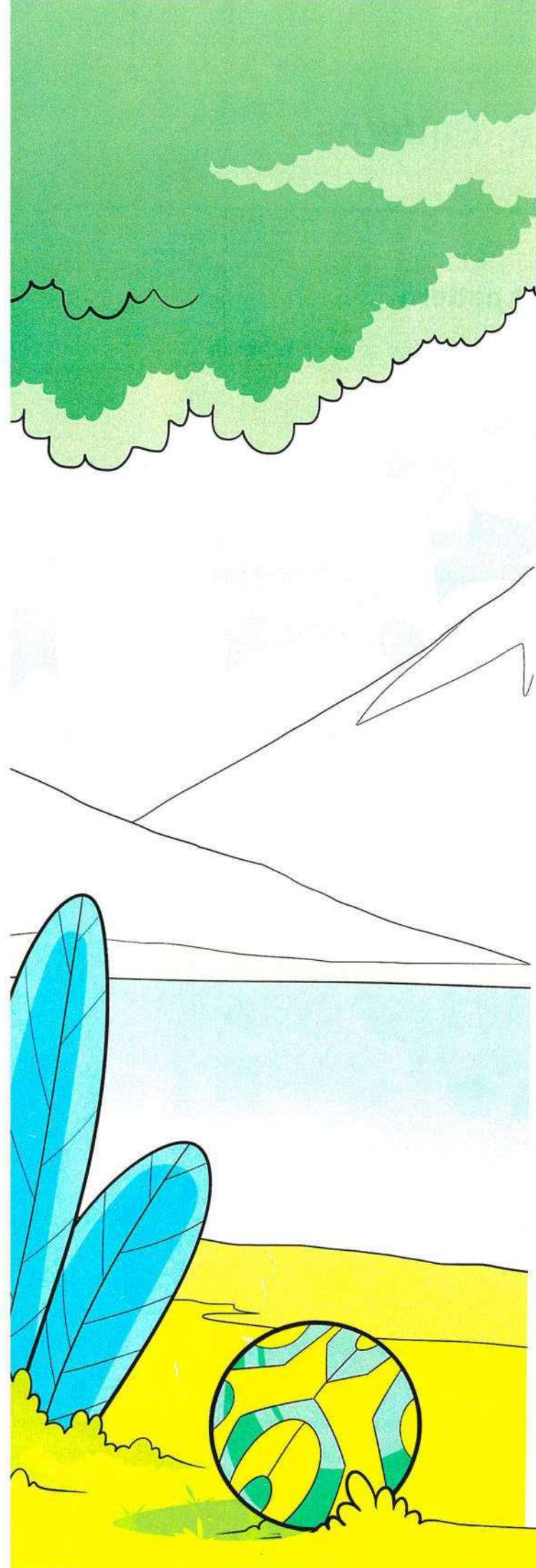


1

CHAPTER





## Outcomes of chapter one :

At the end of chapter one, your child will be able to:

### ► Lesson 1 :

#### Patterns

- Identify repeating and number patterns.
- Determine the next two elements in a pattern.

### ► Lesson 2 :

#### More of bar graphs

- Identify elements of a bar graph.
- Organize, represent, and analyze data from a bar graph.

### ► Lesson 3 :

#### Line plot

- Identify the elements of a line plot.
- Collect and record data.
- Create a line plot.

### ► Lessons 4 to 6 :

- Measuring lengths in centimeter
- Measuring lengths in meter
- Measuring lengths in millimeter

- Discuss centimeter measurement.
- Measure the lengths of objects in centimeters.
- Estimate the lengths of objects in centimeters and meters.
- Discuss meter measurement.
- Demonstrate understanding of the relationship between centimeters and meters.
- Determine whether to use centimeters or meters to measure length.
- Demonstrate understanding that centimeters are composed of millimeters.
- Measure the lengths of objects in millimeters.
- Describe the pattern when measuring the same object in millimeters and centimeters.

**Learn 1** Visual and number pattern

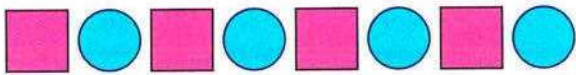
- **Pattern** is an ordered set of objects or numbers related to each other in a certain rule.

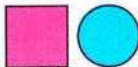
In this lesson you will learn two kinds of patterns.

**Visual pattern**

- **Visual pattern** is an ordered set of objects have repeated part called **pattern unit**.

Example :

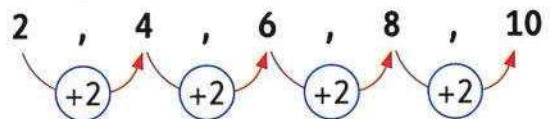


- The pattern unit is 

**Number pattern**

- **Number pattern** is a list of numbers that follow a certain **rule**.

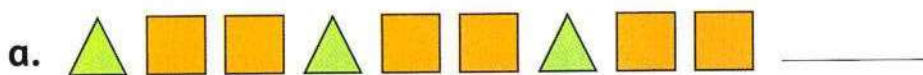
Example :



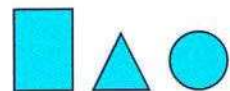
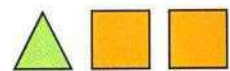
- The pattern rule is  $+2$

**Example 1**

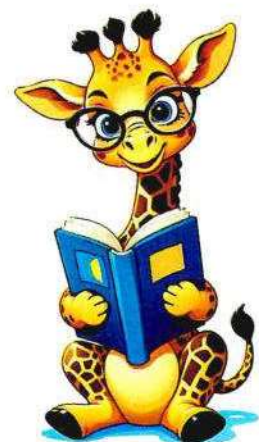
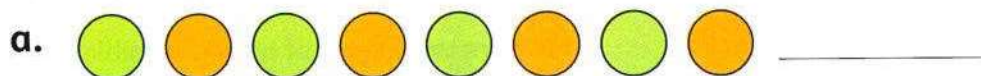
Extend the pattern.



**Solution** ✓

**Check** 

Extend the pattern.



## Example ②

Discover the pattern rule to extend the pattern and write the rule.

a. 10 , 20 , 30 , 40 , \_\_\_\_\_ , \_\_\_\_\_

Rule ▶

b. 95 , 90 , 85 , 80 , \_\_\_\_\_ , \_\_\_\_\_

Rule ▶

## Solution ✓

a. 50 , 60

Rule ▶

▶ **Note** : The numbers are getting larger.

b. 75 , 70

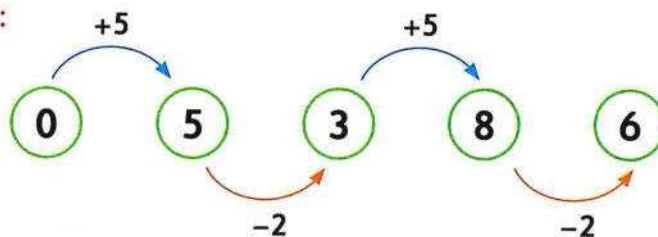
Rule ▶

▶ **Note** : The numbers are getting smaller.

## Remark

- Sometimes number patterns have a rule that requires to add and subtract in the same pattern.

For example :



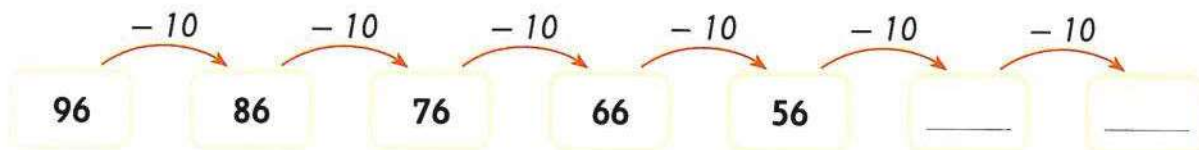
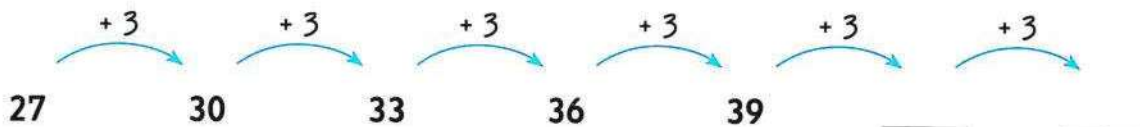
The rule is :

Notice the numbers are increasing and decreasing in the same pattern.



## Check

Use the pattern rule to extend the pattern.

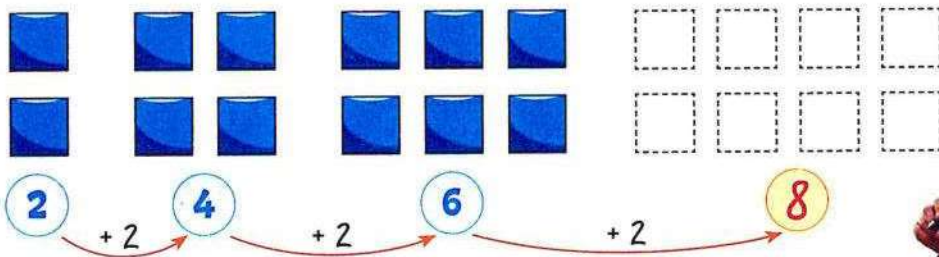


- Practice your child skip-counting by twos, threes, fours, fives and tens.
- Ask your child to find the rule and follow it to complete the patterns.



## Learn 2

- In this pattern you can predict what might come next in the pattern.



Each step 2 more squares than the last step.  
The squares are added to the side.

