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DATA HANDLING
Class 06 - Maths (NEW)

Time Allowed: 50 minutes

Maximum Marks: 22

1.

Sweets	Tally Marks	No. of Students
Jalebi		6
Gulab Jamun		9
Gujiya		_____
Barfi		_____
Rasgulla		_____

 [1]

Complete the table to help Shri Nilesh to purchase the correct numbers of sweets:

- How many students chose jalebi? [_____]
- Barfi was chosen by [_____] students?
- How many students chose gujiya? [_____]
- Rasgulla was chosen by [_____] students?
- How many students chose gulab jamun? [_____]

2. Sushri Sandhya asked her students about the sizes of the shoes they wear. She noted the data on the board- [1]

4	5	3	4	3	4	5	5	4
5	5	4	5	6	4	3	5	6
4	6	4	5	7	5	6	4	5

She then arranged the shoe sizes of the students in ascending order-

3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 6, 6, 6, 6, 7

i. Help her to figure out the following-

- The largest shoe size in the class is _____
- The smallest shoe size in the class is _____
- There are _____ students who wear shoe size 5.
- There are _____ students who wear shoe sizes larger than 4.

ii. How did arranging the data in ascending order help to answer these questions?

iii. Are there other ways to arrange the data?

3. Write the names of a few trees you see around you. When you observe a tree on the way from your home to school (or while walking from one place to another place), record the data and fill in the following table- [1]

Tree	No. of Trees
Peepal	

Neem	
—	
—	

- Which tree was found in the greatest number?
- Which tree was found in the smallest number?
- Were there any two trees found in the same numbers?

4. Take a blank piece of paper and paste any small news item from a newspaper. Each student may use a different article. Now, prepare a table on the piece of paper as given below. Count the number of each of the letters **c**, **e**, **i**, **r**, and **x** in the words of the news article, and fill in the table. [1]

Letter	c	e	i	r	x	Any other letter of your choice:
Number of times found in the news item						

- The letter found the most number of times is _____
- The letter found the least number of times is _____
- List the five letters 'c', 'e', 'i', 'r', 'x' in ascending order of frequency. Now, compare the order of your list with that of your classmates. Is your order the same or nearly the same as theirs? (Almost everyone is likely to get the order 'x, c, r, i, e'.) Why do you think this is the case?
- Write the process you followed to complete this task.
- Discuss with your friends the processes they followed.
- If you do this task with another news item, what process would you follow?

5. Naresh and Navya decided to go to each student in the class and ask what their favourite game is. Then they prepared a list. Navya is showing the list: [1]

Mehnoor - Kabaddi	Pushkal - Satoliya (Pittu)	Anaya - Kabaddi
Jubimon - Hockey	Densy - Badminton	Jivisha - Satoliya (Pittu)
Simran - Kabaddi	Jivika - Satoliya (Pittu)	Rajesh - Football
Nand - Satoliya (Pittu)	Leela - Hockey	Thara - Football
Ankita - Kabaddi	Afshan - Hockey	Soumya - Cricket
Imon - Hockey	Keerat - Cricket	Navjot - Hockey
Yuvraj - Cricket	Gurpreet - Hockey	Hemal - Satoliya (Pittu)
Rehana - Hockey	Arsh - Kabaddi	Debabrata - Football
Aarna - Badminton	Bhavya - Cricket	Ananya - Hockey
Kompal - Football	Sarah - Kabaddi	Hardik - Cricket
Tahira - Cricket		

She says (happily), "I have collected the data. I can figure out the most popular game now!"

A few other children are looking at the list and wondering, "We can't yet see the most popular game. How can we get it from this list?"

- What would you do to find the most popular game among Naresh's and Navya's classmates?
- What is the most popular game in their class?

