



Chapter 12



Smart Charts









1Marks Question


Chi-Chi, Meow-Meow:

Yamini did a project 'Animals and Birds'. She asked each child of her class about one favorite pet animal.



She used tally marks to record each answer. For example if someone said cat she put one line | in front of 'cats'. When someone said cat again, she added a line. So  means two cats and  means 5 cats. In all 24 children said cat was their favorite animal. Help Yamini complete the table.


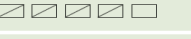


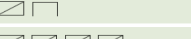

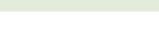





| Animal | Tally Marks | Number |
|--|---|--------|
|  Cats |  | 24 |
| Dogs |  | |
| Rabbits |  | |
| Cows |  | |
| Parrots |  | |
| Goats |  | |
| Squirrel |  | |



Solution:

| Animal | Tally Marks | Number |
|--|---|--------|
|  Cats |  | 24 |
| Dogs |  | 32 |
| Rabbits |  | 10 |
| Cows |  | 22 |
| Parrots |  | 8 |
| Goats |  | 20 |
| Squirrel |  | 15 |



2.Look at the tally marks and write the number for each animal in the table. How many children did Yamini talk to?

Solution:

Yamini talked to 131 children.

3. Which is the most favourite pet animal on this table?

Solution:

The dog is the favourite pet animal on this table.

4. Which pet will you like to have? What will you name it? Which other animals can be kept at home? Discuss.

Solution:

I would like to have a dog. I will name it Brownie. The other animals that can be kept at home are cats, rabbits, parrots, etc.

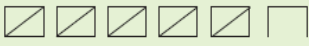





6. Making Tally Marks on the Road:

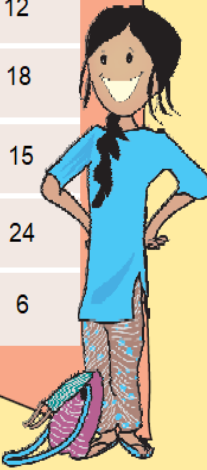
Sumita stood on the road for half an hour and counted the number of vehicles passing by. She made a tally mark for each vehicle. This helped her in counting the total number of vehicles quickly in each group?

| | Tally Marks | Number |
|----------------|--|--------|
| Cycle | <div> <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> </div> | |
| Car | <div> <div> <div></div> <div></div> </div> <div> <div></div> </div> </div> | |
| Auto rickshaw | <div> <div> <div></div> <div></div> <div></div> </div> <div> <div></div> </div> </div> | |
| Bus | <div> <div> <div></div> <div></div> <div></div> </div> </div> | |
| Cycle rickshaw | <div> <div> <div></div> <div></div> <div></div> <div></div> </div> <div> <div></div> </div> </div> | |
| Truck | <div> <div> <div></div> </div> <div> <div></div> </div> </div> | |

Write the number of each vehicle in the table?

Solution:

| | Tally Marks | Number |
|----------------|---|--------|
| Cycle |  | 28 |
| Car |  | 12 |
| Auto rickshaw |  | 18 |
| Bus |  | 15 |
| Cycle rickshaw |  | 24 |
| Truck |  | 6 |



7. How many vehicles in all did Sumita see on the road in half an hour?

Solution:

Sumita saw 103 vehicles in half an hour.

8. Auto rickshaws are thrice the number of trucks – true/false?

Solution:

False.

9. Make tally marks for 7 more buses and 2 more trucks?

Solution:

Tally marks for 7 more buses:



Tally marks for 2 more trucks:



10. Helping Hands:

In the EVS period, the teacher asked the children whether they help their parents at home. There were different answers. Children named the work in which they help their parents the most. The teacher collected their answers and made a table?



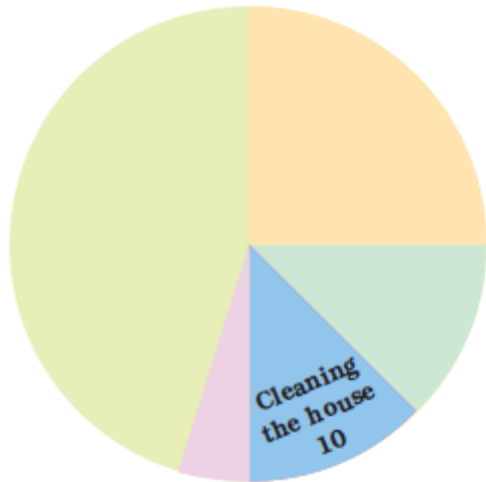
| <i>Help most in house work</i> | <i>Number of children</i> |
|---|---------------------------|
| Going to the market | 47 |
| Washing utensils | 15 |
| Washing clothes | 3 |
| Making, serving food | 25 |
| Cleaning the house | 10 |
| Total children who said they help their parents | |

2Marks Questions

1) Look and find out:

Children who help in making or serving food are

- a) One-third of the total children
- b) Half of the total children
- c) One-fourth of the total children



Solution:

- c) One-fourth of the total children



After school, ask 10 of your friends about what they like to do most after school.