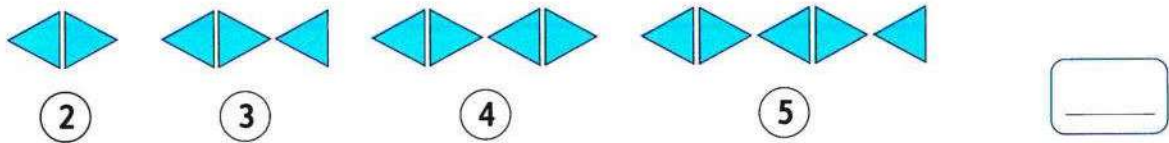


So, The next step has 8 squares.

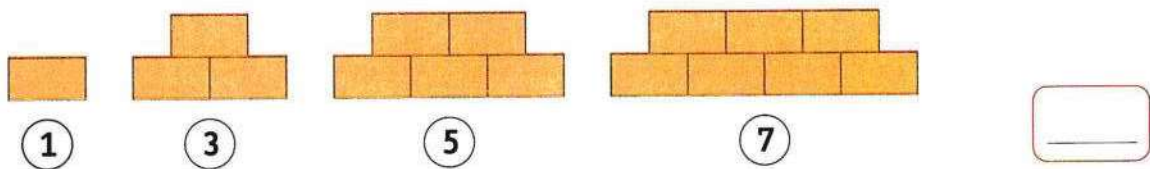
## Example 3

Extend the pattern. Write the number of items you draw.

a.

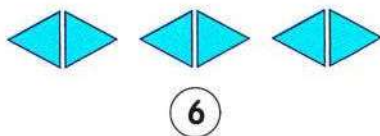


b.

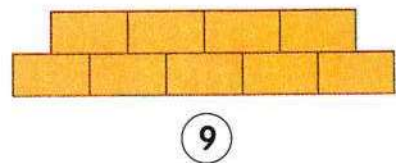


## Solution

a.

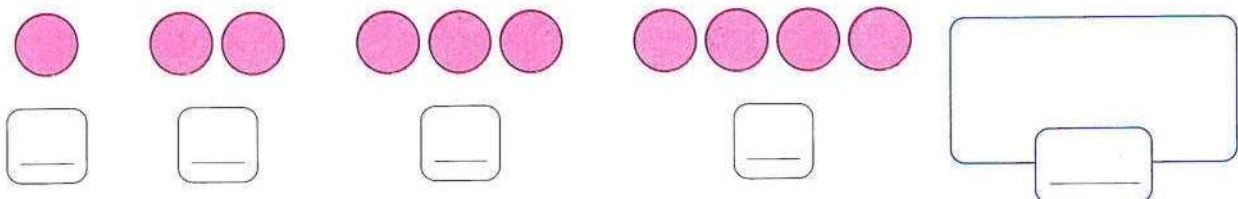


b.



## Check

Draw what might come next in the pattern. Write the number of items in each step.




# Exercise

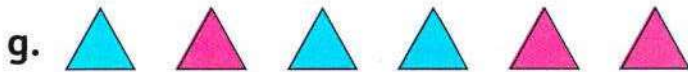
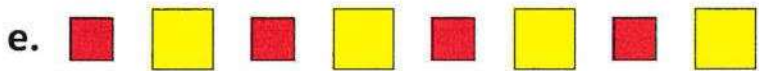
# 1

On Lesson 1

## Patterns

 From the school book

### 1 Extend the pattern.



Work area



### 2 Discover the pattern rule. Write the missing numbers and the rule.

a. 20 , 22 , 24 , 26 , \_\_\_\_\_ , \_\_\_\_\_

b. 70 , 65 , 60 , 55 , \_\_\_\_\_ , \_\_\_\_\_

c. 83 , 73 , 63 , 53 , \_\_\_\_\_ , \_\_\_\_\_

d. 12 , 23 , 34 , 45 , \_\_\_\_\_ , \_\_\_\_\_

e. 21 , 31 , 41 , 51 , \_\_\_\_\_ , \_\_\_\_\_

f. 49 , 46 , 43 , 40 , \_\_\_\_\_ , \_\_\_\_\_

Rule

**3** Find the rule. Complete in the same pattern.

a.  30, 40, 50, 60, 70, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b.  52, 54, 56, 58, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

c. 39, 35, 31, 27, \_\_\_\_\_, \_\_\_\_\_

d. 98, 88, 78, 68, \_\_\_\_\_, \_\_\_\_\_

e. 33, 37, 41, 45, \_\_\_\_\_, \_\_\_\_\_

f. 120, 125, 130, 135, \_\_\_\_\_, \_\_\_\_\_

g. 95, 90, 85, 80, \_\_\_\_\_, \_\_\_\_\_

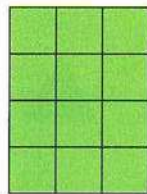
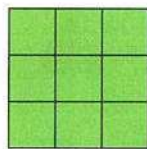
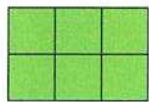
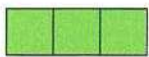
h. 58, 54, 50, 46, \_\_\_\_\_, \_\_\_\_\_

i. 10, 22, 34, 46, \_\_\_\_\_, \_\_\_\_\_

j. 24, 35, 46, 57, \_\_\_\_\_, \_\_\_\_\_

**4** Draw what comes next in each pattern. Write the number of items in each step.

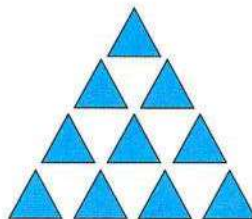
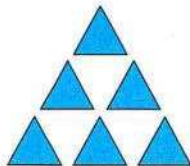
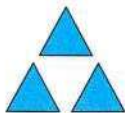
a.







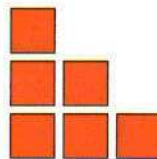
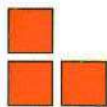
b.



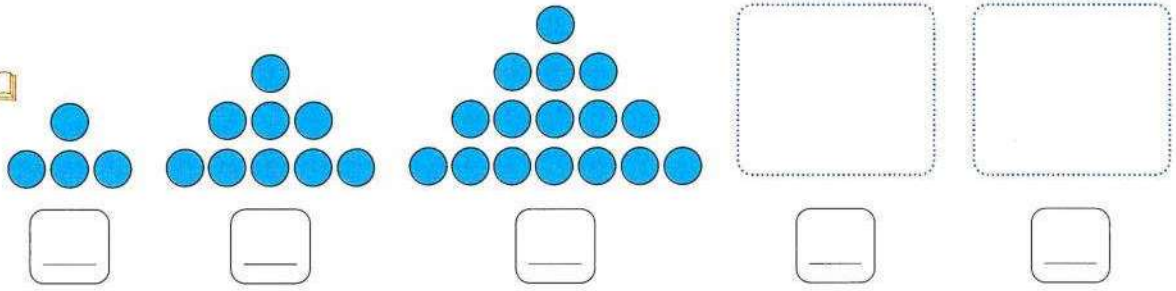




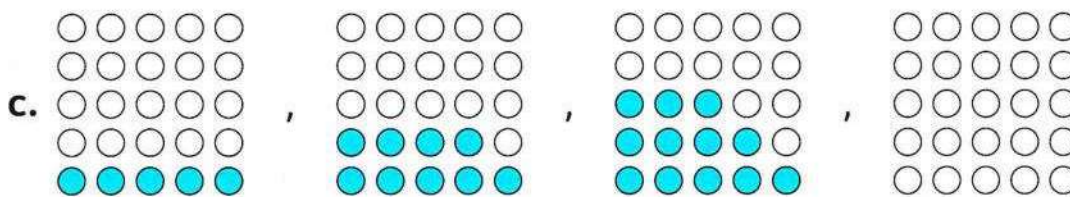
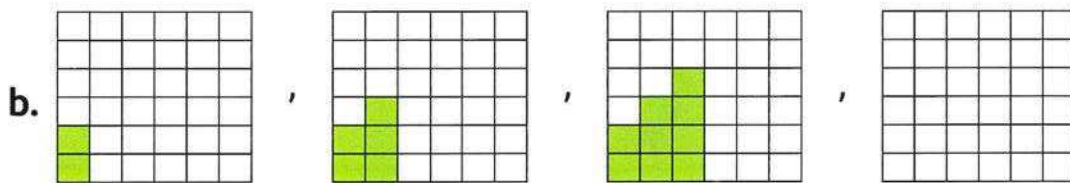
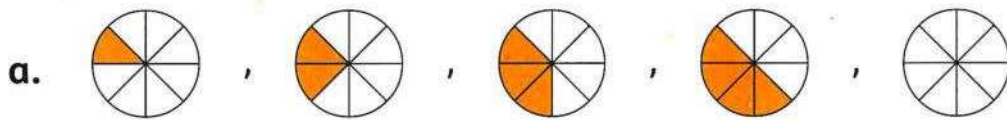
c.



d. 



**5** Color to complete the pattern.



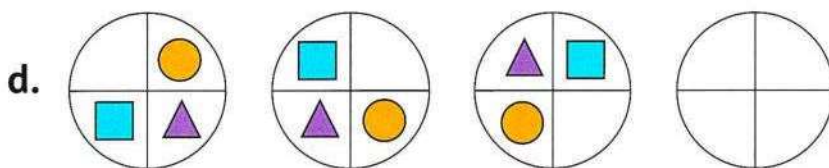
**Challenge** 

**6** Find the rule. Extend the pattern.

a. 30 , 35 , 33 , 38 , 36 , 41 , 39 , \_\_\_\_\_ , \_\_\_\_\_

b. 1 , 2 , 4 , 7 , 11 , \_\_\_\_\_ , \_\_\_\_\_

c. 1 , 1 , 2 , 3 , 5 , \_\_\_\_\_ , \_\_\_\_\_



Place a smiley face



# More of bar graphs



## Learn

### Tally marks, tally table and bar graph

- Tally mark is a mark used to record votes or other items.