- iii. Try to find out the most popular game among your classmates.
- iv. Pari wants to respond to the questions given below. Put a tick (✓) for the questions where she needs to carry out data collection and put a cross (X) for the questions where she doesn't need to collect data. Discuss your answers in the classroom.
- What is the most popular TV show among her classmates? []
 - When did India get independence? []
 - How much water is getting wasted in her locality? []
 - What is the capital of India? []

6. Magan Bhai sells kites at Jamnagar. Six shopkeepers from nearby villages come to purchase kites from him. The number of kites he sold to these six shopkeepers are given below- [1]

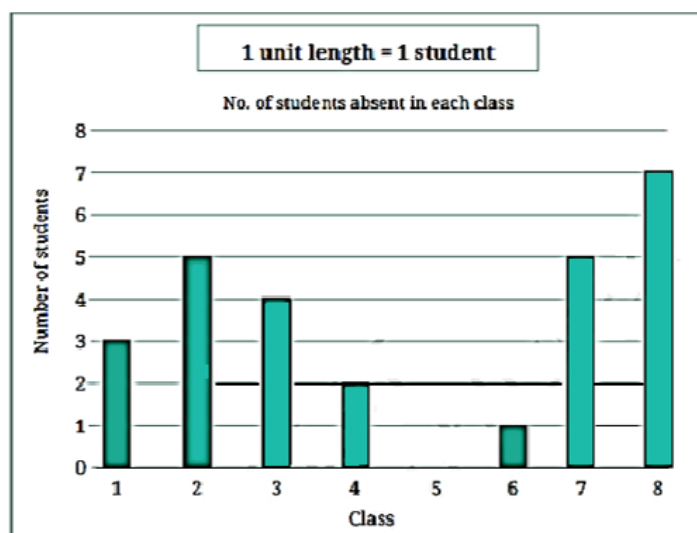
Shopkeeper	Number of Kites sold
Chaman	250
Rani	300
Rukhsana	100
Jasmeet	450
Jetha Lal	250
Poonam Ben	700

Prepare a pictograph using the symbol  to represent 100 kites. Answer the following questions:

- How many symbols represent the kites that Rani purchased?
 - Who purchased the maximum number of kites?
 - Who purchased more kites, Jasmeet or Chaman?
 - Rukhsana says Poonam Ben purchased more than double the number of kites that Rani purchased. Is she correct? Why?
7. Let's take the data collected by Lakhanpal earlier, regarding the number of students absent on one day in each class- [1]

Class	1	2	3	4	5	6	7	8
No. of students	3	5	4	2	0	1	5	7

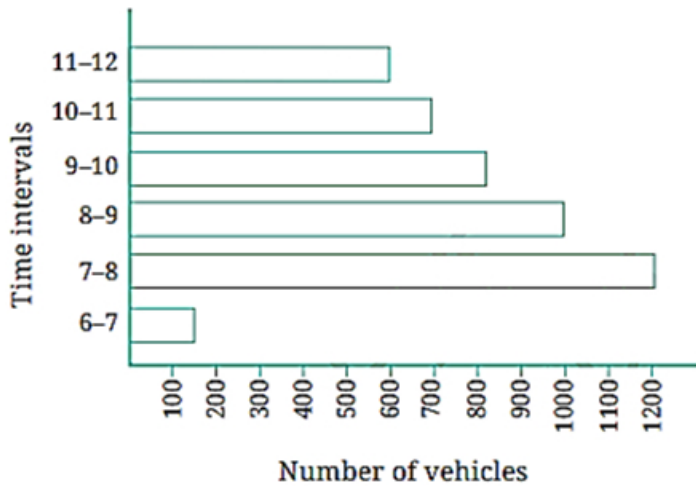
He presented the same data using a bar graph-



Answer the following questions using the bar graph:

- i. In Class 2, _____ students were absent that day.
- ii. In which class were the maximum number of students absent? _____
- iii. Which class had full attendance that day? _____

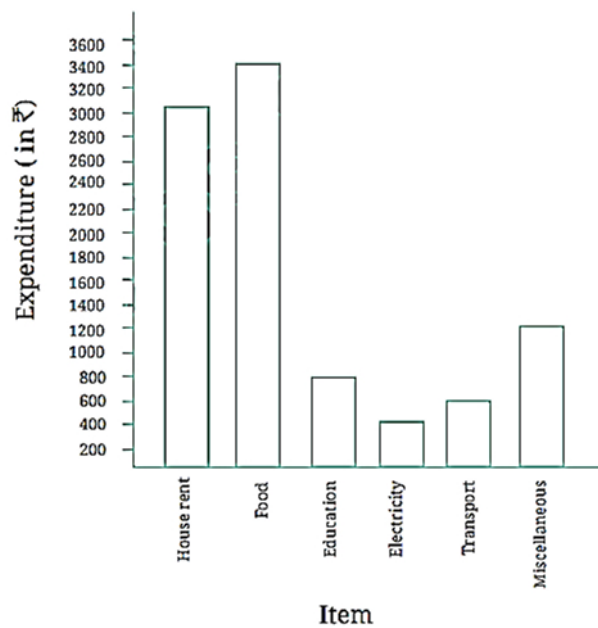
8.



