

1. Following is the choice of 20 students of class VI of a school:

Banana, Apple, Guava, Orange, Apple, Banana, Orange, Guava, Banana, Banana, Apple, Banana, Apple, Banana, Orange, Guava, Apple, Banana, Guava, Banana

- (i) Arrange the name of fruits in a table using tally marks.
- (ii) Which fruit is liked by maximum number of students?
- (iii) Which fruit is liked by minimum number of students?

Solution:

(i)

Name of fruits	Tally Marks	Frequency (no. of fruits)
Banana	IIII III	8
Apple	IIII	5
Guava	IIII	4
Orange	III	3
Total		20

(ii) The fruit liked by maximum number of students is Banana

(iii) The fruit liked by minimum number of students is Orange

2. In a ready-made garment shop, on a particular day the following sizes of shirts were sold:

34, 38, 42, 40, 44, 32, 34, 36, 42, 40, 44, 36, 38, 42, 44, 40, 38, 40, 42, 32, 34, 38, 42, 40, 36, 42, 40, 38, 36, 40.

Arrange the above data in ascending order and construct frequency distribution table. Also answer the following questions:

- (i) Which shirt size had the maximum sale?
- (ii) Which shirt size had the minimum sale?
- (iii) The number of shirts sold of size 42 or greater than size 42

Solution:

The frequency distribution table for the above data is as follows:

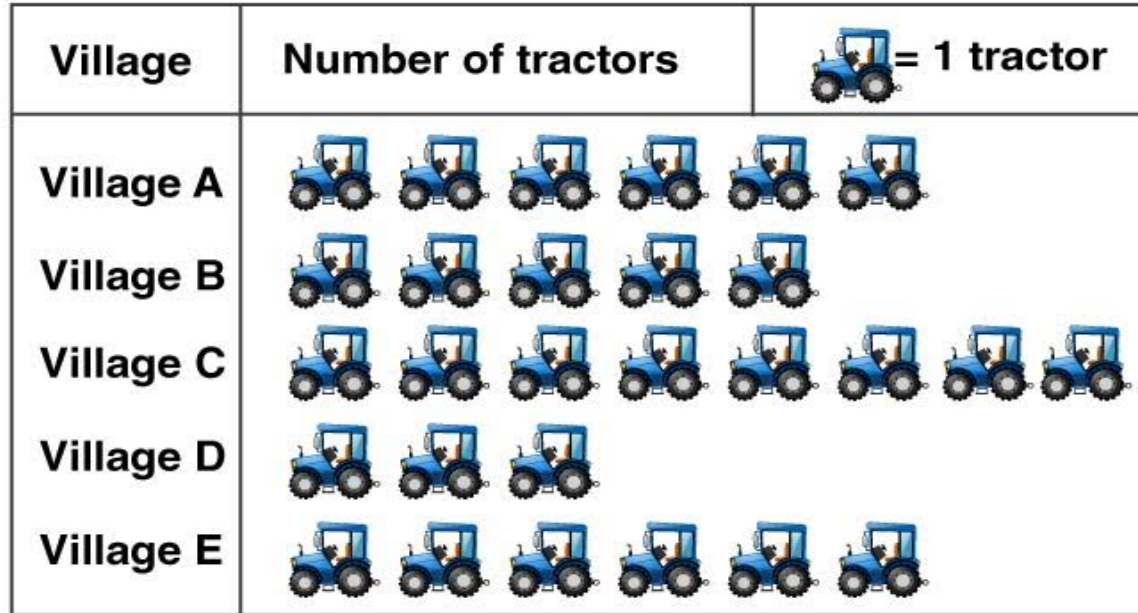
Size of shirts	Tally Marks	Number of shirts
32	II	2
34	III	3
36	IIII	4
38	IIII	5
40	IIII II	7
42	IIII I	6
44	III	3
Total		30