#### Tally marks

| means 1

|||| means 5



Tally					
Number	1	2	3	4	5
Tally					
Number	6	7	8	9	10

- Tally table is a table uses tally marks to record data.

### Example ①

This is a survey about favorite time of a day. Make a tally table and then use it to make a bar graph.

### Solution ✓

Times of day	Tally	Number
Morning		4
Lunchtime		3
Afternoon		8
Evening		3
Night time		2

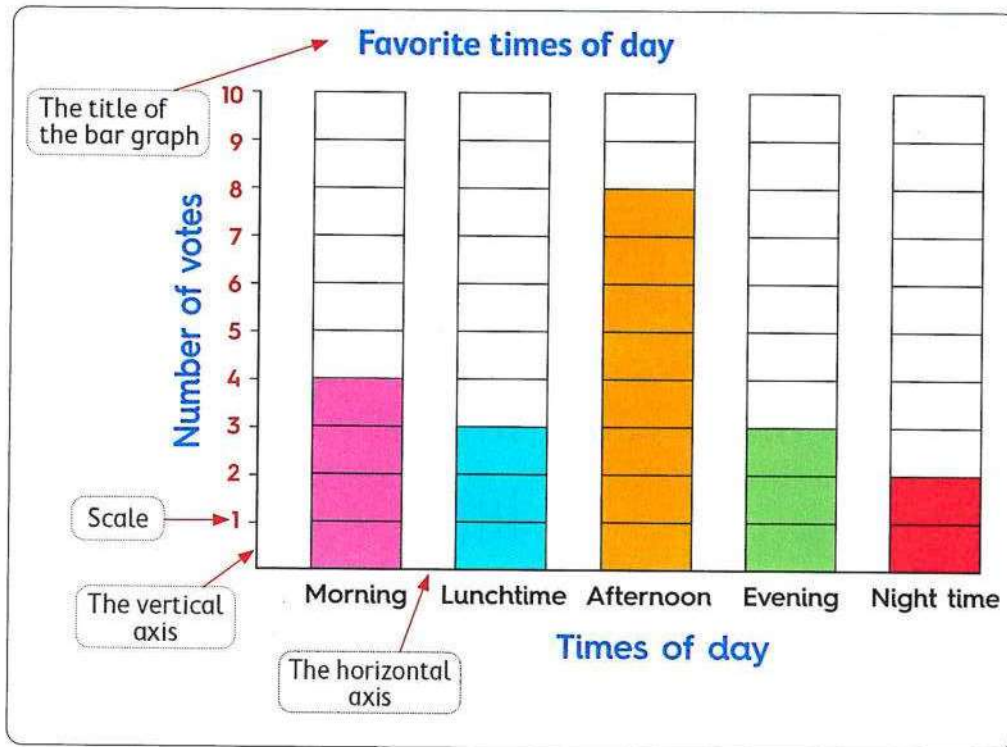
Tally table

Morning	Night time
Evening	Lunchtime
Afternoon	Afternoon
Afternoon	Afternoon
Evening	Morning
Afternoon	Lunchtime
Lunchtime	Morning
Morning	Afternoon
Evening	Night time
Afternoon	Afternoon

#### Think

It is better to record votes by using tally table than record it by writing its name.

- Ask your child to use tally marks to count the number of girls and the number of boys in his/her family.

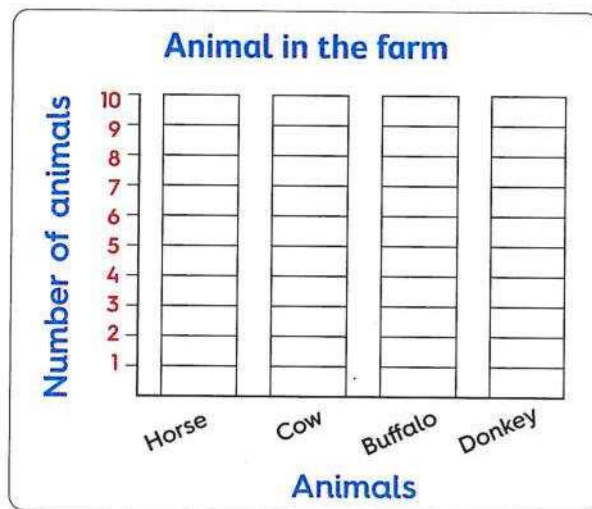


- Bar graph is a graph that uses bars to show data.
- Each bar graph has a scale which is the numbers that show the units used on a bar graph.

## Check

Complete the tally table. Color the graph to show data, then answer the questions.

Animals in the farm		
Animal	Tally	Number
Horse		—
Cow		—
Buffalo		—
Donkey		—



- What is the number of cows in the farm ? \_\_\_\_\_
- Which animal has the greatest number ? \_\_\_\_\_
- Which animal has the least number ? \_\_\_\_\_
- How many animals are there in the farm ? \_\_\_\_\_

Ask your child to survey another favorite such as favorite animals and organize his/her data using tally table.

# Exercise

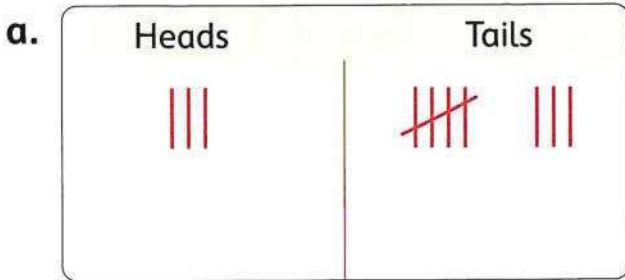
# 2

On Lesson 2

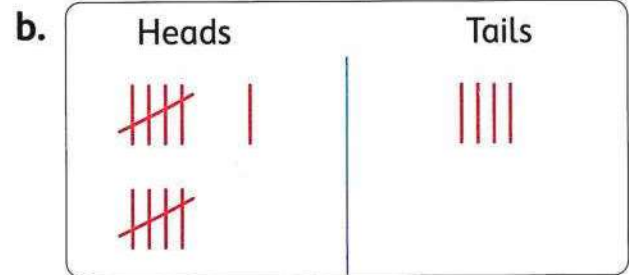
## More of bar graphs

**1** Here are some other tallies.

Count how many heads, how many tails, and how many in all.

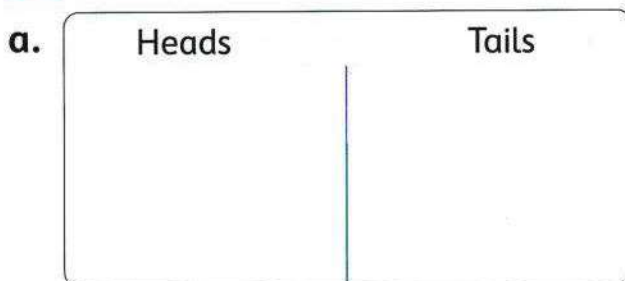


- How many heads? \_\_\_\_\_
- How many tails? \_\_\_\_\_
- How many in all? \_\_\_\_\_

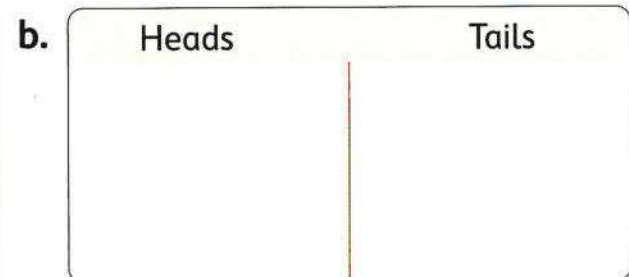


- How many heads? \_\_\_\_\_
- How many tails? \_\_\_\_\_
- How many in all? \_\_\_\_\_

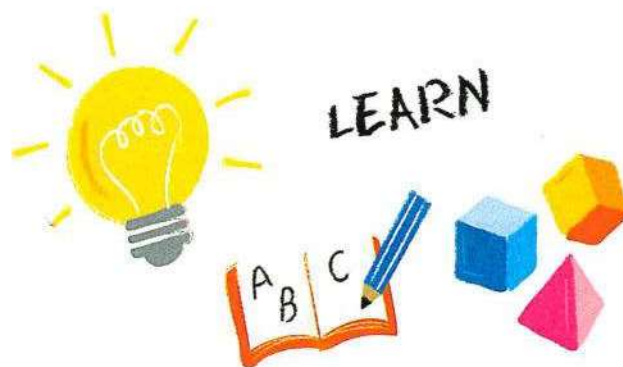
**2** Show the tallies for each chart.