[1]

- i. How many total cars passed through the crossing between 6 am and noon?
- ii. Why do you think so little traffic occurred during the hour of 6-7 am, as compared to the other hours from 7 am-noon?
- iii. Why do you think the traffic was the heaviest between 7 am and 8 am?
- iv. Why do you think the traffic was lesser and lesser each hour after 8 am all the way until noon?

9.








[5]

Use the bar graph to answer the following questions:

- i. On which item does Imran’s family spend the most and the second most?
- ii. Is the cost of electricity about one-half the cost of education?
- iii. Is the cost of education less than one-fourth the cost of food?

- 10. Samantha visited a tea garden and collected data of the insects and critters she saw there. Here is the data she collected- [1]

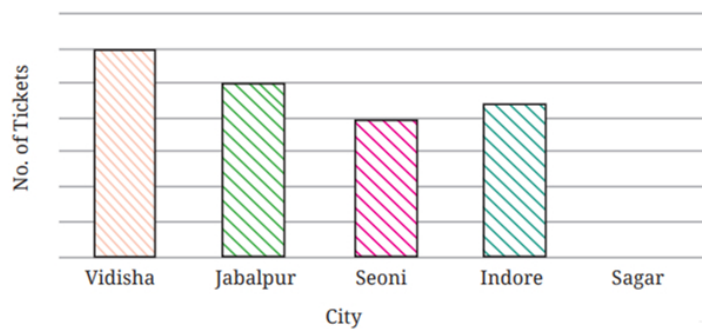
				
Mites	Caterpillars	Beetles	Butterflies	Grasshoppers
6	10	5	3	2

Help her prepare a bar graph representing this data.

11. Pooja collected data on the number of tickets sold at the Bhopal railway station for a few different cities of Madhya Pradesh over a 2-hour period. [1]

City	Vidisha	Jabalpur	Seoni	Indore	Sagar
Number of tickets	24	20	16	28	16

She used this data and prepared a bar graph on the board to discuss the data with her students, but someone erased a portion of the graph.



- Write the number of tickets sold for Vidisha above the bar.
 - Write the number of tickets sold for Jabalpur above the bar.
 - The bar for Vidisha is 6 unit lengths and the bar for Jabalpur is 5 unit lengths. What is the scale for this graph?
 - Draw the correct bar for Sagar.
 - Add the scale of the bar graph placing the correct numbers on the vertical axis.
 - Are the bars for Seoni and Indore correct in this graph? If not, draw the correct bar(s).
12. Chinu listed the various means of transport that passed across the road in front of his house from 9 am to 10 am: [1]

bike	car	bike	bus	bike	bike
bike	auto	bicycle	bullock cart	bicycle	auto
car	scooter	car	auto	bicycle	bike
car	auto	bike	scooter	bike	car
bicycle	scooter	bicycle	scooter	bike	bus
auto	auto	bike	bicycle	bus	bike
bicycle	scooter	bus	scooter	auto	bike
scooter	bicycle	bike	bullock cart	auto	scooter
car	scooter				

- Prepare a frequency distribution table for the data.
- Which means of transport was used the most?

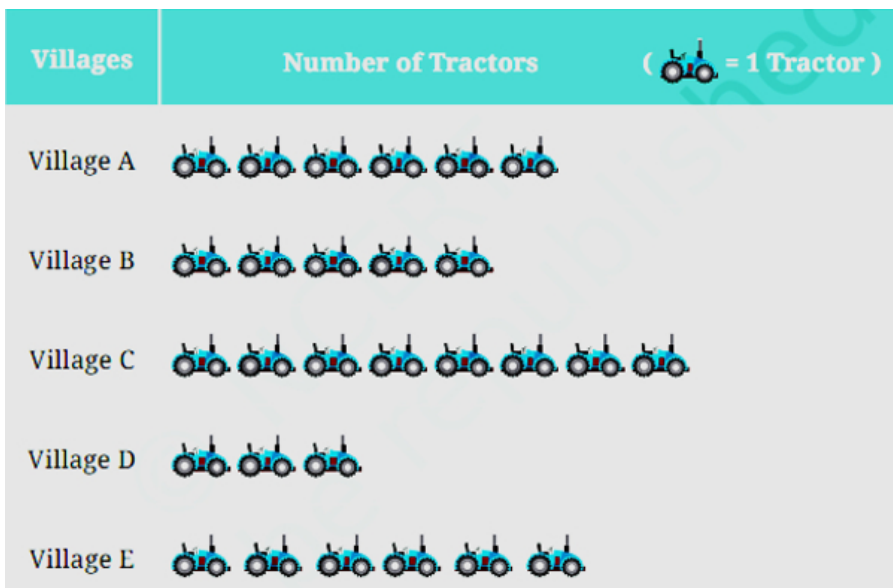
c. If you were there to collect this data, how could you do it? Write the steps or process.

