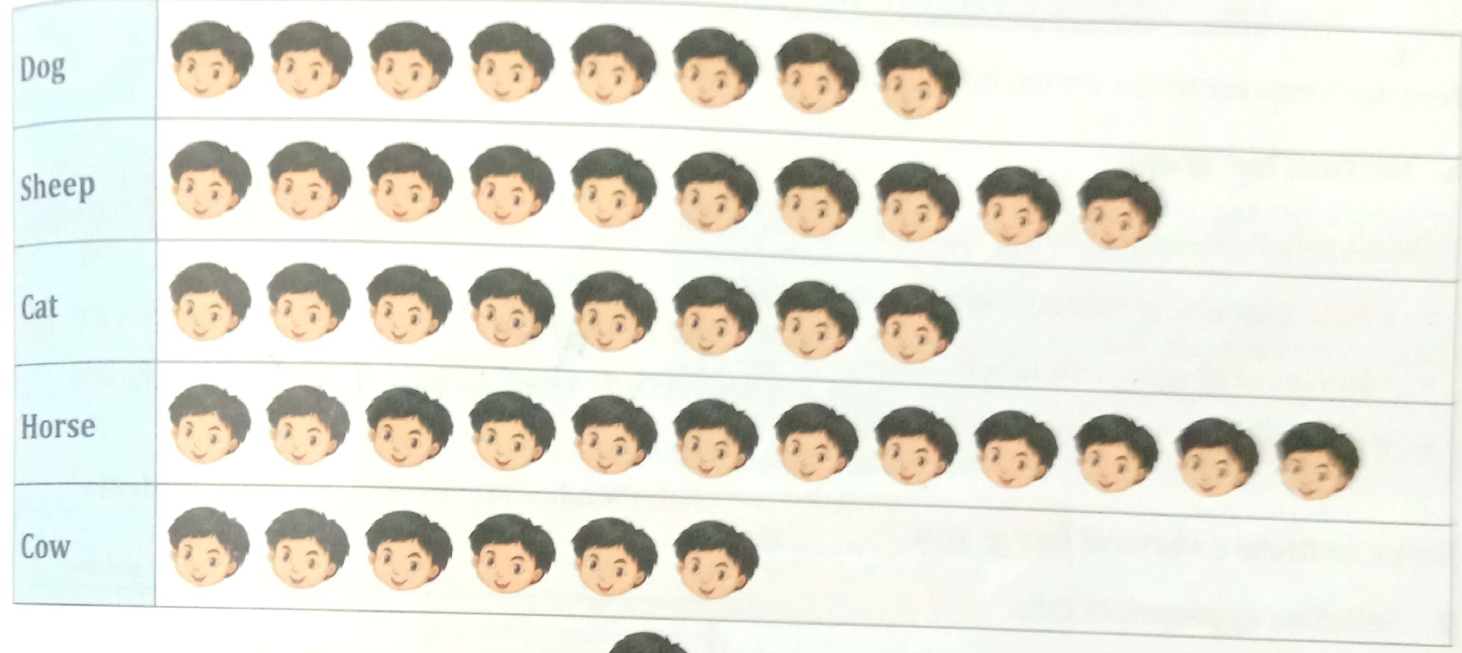
Study the above information and fill in the blanks.


- The best-selling ice cream is \_\_\_\_\_.
- The least favoured ice cream is \_\_\_\_\_.
- Total number of ice creams sold on Sunday is \_\_\_\_\_.

Represent the above data using tally marks and pictograph in your notebook.

3 Study the pictograph and answer the following questions.

Favourite animals of a group of children



Key: 1  = 100 children

- Number of children who like:  
 dogs - \_\_\_\_\_, sheep - \_\_\_\_\_, cats - \_\_\_\_\_, horses - \_\_\_\_\_, cows - \_\_\_\_\_
- How many less children like sheep than horse? \_\_\_\_\_
- How many less children like cow than cat? \_\_\_\_\_
- How many children does the pictograph represent in all? \_\_\_\_\_