- Show 7 heads.
- Show 13 tails.
- How many in all? \_\_\_\_\_



- Show 12 heads.
- Show 18 tails.
- How many in all? \_\_\_\_\_



**3** Hany made this list of the shirt colors his friends were wearing.

**Make a tally table. Then answer.**

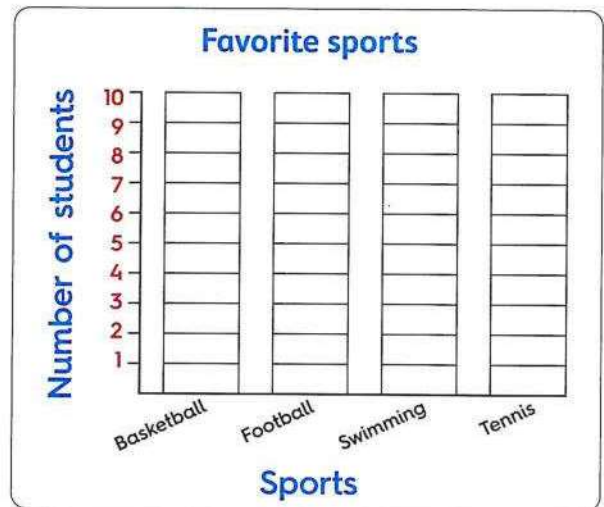
- How many children were wearing blue shirts? \_\_\_\_\_
- What was the color of the most shirt? \_\_\_\_\_
- List the shirt color data from the least to the greatest : \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Shirt color			
Blue	Red	Blue	Green
Green	Green	Blue	Red
Blue	Blue	Red	Blue
Red	Red	Blue	Red
Blue	Blue	Blue	Red

Shirt color		
Color	Tally	Number
_____		_____
_____		_____
_____		_____

**4** Count the tallies. Write the total. Color the graph to show the data.

Favorite sports		
Sports	Number of students	Number
Basketball		_____
Football	 	_____
Swimming	 	_____
Tennis		_____







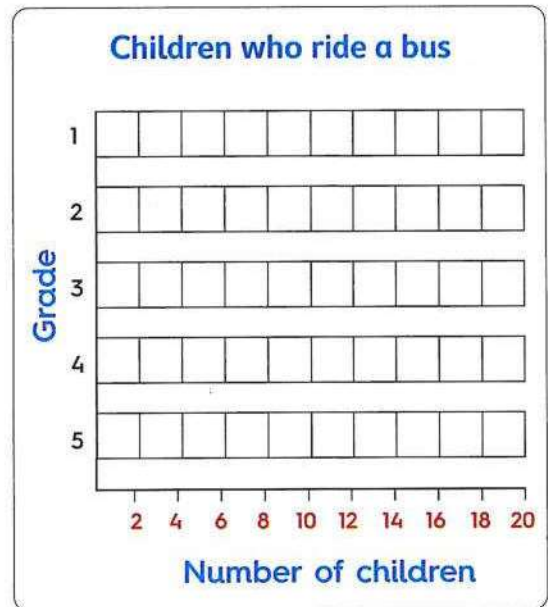
**Answer the questions :**

- How many students did vote for football?  
\_\_\_\_\_ students.
- Which sport is favored by the most? \_\_\_\_\_
- Which sport is favored by the least? \_\_\_\_\_



**5** Count the tallies. Write the total. Color the graph to show the data.

Children who ride a bus		
Grade	Number of children	Number
1		_____
2		_____
3		_____
4		_____
5		_____



**1.** Answer the following questions :

- How many children in grade 4 ride the bus to school ? \_\_\_\_\_
- How many children in grade 3 ride the bus to school ? \_\_\_\_\_
- Which grade has the most children who ride the bus ? \_\_\_\_\_
- Which grade has the least children who ride the bus ? \_\_\_\_\_

**2.** Put (✓) to the correct statement or (X) to the incorrect statement.

- Number of children in grade 5 who ride bus to school is greater than number of children in grade 2 who ride bus to school. ( )
- Number of children are equal in grade 2 and 3 who ride bus to school. ( )
- Number of children in grade 3 who ride bus to school is 15 ( )
- Number of children in grade 1 and grade 4 who ride bus to school is 60 ( )

- 6** This is a survey about our favorite season in the class.  
Make a tally table and then use it to make a bar graph.

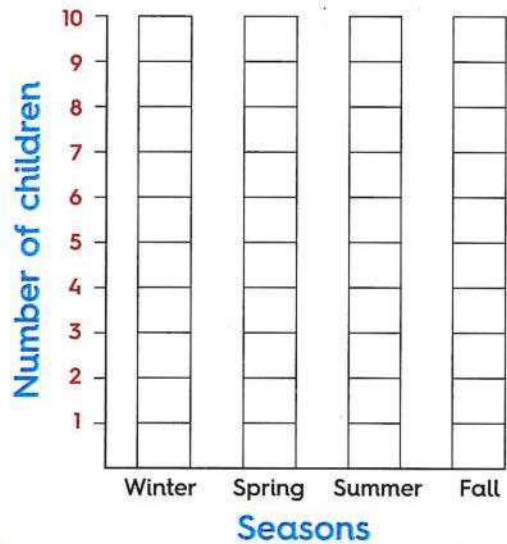
**Our favorite season**

Season	Tally	Number
Winter		___
Spring		___
Summer		___
Fall		___

Summer Winter Summer Fall  
 Fall Winter Winter Summer  
 Fall Summer Summer Fall  
 Winter Fall Summer Spring  
 Spring Summer Fall Summer



**Favorite season**



**1. Answer the questions.**

- Which season is favored by the most? \_\_\_\_\_
- Which season is favored by the least? \_\_\_\_\_
- How many students did vote in total? \_\_\_\_\_

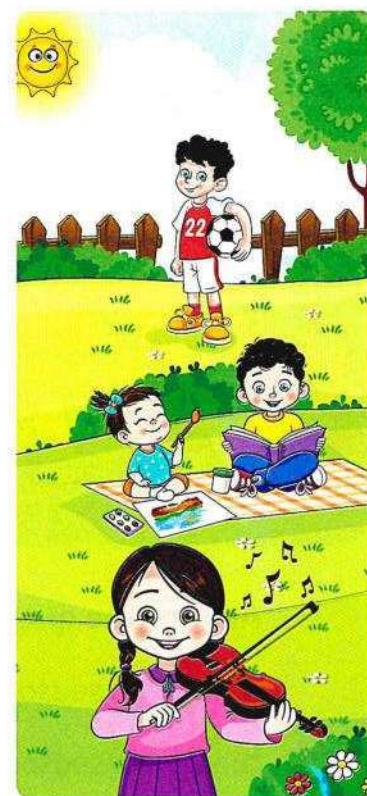
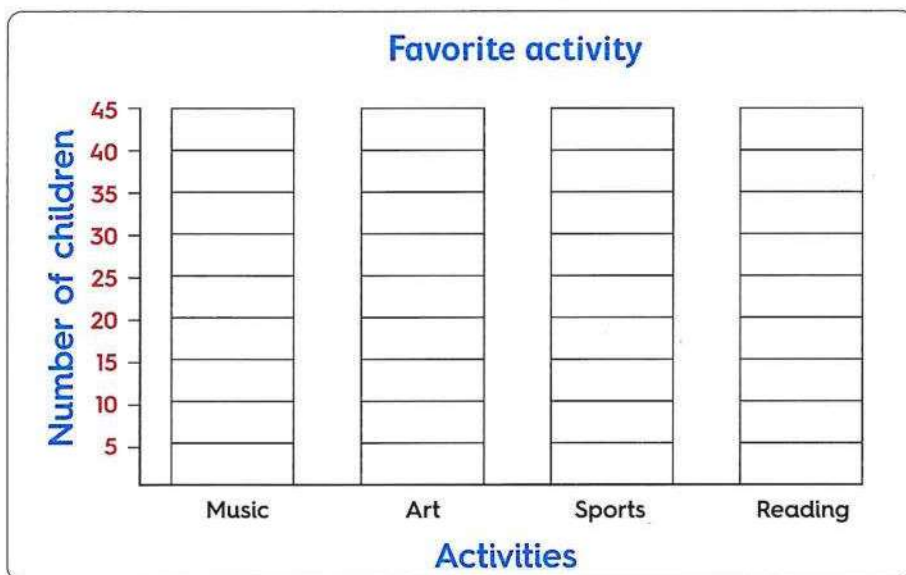
**2. Put (✓) to the correct statement or (X) to the incorrect statement.**

- Number of students who liked summer is 8 ( )
- Number of students who liked fall more than winter is 3 ( )
- Number of students who liked spring and summer altogether is 10 ( )

**7** Complete the tally table, then use it to make a bar graph.

Favorite activity		
Activity	Tally	Number
Music		_____
Art		_____
Sports	 	_____
Reading		_____

Convert the same data into a bar graph.



**1.** Answer following questions.

- How many people liked music best ? \_\_\_\_\_ people.
- Which activity is liked the least ? \_\_\_\_\_
- Which activity is liked the most ? \_\_\_\_\_
- How many people in all liked art and sports activities ? \_\_\_\_\_ people.
- How many people liked sports more than art ? \_\_\_\_\_ people.

**2.** Compare. Write ">, = or <".

- Number of people who liked reading. ○ Number of people who liked art.
- Number of people who liked sports. ○ Number of people who liked music.





## Learn What is a line plot ?

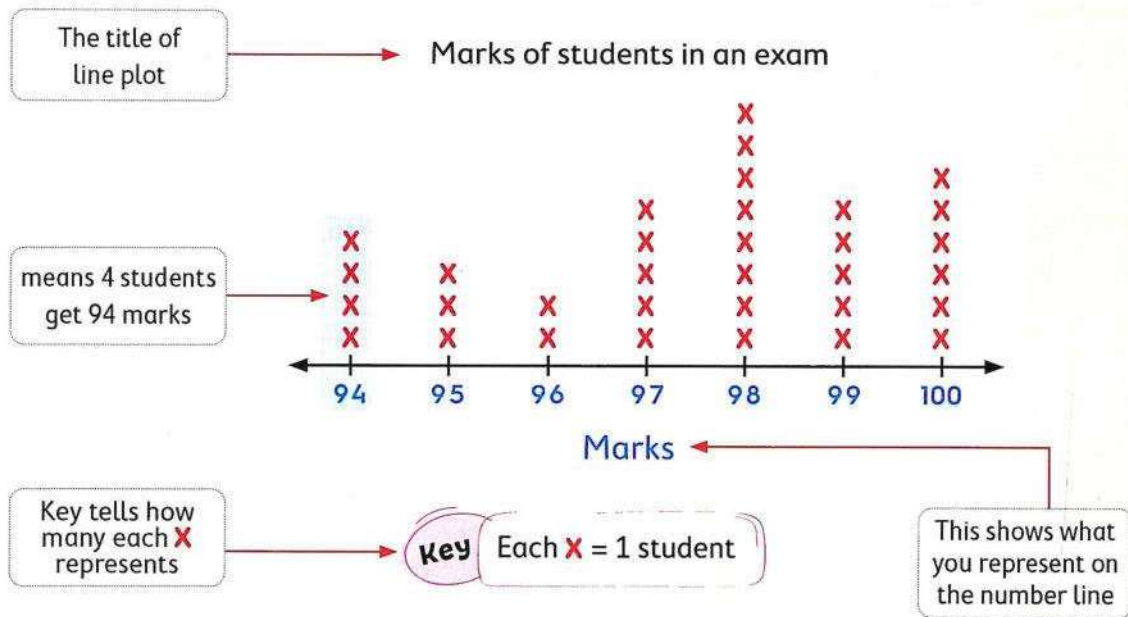
- Line plot is a graph shows how many times something happened.
- It is a graph that shows the data as **X**'s above a number line.