13. Faiz prepared a frequency distribution table of data on the number of wickets taken by Jaspreet Bumrah in his last 30 matches: [1]

Wickets Taken	Number of Matches
0	2
1	4
2	6
3	8
4	3
5	5
6	1
7	1

- What information is this table giving?
 - What may be the title of this table?
 - What caught your attention in this table?
 - In how many matches has Bumrah taken 4 wickets?
 - Mayank says “If we want to know the total number of wickets he has taken in his last 30 matches, we have to add the numbers 0, 1, 2, 3 ..., up to 7.” Can Mayank get the total number of wickets taken in this way? Why?
 - How would you correctly figure out the total number of wickets taken by Bumrah in his last 30 matches, using this table?
14. Roll a die 30 times and record the number you obtain each time. Prepare a frequency distribution table using tally marks. Find the number that appeared: [1]
- The minimum number of times.
 - The maximum number of times.
 - Find numbers that appeared an equal number of times.

15. The following pictograph shows the number of tractors in five different villages. [1]

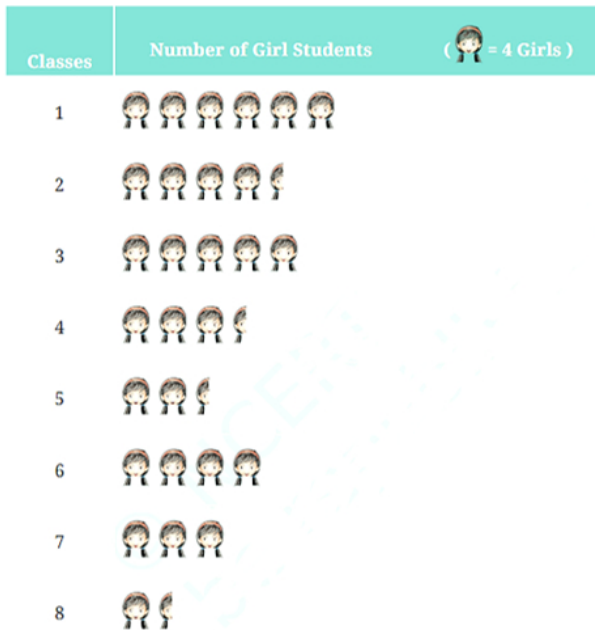


Observe the pictograph and answer the following questions-

- Which village has the smallest number of tractors?
- Which village has the most tractors?
- How many more tractors does Village C have than Village B?
- Komal says, "Village D has half the number of tractors as Village E." Is she right?

16. The number of girl students in each class of a school is depicted by a pictograph:

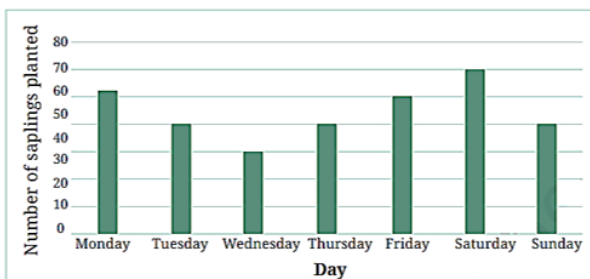
[1]



Observe this pictograph and answer the following questions:

- Which class has the least number of girl students?
 - What is the difference between the number of girls in Class 5 and 6?
 - If 2 more girls were admitted in Class 2, how would the graph change?
 - How many girls are there in Class 7?
17. Students and teachers of a primary school decided to plant tree saplings in the school campus and in the surrounding village during the first week of July. Details of the saplings they planted are as follows-

[1]