(i) The maximum sale of shirt size is 40

(ii) The minimum sale of shirt size is 32

(iii) The number of shirts sold of size 42 or greater than size 42 is 9

3. Following pictograph shows the number of tractors in five villages



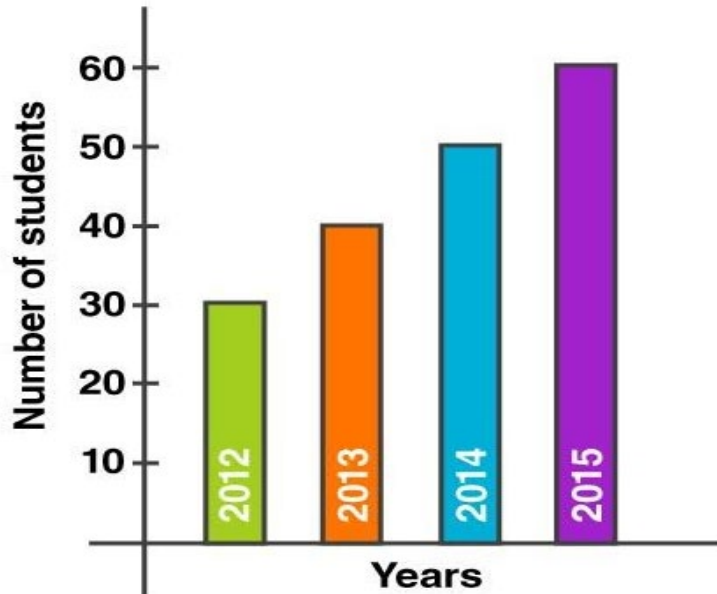
Observe the pictograph and answer the following question.

- Which village has the minimum number of tractors?
- Which village has the maximum number of tractors?
- How many more tractors village C has as compared to village B.
- What is the total number of tractor in all the five villages?

Solution:

- The village which has the minimum number of tractors is Village D
- The village which has the maximum number of tractors is Village C
- Village C has 3 more tractors as compared to village B
- Total number of tractors in all the five villages = $6 + 5 + 8 + 3 + 6 = 28$

4. Observe the adjoining bar graph showing the number of students in a particular class of a school.



Answer the following questions:

(i) What is the scale of this graph?

(ii) How many new students are added every year?

(iii) Is the number of students in the year 2015 is twice than that of in the year 2012?

Solution:

(i) The scale of this graph is 1 unit height = 10 students

(ii) 10 new students are added every year

(iii) Yes, the number of students in the year 2015 is twice than that of in the year 2012

5. Find the mean of the following data:

(i) 40, 30, 30, 0, 26, 60

(ii) 3, 5, 7, 9, 11, 13, 15

Solution:

(i) Mean of 40, 30, 30, 0, 26, 60 is shown below

Number of data (n) = 6

Hence,

$$\text{Mean} = (40 + 30 + 30 + 0 + 26 + 60) / 6$$

$$= (186 / 6)$$

We get,

$$= 31$$

Therefore, the mean of 40, 30, 30, 0, 26, 60 is 31

(ii) Mean of 3, 5, 7, 9, 11, 13, 15 is shown below

Number of data (n) = 7

Hence,

$$\text{Mean} = (3 + 5 + 7 + 9 + 11 + 13 + 15) / 7$$

$$= (63 / 7)$$

We get,

$$= 9$$

Therefore, the mean of 3, 5, 7, 9, 11, 13, 15 is 9

6. Find the median of the following data:

(i) 3, 1, 5, 6, 3, 4, 5

(ii) 3, 1, 5, 6, 3, 4, 5, 6

Solution:

(i) Given

3, 1, 5, 6, 3, 4, 5

Arrange the given data in ascending order

We get,

1, 3, 3, 4, 5, 5, 6

Hence,

$$\text{Median} = \{(n + 1) / 2\}^{\text{th}} \text{ term}$$

$$= \{(7 + 1) / 2\}^{\text{th}}$$

We get,

$$= 4^{\text{th}} \text{ term}$$

(ii) Given

3, 1, 5, 6, 3, 4, 5, 6

Arrange the data in ascending order

We get,

1, 3, 3, 4, 5, 5, 6, 6

Hence,

$$\text{Median} = (4 + 5) / 2$$

$$= (9 / 2)$$

We get,

$$= 4.5$$