### Example

The following table shows the marks of students in an exam :

Marks	94	95	96	97	98	99	100
Number of students (frequency)	4	3	2	5	8	5	6

You can show these data using a line plot as follows :



### From the graph :

- The number of students who get 98 marks is 8 students.
- The number of students who get smaller than 98 is  $5 + 2 + 3 + 4 = 14$  students.
- The number of students who get greater than 98 is  $5 + 6 = 11$  students.
- The number of students who get the highest mark is 6 students.
- The number of students who get the lowest mark is 4 students.

### Notes for parents

- Tell your child that the "frequency" means how many times a piece of data appears.



## Example

The following data shows the weights of 30 students in kilograms.

Make a line plot to show these data, and then answer the questions.

28	26	29	24	26	30
30	25	28	27	28	26
24	30	25	30	28	28
25	26	28	25	28	30
26	24	29	24	30	26

- How many students weight 25 kilograms? \_\_\_\_\_
- What is the frequency of 28 in these data? \_\_\_\_\_
- What weight has the most frequency? \_\_\_\_\_
- What weight has the least frequency? \_\_\_\_\_
- How many students weight less than 26 kilograms? \_\_\_\_\_
- How many students weight more than 27 kilograms? \_\_\_\_\_

## Solution

To make a line plot for these data follow the following steps :

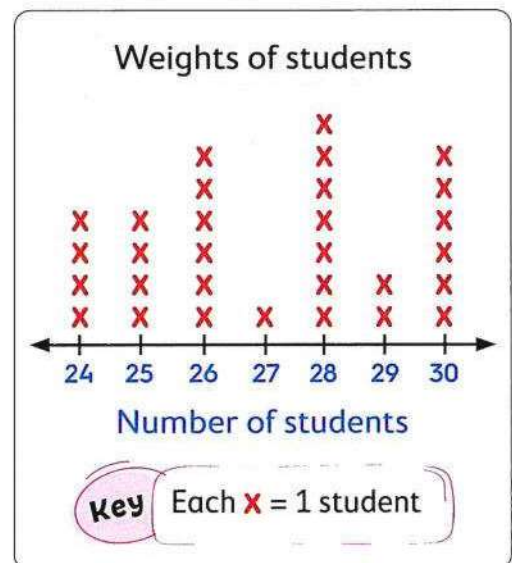
**First** : Determine the lowest and the greatest weight.

- The lowest weight = 24 kilogram.
- The greatest weight = 30 kilogram.

**Second** : Make a tally table shows how many times each weight appears.

Weights	24	25	26	27	28	29	30
Tallies			/		/		/
Number of students (Frequency)	4	4	6	1	7	2	6

- 4 students
- 7 students
- 28 kilograms
- 27 kilograms
- $4 + 4 = 8$  students
- $7 + 2 + 6 = 15$  students



## Check



The opposite data shows the number of books read by 20 children in a month, complete the tally table, and make a line plot.

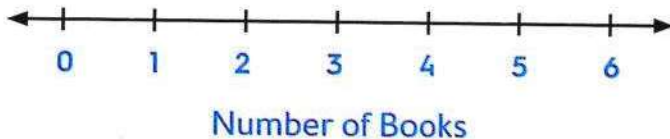
How many books did you read in this month?

4	5	2	3	4
6	1	4	1	5
1	5	0	4	5
5	2	4	5	6

Number of books	0	1	2	3	4	5	6
Tallies							
Number of children	_____	_____	_____	_____	_____	_____	_____



Books Read This Month



key Each **x** = 1 child

Answer the following questions :

- How many children read 6 books ? \_\_\_\_\_
- How many children read 4 books ? \_\_\_\_\_
- How many children did not read any book ? \_\_\_\_\_
- How many children read more than 3 books ? \_\_\_\_\_
- How many children read 10 books ? \_\_\_\_\_



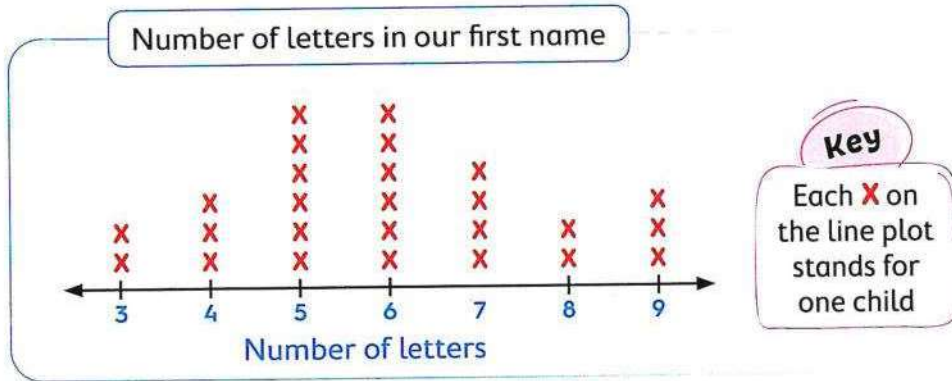
# Exercise

# 3

On Lesson 3

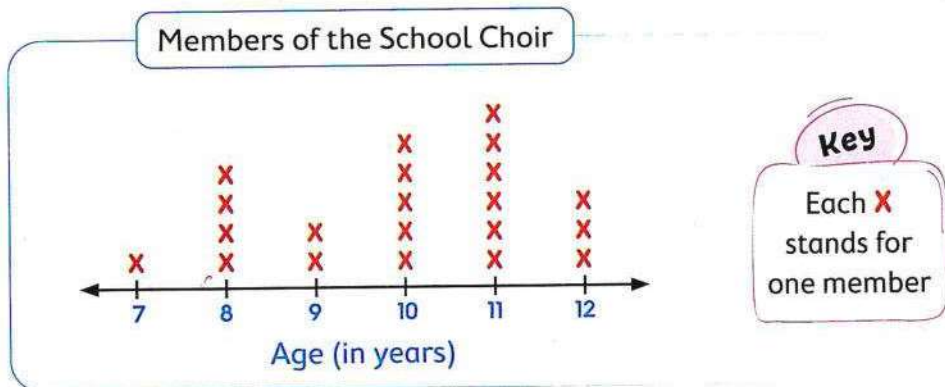
## Line plot

1 Use the line plot to answer the questions.



- How many children have 5 letters in their first name? \_\_\_\_\_ children.
- What is the smallest number of letters in a child's first name? \_\_\_\_\_ letters.
- What is the greatest number of letters in a child's first name? \_\_\_\_\_ letters.

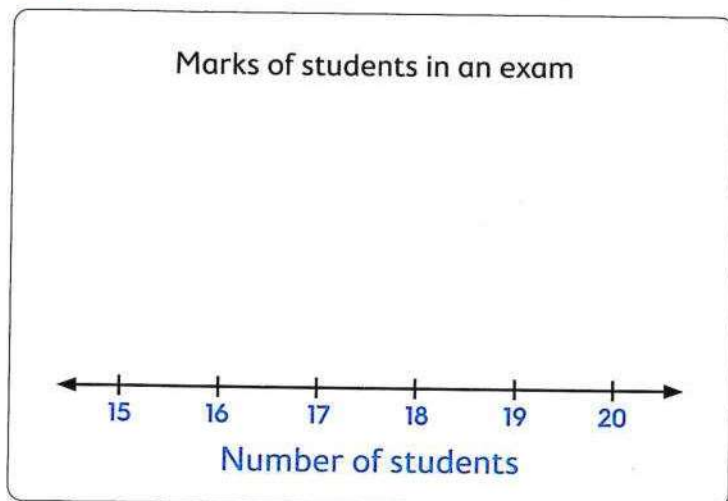
2 The data in this line plot shows the ages of a group of students in a school choir. The number line shows the ages of the students. Use the line plot to answer the questions.



- How many students are 8 years old? \_\_\_\_\_
- How many students are 10 years old? \_\_\_\_\_
- How many students are 12 years old? \_\_\_\_\_
- What is the frequency of 11 years in this data? \_\_\_\_\_
- How many students are in the choir? \_\_\_\_\_
- How many students are younger than 10 years old? \_\_\_\_\_



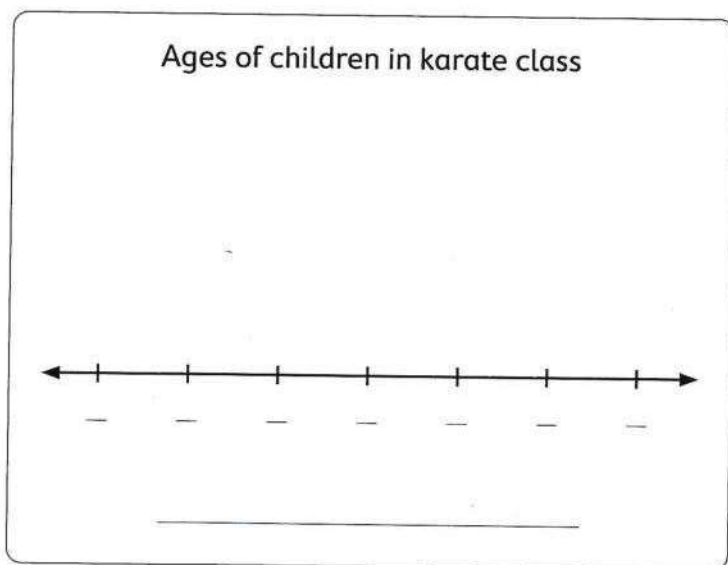
**3** Use the table to draw a line plot.



Marks	Number of students
15	2
16	1
17	3
18	5
19	4
20	2

**Key** Each **x** = \_\_\_\_\_ student

**4** Use the table to draw a line plot.



Age in years	Tallies
7	
8	
9	
10	
11	
12	
13	

**Key** \_\_\_\_\_

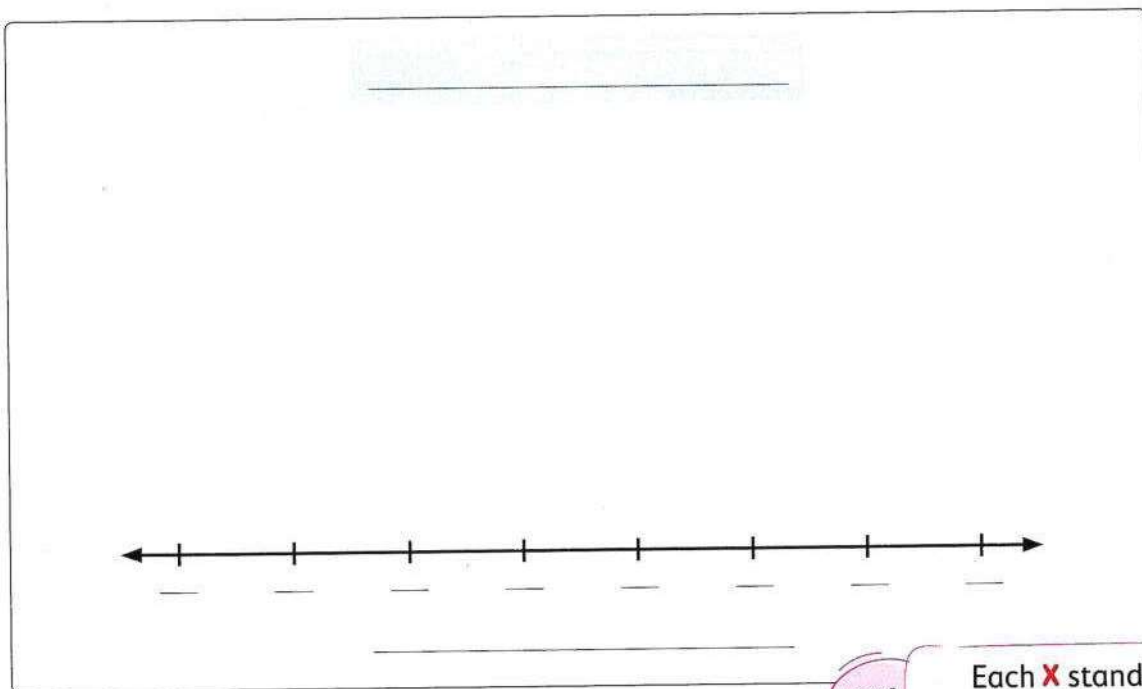
Use the line plot to answer the questions :

- How many children in the class are 11 years ? \_\_\_\_\_ children.
- What age is the greatest number of children ? \_\_\_\_\_ years old.
- How many children are in karate class in all ? \_\_\_\_\_ children.

**5** The following numbers are the number of study hours per week for a number of students.

15	14	17	20	21	19
20	18	19	14	16	15
21	15	18	16	19	20
14	17	19	21	20	15
16	14	15	19	21	20

Hours								
Tally								
Frequency								



**Key** Each **X** stands for \_\_\_\_\_ student

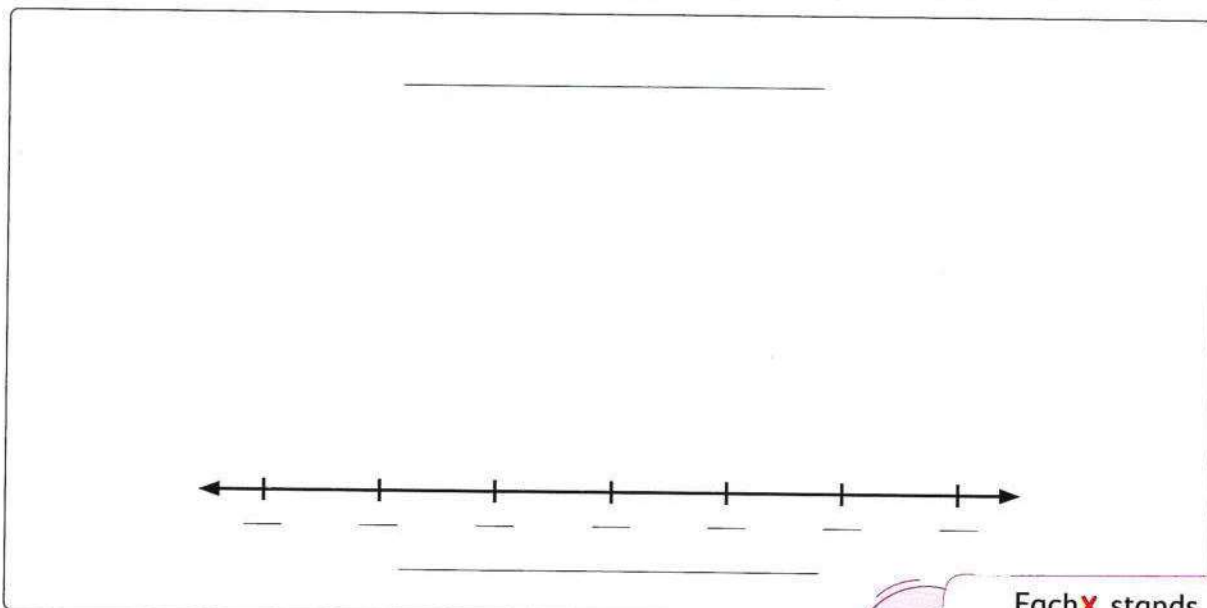
Answer the following questions :

- How many students study 17 hr. per week ? \_\_\_\_\_
- How many students study 21 hr. per week ? \_\_\_\_\_
- What is the greatest number of students study a certain number of hours ? \_\_\_\_\_
- What is the smallest number of students study a certain number of hours ? \_\_\_\_\_

**6** The following numbers are the money saved by a number of children in a week in pounds.

50	60	40	30	90	80
40	50	60	70	80	90
50	70	80	90	60	50
70	50	50	60	80	50
70	60	50	40	50	80

Saved money								
Frequency								



Key Each **X** stands for \_\_\_\_\_ child

1. Choose the correct answer.
  - a. The number of children saving 90 pounds is \_\_\_\_\_ ( 3 or 4 or 5 )
  - b. The number of children saving the least amount of money is \_\_\_\_\_ ( 3 or 2 or 1 )
  - c. The greatest number of children saved \_\_\_\_\_ pounds. ( 50 or 60 or 90 )
  
2. Put (✓) to the correct statement or (X) to the incorrect statement.
  - a. The number of children who saved 70 pounds is 4. ( )
  - b. The smallest number of children saved 50 pounds. ( )
  - c. The number of all children in all is 90. ( )

Place  
a smiley  
face

# Lessons 4 to 6

- Measuring lengths in centimeter
- Measuring lengths in meter
- Measuring lengths in millimeter

## **Learn 1** Length units (meter, centimeter and millimeter)

### ◦ Meter (m) :

Used to measure distances and longer lengths as : buildings and buses.

### ◦ Centimeter (cm) :

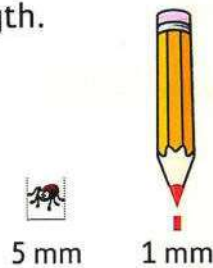
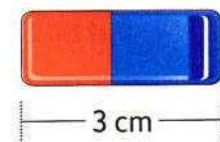
A centimeter (cm) is a small standard unit of measuring length, used to measure the length of small objects as : pencils, books and erasers.

### ◦ Millimeter (mm) :

- A millimeter (mm) is a very small standard unit of measuring length.

It is used to measure the length of a very small object as the length of an insect.

- A millimeter is about the width of the point of the end of your pencil.

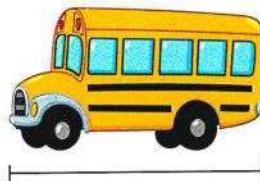


## Check

Ring the estimating length.



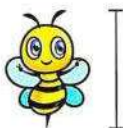
80 **cm**    80 **m**



6 **mm**    6 **m**



13 **cm**    8 **mm**



10 **cm**    10 **mm**



50 **mm**    50 **cm**



30 **cm**    30 **m**

### Notes for parents

• Ask your child to find something at home is about 5 cm in length, width or height, and another something is about 1 m

• Ask your child to find objects at home he/she can measure it in millimeter.



## Learn 2 Converting length units

There are 100 centimeters in 1 meter

$$1 \text{ m} = 100 \text{ cm}$$

**Example :**

- 2 m = 200 cm
- 5 m = 500 cm
- 8 m = 800 cm

When moving from meters to centimeters, the number gets two zeros on the end.

There are 10 millimeters in 1 centimeter

$$1 \text{ cm} = 10 \text{ mm}$$

**Example :**

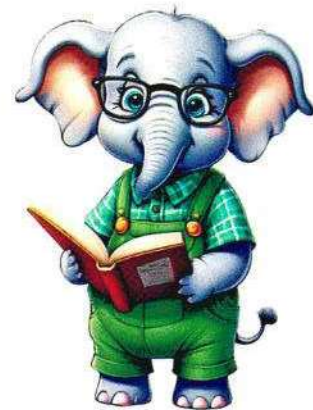
- 2 cm = 20 mm
- 4 cm = 40 mm
- 19 cm = 190 mm

When moving from centimeters to millimeters, the number gets a zero on the end.

### Example ①

Complete.

- |   |                     |                      |
|---|---------------------|----------------------|
| a. 6 m = _____ cm                           | b. 9 m = _____ cm   | c. 5 cm = _____ mm   |
| d. 28 cm = _____ mm                         | e. _____ m = 700 cm | f. _____ cm = 120 mm |
| g. 2 m + 5 m = _____ + _____ = _____ cm     |                     |                      |
| h. 6 m + 30 cm = _____ + _____ = _____ cm   |                     |                      |
| i. 30 cm + 10 mm = _____ + _____ = _____ mm |                     |                      |
| j. 60 cm + 20 cm = _____ + _____ = _____ mm |                     |                      |



### Solution ✓

- |                             |                             |       |
|-----------------------------|-----------------------------|-------|
| a. 600                      | b. 900                      | c. 50 |
| d. 280                      | e. 7                        | f. 12 |
| g. 200 cm + 500 cm = 700 cm | h. 600 cm + 30 cm = 630 cm  |       |
| i. 300 mm + 10 mm = 310 mm  | j. 600 mm + 200 mm = 800 mm |       |

• Later in this year, your child will understand that when moving from centimeters to millimeters he/she can multiply by 10.



## Example ②

Compare, write "> , = or <".

a. 9 cm  9 mm

c. 20 cm  200 mm

e. 3 m + 15 cm  315 cm

b. 50 mm  5 cm

d. 80 cm  90 mm

f. 7 cm + 5 mm  705 mm

## Solution

a.  $9 \text{ cm} \downarrow$   
90 mm  9 mm

c.  $20 \text{ cm} \downarrow$   
200 mm  200 mm

e.  $3 \text{ m} + 15 \text{ cm} \downarrow$   
 $300 + 15 = 315 \text{ cm}$   315 mm

b. 50 mm   $5 \text{ cm} \downarrow$   
50 mm

d.  $80 \text{ cm} \downarrow$   
800 mm  90 mm

f.  $7 \text{ cm} + 5 \text{ mm} \downarrow$   
 $70 + 5 = 75 \text{ mm}$   705 mm

## Check

Complete.

a. 3 m = \_\_\_\_\_ cm

b. 8 cm = \_\_\_\_\_ mm

c. 10 cm = \_\_\_\_\_ mm

d. \_\_\_\_\_ m = 400 cm

e. \_\_\_\_\_ cm = 400 mm

f. \_\_\_\_\_ cm = 250 mm

g.  $40 \text{ cm} + 20 \text{ mm} =$  \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_ mm

h.  $207 \text{ cm} =$  \_\_\_\_\_ m  $+$  \_\_\_\_\_ cm

- Let your child remember that to move from centimeter to millimeters he/she put 0 at the end of the number and to move from meter to centimeter he/she put two 0's at the end of the number.



### Learn 3

## How to use a ruler to measure the length of any object

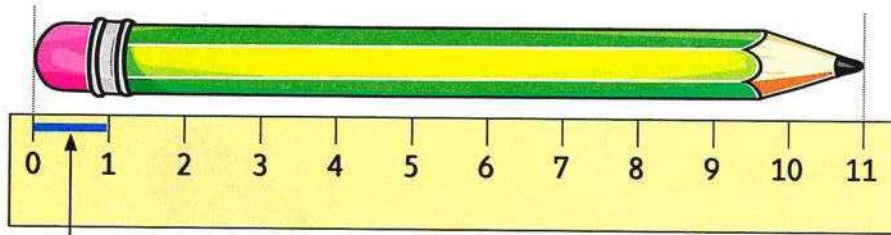
#### Step 1

Line up one end of the pencil with the zero mark on the ruler.

#### Step 2

Find the centimeter mark on the ruler that is at the other end of the pencil.

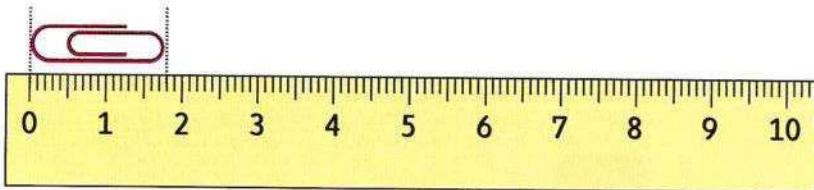
- What is the length of the pencil in centimeters ?



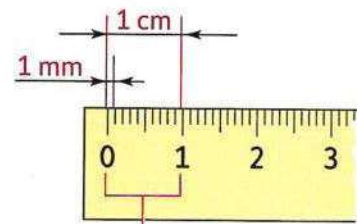
1 centimeter

The length of the pencil is 11 cm

- What is the length of the paper clip in millimeters ?

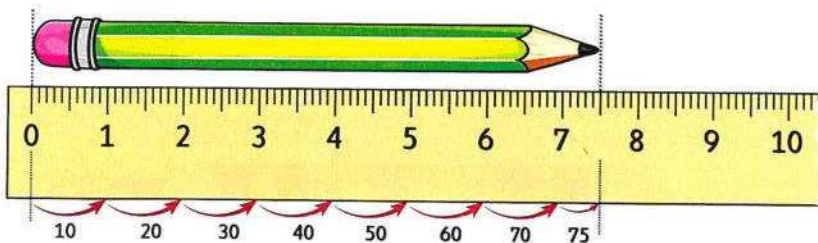


The paper clip is 18 millimeter.



1 cm = 10 mm

- What is the length of the pencil in millimeters ?



The pencil is 75 millimeter.



You can count by 10

- Ask your child to measure the lengths of his/her coloring pencils then arrange them from the shortest to the longest.

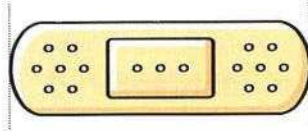
# Check



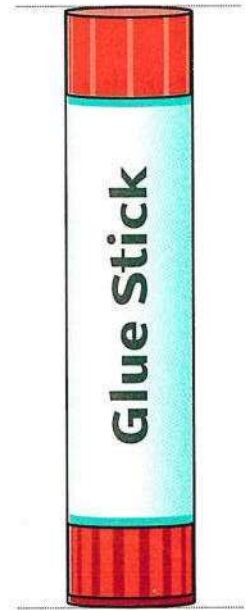
Measure the length of each object. Circle the longest one and tick (✓) the shortest one.



\_\_\_\_\_ centimeter



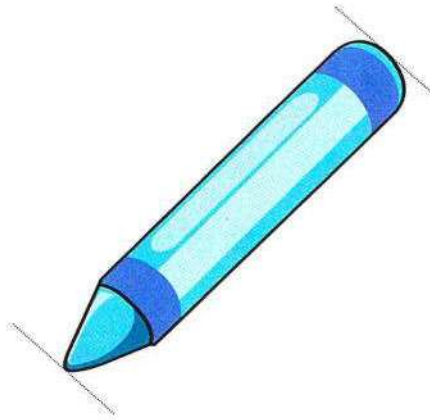
\_\_\_\_\_ centimeter



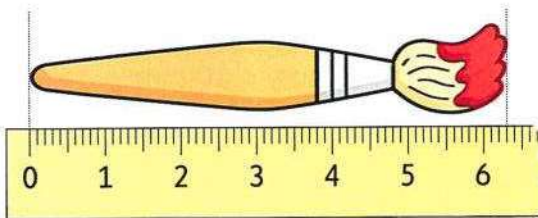
\_\_\_\_\_ centimeter



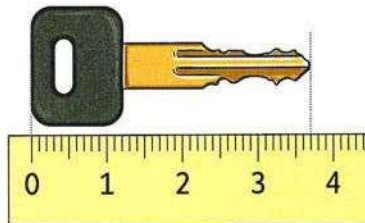
\_\_\_\_\_ centimeter



\_\_\_\_\_ centimeter



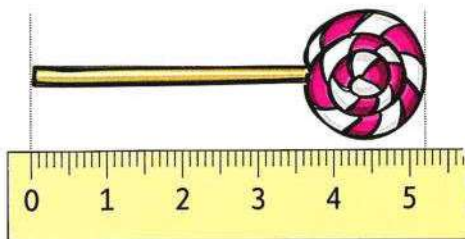
\_\_\_\_\_ millimeter



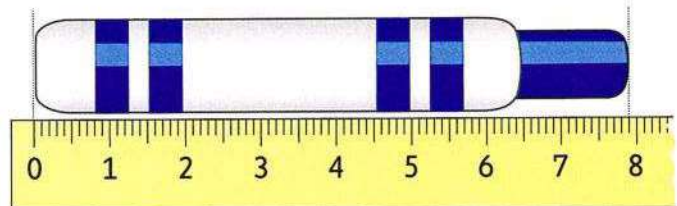
\_\_\_\_\_ millimeter



\_\_\_\_\_ millimeter



\_\_\_\_\_ millimeter



\_\_\_\_\_ millimeter


- Give your child 4 strings and ask him/her to use a ruler to measure their lengths, then put them in order from the longest to the shortest.

# Exercise

# 4

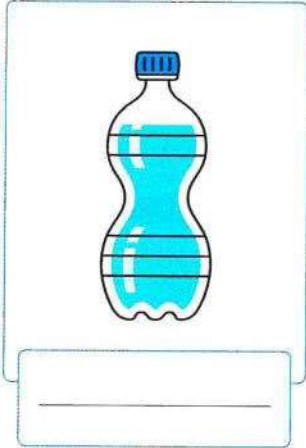
On Lessons 4 to 6

- Measuring lengths in centimeter
- Measuring lengths in meter
- Measuring lengths in millimeter

 From the school book

**1** Write the suitable unit (**meter** or **centimeter** or **millimeter**) to measure each object.

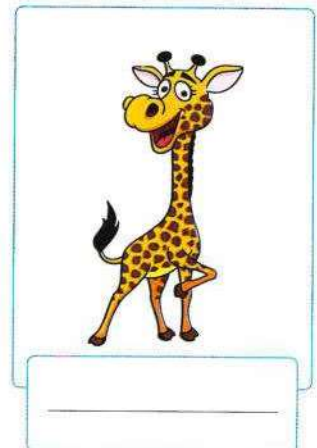
a.



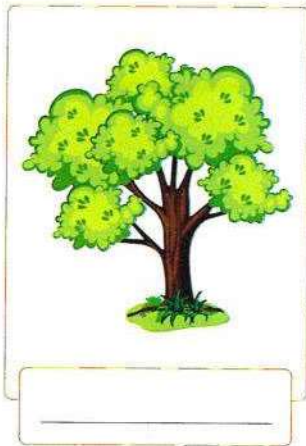
b. 



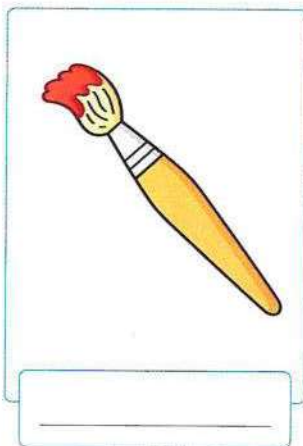
c.



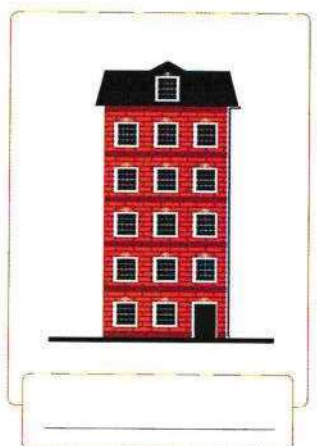
d.



e.



f. 

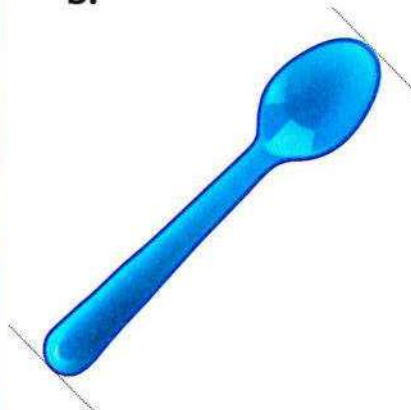


**2** Use the ruler to measure the length of each of the following.

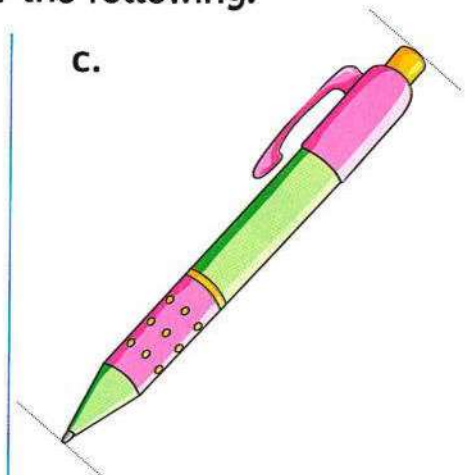
a.



b.



c.



d.



\_\_\_\_\_ millimeter

e.



\_\_\_\_\_ centimeter

f.



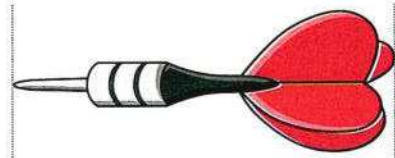
\_\_\_\_\_ millimeter

g.



\_\_\_\_\_ millimeter

h.



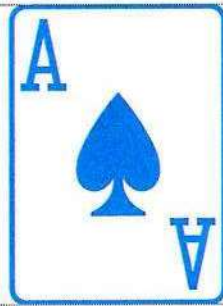
\_\_\_\_\_ millimeter

i.



\_\_\_\_\_ centimeter

j.



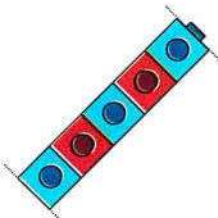
\_\_\_\_\_ centimeter

k.

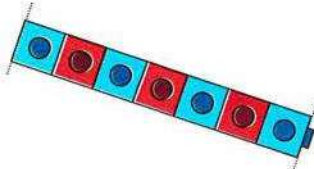


\_\_\_\_\_ centimeter

**3** Measure the length of each stripe and write its length, then arrange from the longest to the shortest.



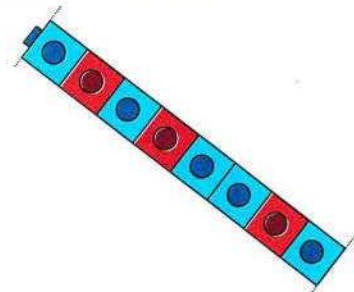
\_\_\_\_\_ centimeter



\_\_\_\_\_ centimeter



\_\_\_\_\_ centimeter



\_\_\_\_\_ centimeter

The order is :  ,  ,  ,

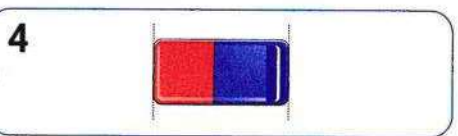
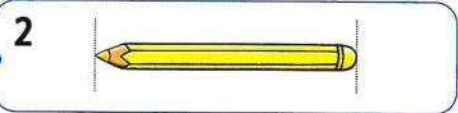
**4** Estimate and match.

a about **2** cm

b about **10** m

c about **2** m

d about **10** cm



**5** Put (✓) to the correct statement or (X) to the incorrect statement.

- a. The length of a bus is about 5 cm ( )
- b. The length of your book is about 30 cm ( )
- c. The length of an insect is about 3 m ( )
- d. The length of your pen is about 15 cm ( )
- e. Millimeter is a suitable unit to measure the length of large distances. ( )

**6** Choose the correct answer.

- a. 3 cm = \_\_\_\_\_ mm (3 or 30 or 300)
- b. 24 cm = \_\_\_\_\_ mm (240 or 40 or 200)
- c. 70 mm = \_\_\_\_\_ cm (70 or 700 or 7)

- d.  $500 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$  (50 or 5 or 55)
- e.  $5 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$  (5 or 50 or 500)
- f.  $200 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$  (2 or 20 or 200)
- g.  $\underline{\hspace{2cm}} \text{ cm} = 60 \text{ mm}$  (600 or 6 or 60)
- h.  $\underline{\hspace{2cm}} \text{ mm} = 7 \text{ cm}$  (7 or 70 or 700)

**7** Complete.

- |  |  |
|--|--|
| a. $7 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$  | b. $3 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$  |
| c. $4 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$   | d. $8 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$   |
| e. $18 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$                                       | f. $50 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$   |
| g. $\underline{\hspace{2cm}} \text{ m} = 500 \text{ cm}$                                       | h. $300 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$   |
| i. $\underline{\hspace{2cm}} \text{ cm} = 40 \text{ mm}$                                       | j. $200 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$  |
| k. $10 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$                                       | l. $10 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$   |
| m. $2 \text{ cm} + 5 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$                         | n. $4 \text{ cm} + 2 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$                             |
| o. $5 \text{ m} + 3 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$                           | p. $4 \text{ m} + 2 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$                               |
| q. $70 \text{ mm} + 10 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$                       | r. $20 \text{ mm} + 70 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$                           |
| s. $350 \text{ cm} = \underline{\hspace{2cm}} \text{ m} + \underline{\hspace{2cm}} \text{ cm}$ | t. $75 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ and $\underline{\hspace{2cm}} \text{ mm}$ |

**8** Put (✓) to the correct statement or (X) to the incorrect statement.

- |  |   |
|--|---|
| a. $1 \text{ m} = 100 \text{ cm}$ ( )                    | b. $90 \text{ mm} = 9 \text{ cm}$ ( )               |
| c. $30 \text{ cm} = 300 \text{ mm}$ ( )                  | d. $500 \text{ cm} = 50 \text{ m}$ ( )              |
| e. $1 \text{ cm}$ and $2 \text{ mm} = 12 \text{ mm}$ ( ) | f. $2 \text{ m} + 6 \text{ m} = 800 \text{ mm}$ ( ) |

**9** Complete using "> , = or <".

a. 5 m  5 cm

c. 40 mm  9 cm

e. 6 cm  6 mm

g. 9 mm  9 m

i. 1 cm  100 mm

k. 600 mm  6 cm

m. 3 cm and 3 mm  303 mm

b. 20 mm  2 cm

d. 7 cm  20 mm

f. 20 cm  200 mm

h. 1 m  100 cm

j. 20 mm  200 cm

l. 30 mm + 20 mm  50 cm

n. 56 mm  50 cm + 6 mm

## Challenge



**10** Ring the longest length.

90 mm

88 cm

100 mm

90 cm

**11** Complete.

a. 4 cm + \_\_\_\_\_ mm = 70 mm

c. 90 mm - \_\_\_\_\_ mm = 2 cm

e. 5 m - \_\_\_\_\_ cm = 300 cm

b. 10 mm + \_\_\_\_\_ mm = 3 cm

d. 8 cm - \_\_\_\_\_ cm = 20 mm

f. \_\_\_\_\_ m + 40 cm = 540 cm

Place  
a smiley  
face