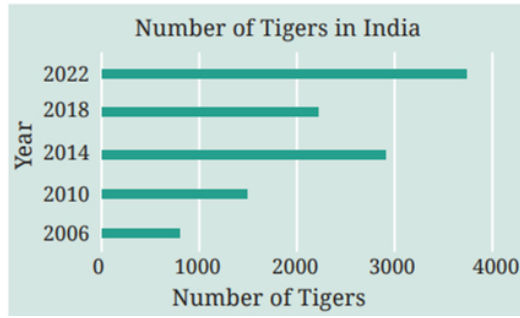


- The total number of saplings planted on Wednesday and Thursday is _____.
 - The total number of saplings planted during the whole week is _____.
 - The greatest number of saplings were planted on _____, and the least number of saplings were planted on _____. Why do you think that is the case? Why were more saplings planted on certain days of the week and less on others? Can you think of possible explanations or reasons? How could you try and figure out whether your explanations are correct?
18. The number of tigers in India went down drastically between 1900 and 1970. Project Tiger was launched in 1973 to track and protect tigers in India. Starting in 2006, the exact number of tigers in India was tracked. Shagufta and Divya looked up information about the number of tigers in India between 2006 and 2022 in 4-year intervals. They prepared a frequency table for this data and a bar graph to present this data, but there are a few mistakes in

[1]

the graph. Can you find those mistakes and fix them?

Year	Number of Tigers (approx.)
2006	1400
2010	1700
2014	2200
2018	3000
2022	3700



Solution
DATA HANDLING
Class 06 - Maths (NEW)

1.	Sweets	Tally Marks	No. of Students
	Jalebi		6
	Gulab Jamun		9
	Gujjya		13
	Barfi		3
	Rasgulla		7

- o 6 Students
- o 3 students
- o 7 students
- o 9 students

2. i. 7
 3
 10
 15.

ii. Arranging the shoe size from smaller size to lager size

iii. Yes

3.	Tree	No. of trees
	Peepul	5
	Mem	11
	Mango	20
	Banyan	4

- i. Mango
 ii. Banyan
 iii. No

4.	Letter	<i>c</i>	<i>e</i>	<i>i</i>	<i>r</i>	<i>x</i>
	No.of times	10	12	15	5	7
	Number of times found in the news item					

- a. i
 b. r
 c. Do yourself
 d. Do yourself
 e. Do yourself
5. i. Hockey
 ii. Hockey

iii. Cricket

iv. (a) ✓

(b) X

(c) X

(d) X

6. a. 3

b. Poonam Ben

c. Jasmeet

d. Yes, she is correct because Poonam Ben purchased 700 kites while Rani purchased 300 kites which is one than double.

7. i. 5

ii. Class - 8th

iii. Class - 5th

8. i. 4450

ii. -

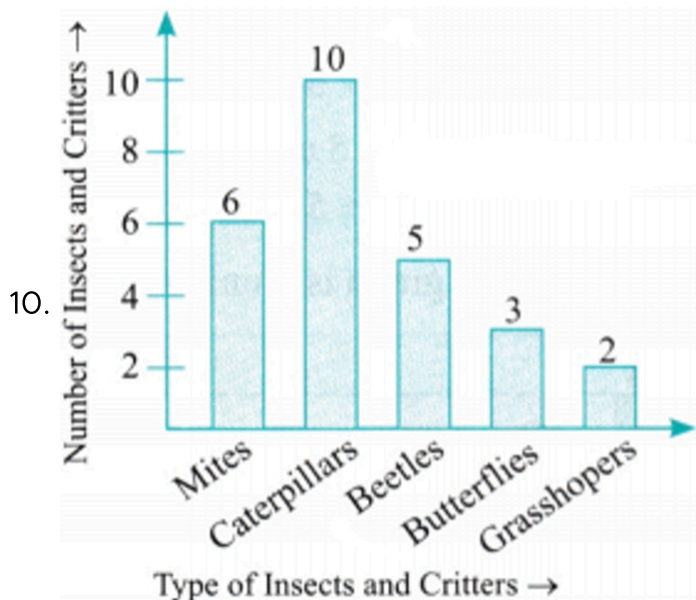
iii. because it is the time to go to office and school.

iv. -

9. i. The highest bar is for food and the second highest is for the house rent. Therefore, Imran's family spends the most on food and the second most on house rent.

ii. In the bar graph, the height of the bar for electricity is 400 and the height of the bar for education 800. Therefore, the cost of electricity is one-half the cost of education.