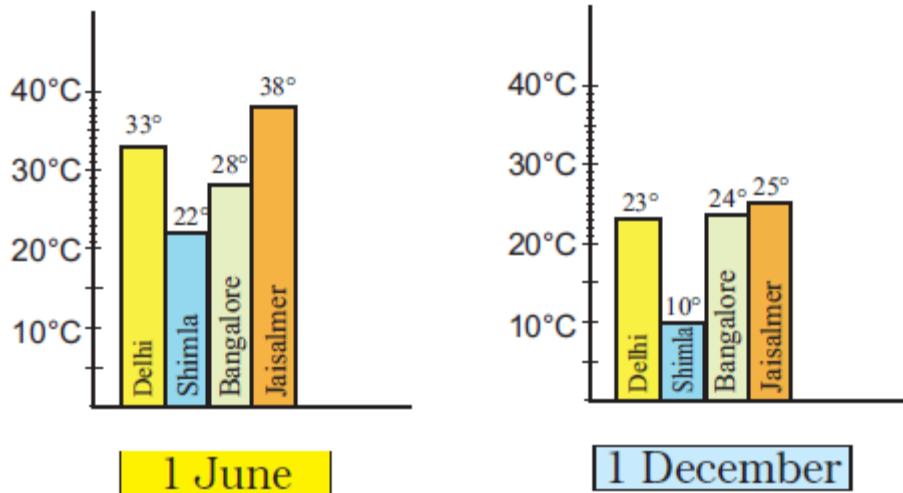
| <i>What they like to do after school</i> | <i>Number of children</i> |
|--|---------------------------|
| Watching TV | |
| Playing football | |
| Reading story books | |
| | |
| | |
| | |

Solution:

| <i>What they like to do after school</i> | <i>Number of children</i> |
|--|---------------------------|
| Watching TV | 42 |
| Playing football | 6 |
| Reading story books | 12 |
| Doing homeworks | 15 |
| Cycling | 2 |
| Drawing | 3 |

2.Hot and Cold:

Have you seen the weather report on TV or in a newspaper? These are two bar charts. These show the highest temperature (in degrees Celsius) in four cities on two different days. The cities are Delhi, Shimla, Bangalore and Jaisalmer.



Yes, I have seen the weather report on TV or in a newspaper.

Find out the following from the bar chart:

1. Which city is hottest on 1 June?

Solution:

Jaisalmer is hottest on 1 June.

2. Which city is coldest on 1 December?

Solution:

Shimla is coldest on 1 December.

3. Which city shows little change in temperature on the two days – 1 June and 1 December?

Solution:

Bangalore shows little change in temperature on the two days.

Lowest change = $28 - 24 = 4^{\circ} \text{C}$.

3. Rabbits in Australia:

Earlier, there were no rabbits in Australia. Rabbits were brought to Australia around the year 1780. At that time, there were no animals in Australia which ate rabbits. So the rabbits began to multiply at a very fast rate. Imagine what they did to the crops?

The table shows how rabbits grew every year?

| <i>Time</i> | <i>Number of rabbits</i> |
|-------------|--------------------------|
| Start | 10 |
| 1 year | 18 |
| 2 year | 32 |
| 3 year | 58 |
| 4 year | 108 |
| 5 year | |
| 6 year | |

1. After each year, the number of rabbits was

- a) A little less than double the number of rabbits in the last year.
- b) Double the number in the last year.
- c) 8 more than the number in the last year.
- d) More than double the number of rabbits in the last year.

Solution:

- a) A little less than double the number of rabbits in the last year.

2. At the end of year 6, the number of rabbits was close to?

- a) 400
- b) 600
- c) 800

Solution:

- a) 400

3. After which year did the number of rabbits cross 1000?

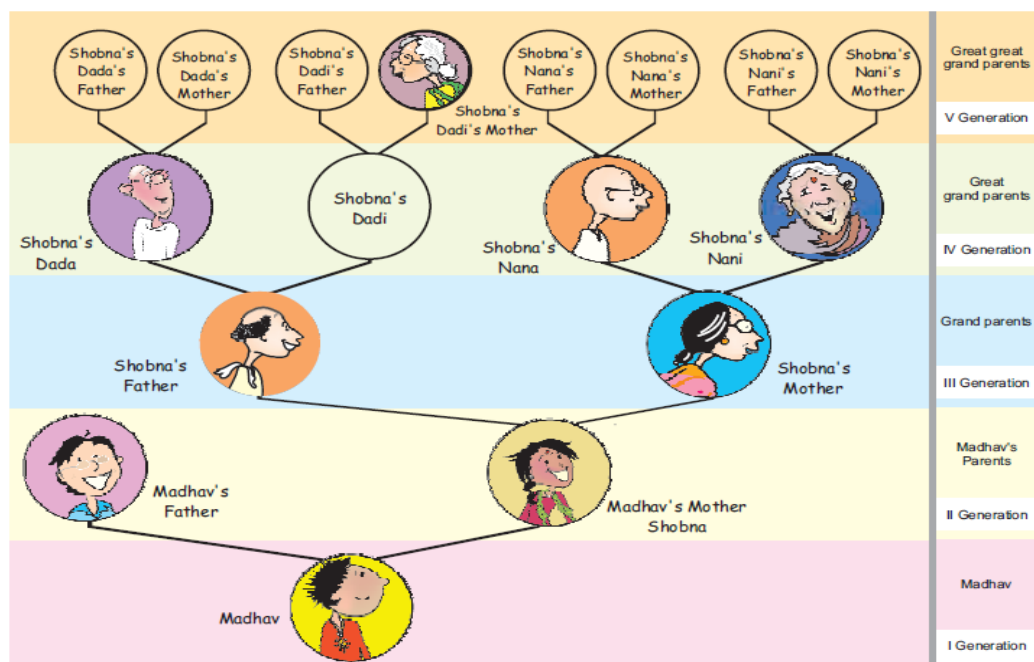
Solution:

After the year 1788, the number of rabbits crosses 1000.

4. Family Tree:

Madhav went to a wedding along with his parents. He met many relatives there. But he didn't know everyone. He met his mother's grandfather but found that her grandmother was not alive. He also found that her mother (grandmother's mother) is still alive and is more than a hundred years old.

Madhav got confused. He couldn't imagine his mother's grandmother's mother! So, Madhav's mother made a family tree for him, as shown below:



Madhav's mother helped him understand her family with the help of this drawing. You can also find out about your older generations using such a family tree.

Answer the following questions:

1. How many grandparents in all does Shobna have?

Solution:

Shobna has four grandparents.

2. How many great, great grandparents in all does Madhav have?

Solution:

Madhav has eight great, great grandparents in all.

3. How many elders will be in the VII generation of his family?

Solution:

32 elders will be in the VII generation of his family.

VI generation: $8 \times 2 = 16$

VII generation: $16 \times 2 = 32$

4. If he takes his family tree forward, in which generation will he find 128 elders?

Solution:

Number of members in VII generation of Madhav's family = 32

Number of members in VIII generation of Madhav's family = $32 \times 2 = 64$

Number of members in IX generation of Madhav's family = $64 \times 2 = 128$

Thus, in the IX generation, the number of elders in Madhav's family will be 128.

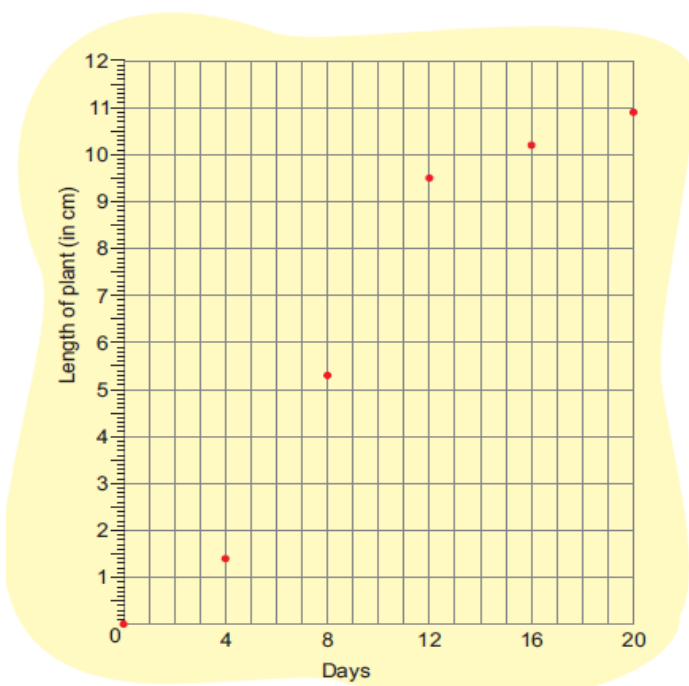
5. Growth Chart of a Plant:

Amit sowed a few seeds of moong dal in the ground. The height of the plant grew to 1.4 cm in the first four days. After that, it started growing faster.

Amit measured the height of the plant after every four days and put a dot on the chart. For example, if you look at the dot marked on the fourth day, you can see on the left side scale that it is 1.4 cm high?

| Day | Length of the plant (in cm) |
|-----|--------------------------------|
| 0 | 0 |
| 4 | 1.4 |
| 8 | 5.3 |
| 12 | 9.5 |
| 16 | 10.2 |
| 20 | 10.9 |

Now look at the height of each dot in cm and check from the table if he has marked the dots correctly?



6. Find out from the growth chart:

a) Between which days did the length of the plant change the most?

i) 0-4, ii) 4-8, iii) 8-12, iv) 12-16, v) 16-20

Solution:

iii) 8-12

b) What could be the length of this plant on the 14th day? Guess.

i) 8.7 cm, ii) 9.9 cm, iii) 10.2 cm, iv) 10.5 cm

Solution:

ii) 9.9 cm

c) Will the plant keep growing all the time? What will be its length on the 100th day?
Make a guess!

No, I think its length would be about 17-18 cm on the 100th day.