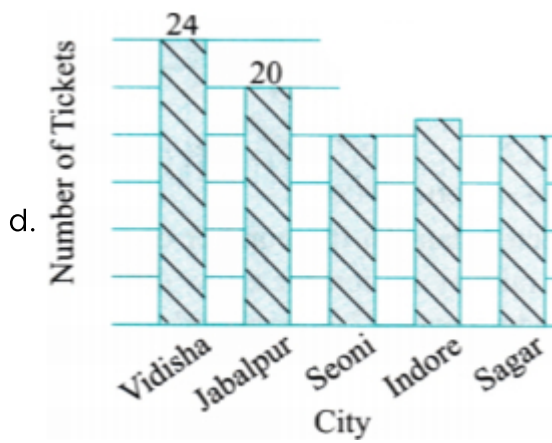
iii. In the bar graph, the height of the bar for food (3400) is more than 4 times the height for the bar for education (800). Therefore, the cost of education is less than one-fourth the cost of food.



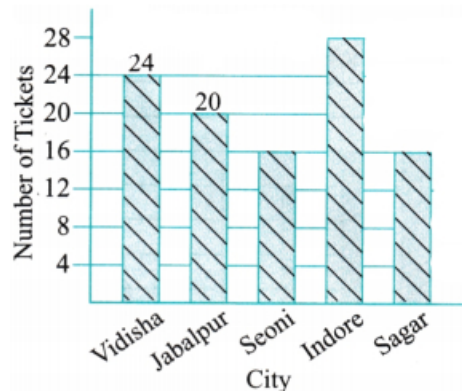
11. a. 24

b. 20

c. 1 unit = 4



e. & f



12. a.

Means of Transport	Tally Marks	Frequency
Bike	/	13
Car	/	6
Bus		4
Auto	/	8
Bicycle	/	8
Bullock cart		2
Scooter	/	9

b. Bike

c. Step 1: Note down the name of various means of transport in the notebook.

Step 2: Between 9 am to 10 am, watch the different means of transport passing in front of the house.

Step 3: Write the number of different means of transport in front of their name.

13. a. The table is giving information about number of wickets taken by Jaspreet Bumrah in his last 30 matches.

b. Title of the given table could be "Number of wickets taken by Jaspreet Bumrah".

c. Out of 30 matches, Jaspreet Bumrah has taken 5 wickets in a match 5 times i.e. in 5 matches.

d. Jaspreet Bumrah has taken 4 wickets in 3 matches.

e. No, the way Mayank is finding total number of wickets taken by Bumrah in his last 30 matches is wrong. In the « first column, each entry represents the number of wickets

taken in some matches that is mentioned in the next column. 1 wicket in 4 matches means, he has taken 1 wicket in each of the 4 matches. Means a total of 4 wickets in 4 matches. Therefore, the method of Mayank will not give the correct number of wickets.

f. To find the total number of wickets, we need to multiply wickets taken by number of matches in each row of the table and then add the results.

Therefore, total number of wickets taken in last 30 matches can be found as

$$0 \times 2 + 1 \times 4 + 2 \times 6 + 3 \times 8 + 4 \times 3 + 5 \times 5 + 6 \times 1 + 7 \times 1$$

$$= 0 + 4 + 12 + 24 + 12 + 25 + 6 + 7$$

$$= 90 \text{ wickets.}$$

14.

Number	Tallymarks	frequency
1		5
2	/	6
3	/	8
4	/	9
5		1
6		1

- a. 5 and 6
- b. 4
- c. 5 and 6

15. .

- a. Village D
- b. Village C
- c. 3
- d. Yes, she is right

16. a. Class 8th

- b. 6
- c. 
- d. 12

17. i. 80

- ii. 360
- iii. Saturday and Wednesday

18. i. The number of tigers (approximately) is 1400 in 2006. But in the bar graph, it is shown less than 1000 (bar is drawn and finished before 1000)

ii. In 2014, the number of tigers is 2200 as given in the frequency table. But in the bar graph, it is shown close to 3000 (bar is approaching 3000).

iii. In 2018, the number of tigers is 3000 as given in the frequency table. But in the bar graph, it is in correct (bar is very close to 2000).

The correct bar graph is shown below:

