



MATHS

BOOKS - ICSE

DATA HANDLING AND MEASURES OF CENTRAL TENDENCY

Example

1. Thirty students of Class 7 have appeared for a mathematics examinations.

The mathematics teacher Ms Rinku has to keep a record of the marks obtained by each student and prepare the result of each student ? From the given figure, State what are the data collected for each students and

how it is useful if you have this figure.

Roll No.	Names	Marks	Roll No.	Names	Marks	Roll No.	Names	Marks
1	Abha	69	11	Garima	88	21	Sana	43
2	Akruti	87	12	Garv	32	22	Shaleen	58
3	Alisha	55	13	Karan	42	23	Shoubhik	68
4	Ananya	76	14	Kshitij	53	24	Shreyoshi	75
5	Ashna	91	15	Megha	30	25	Soumya	71
6	Binati	45	16	Meghna	72	26	Stuti	93
7	Dev	71	17	Neha	81	27	Tejasvi	80
8	Divya	40	18	Niharika	49	28	Tusheen	83
9	Divya	59	19	Nikhil	65	29	Vasudha	95
10	Gandharv	76	20	Palak	44	30	Vibhuti	39



[Watch Video Solution](#)

2. Thirty students of Class 7 have appeared for a mathematics examinations.

Ms Rinku wants to identify students who can be trained to participate in an inter-school mathematics competition. She also wants to arrange remedial classes for students who were not able to score very well in the examination. From the given figure, state how this organize figure is helpful for Ms Rinku? Can you tell the name and marks of people who

were not able to scored very well?

Roll No.	Names	Marks	Roll No.	Names	Marks	Roll No.	Names	Marks
29	Vasudha	95	24	Shreyoshi	75	14	Kshitij	53
26	Stuti	93	16	Meghna	72	18	Niharika	49
5	Ashna	91	7	Dev	71	6	Binati	45
11	Garima	88	25	Soumya	71	20	Palak	44
2	Akruti	87	1	Abha	69	21	Sana	43
28	Tusheen	83	23	Shoubhik	68	13	Karan	42
17	Neha	81	19	Nikhil	65	8	Divya	40
27	Tejasvi	80	9	Divya	59	30	Vibhuti	39
4	Ananya	76	22	Shaleen	58	12	Garv	32
10	Gandharv	76	3	Alisha	55	15	Megha	30



[Watch Video Solution](#)

3. The heights of 8 students in a study group are 180 cm, 160 cm, 175 cm, 165 cm, 178 cm, 170 cm, 174 cm and 182 cm. Find their mean height.

- A. 183cm
- B. 173cm
- C. 179cm
- D. 153cm

Answer: B



[Watch Video Solution](#)

4. Marks of 10 students in an English test are as follow, 9, 10, 7, 11, 12, 6, 8, 14, 15, 18. Find.

Maximum marks obtained

A. 20

B. 43

C. 18

D. 8

Answer: C



[Watch Video Solution](#)

5. Marks of 10 students in an English test are as follow, 9,10,7,11,12,6,8,14,15,18. Find.

Minimum marks obtained



[Watch Video Solution](#)

6. Marks of 10 students in an English test are as follow, 9, 10, 7, 11, 12, 6, 8, 14, 15, 18. Find.

Range of the marks

A. 11

B. 12

C. 15

D. 18

Answer: B



Watch Video Solution

7. Marks of 10 students in an English test are as follow, 9, 10, 7, 11, 12, 6, 8, 14, 15, 18. Find mean marks

A. 15

B. 12

C. 11

D. 18

Answer: C



[Watch Video Solution](#)

8. Create data of 8 observations with mean 10.



[Watch Video Solution](#)

9. The mean of 5 observations is 8, Find the sum of the 5 observations.

A. 50

B. 35

C. 45

D. 40

Answer: D



[Watch Video Solution](#)

10. The mean of 8 numbers is 7. One more number is added and the mean is still 7. Find the number that has been added.

A. 7

B. 8

C. 9

D. 6

Answer: A



[Watch Video Solution](#)

11. If the mean of six consecutive multiples of 4 is 18, find the sum of *3rd* and *4th* numbers.

A. 36

B. 12

C. 48

D. 14

Answer: A



[Watch Video Solution](#)

12. The mean of 7 numbers is 12, Four of the 7 numbers are 10,14,15, and 17.

The remaining three numbers are in the ratio 1 : 2 : 4. Find these three numbers.



[Watch Video Solution](#)

13. Find the median of the data: 24, 36, 46, 17, 18, 25, 35

A. 24

B. 25

C. 36

D. 17

Answer: B



[Watch Video Solution](#)

14. Find the median of the data: 12, 10, 14, 56, 34, 20, 12, 16, 31, 29



[Watch Video Solution](#)

15. Is median always one of the numbers in a data?



[Watch Video Solution](#)

16. Create a collection of 8 observations with median 12.



[Watch Video Solution](#)

 Watch Video Solution

17. The median of a set of eight numbers is $4\frac{1}{2}$. Given that seven of the numbers are 9,2,3,4,12,13 and 1, find the eight number.



Watch Video Solution

18. A collection of data has 12 observation such that no two observations are equal. The median of this data is 15. One number is added to this data collection. The median of the new data is also 15. Find the number that was added.



Watch Video Solution

19. Find the mode for the data: 1, 1, 2, 4, 3, 2, 1, 2, 2, 4

A. 1

B. 2

C. 3

D. 4

Answer: B



[Watch Video Solution](#)

20. Find the mode of the following data.

12, 14, 12, 16, 15, 13, 14, 18, 19, 12, 14, 15, 16, 15, 16, 16, 15, 17, 13, 16, 16, 15

.

A. 16

B. 14

C. 15

D. 12

Answer: C



[Watch Video Solution](#)

21. Following is a data sample in descending order.

If the mean is 18.2 and the mode of this data is 17.5. find the missing numbers. 22.1, 20.9, x , 18.6, y , 17.5, 13.5



[Watch Video Solution](#)

22. The salaries of 14 employes in a company are as follows.

Employee	Salary (in ₹)
1	40,000
2	50,000
3	47,000
4	52,000
5	44,000
6	53,000
7	43,000

8	45,000
9	56,000
10	54,000
11	2,25,000
12	1,90,000
13	40,000
14	44,500

Which central tendency should be used to represent the salaries of the employees of the company?



[Watch Video Solution](#)

23. A school has to send one team of 8 members to participate in team event in a Mathematics competition. Team A and B want to participate in this competition. The members of both the teams appear for a qualifying test. The marks obtained by the members of the two teams are as follow:

Team A: 76,72,78,82,79,80,77

Team B: 81,73,51,81,56,81,54,83

Which central tendency should the school use to select the team for the

competition?



Watch Video Solution

24. A school has to send one team of 8 members to participate in team event in a Mathematics competition. Team A and B want to participate in this competition. The members of both the teams appear for a qualifying test. The marks obtained by the members of the two teams are as follow:

Team A: 76,72,78,82,79,80,77

Team B: 81,73,51,81,56,81,54,83

Which central tendency should the school use to select the team for the

competition?



[Watch Video Solution](#)

25. The following table shows the favourite sports of 250 students of a school. Represent the data by a bar graph.

[Watch Video Solution](#)

26. The bar graph given alongside shows the amount of wheat purchased by government during the year 1998-2002.

Read the bar graph and write down your observations. In which year was

(a) the wheat production maximum?

(b) the wheat production minimum?



[Watch Video Solution](#)

27. Look at the bar graph given below.

Read it care fully and answer the following questions.

(i) What information does the bar graph give?

(ii) In which subject is the student very good?

(iii) In which subject is the poor? (iv) What is the average of his marks?



[Watch Video Solution](#)

28. Given below is a bar graph showing the heights of five mountain peaks.

Read the bar graph carefully and answer the following questions:

(i) Which is the highest peak and what is its height?

(ii) What is the ratio of the heights of the highest peak and the next

highest peak?

(iii) Arrange the heights of the given peaks in descending order.

 [Watch Video Solution](#)

29. Read the following graph and answer the following question.

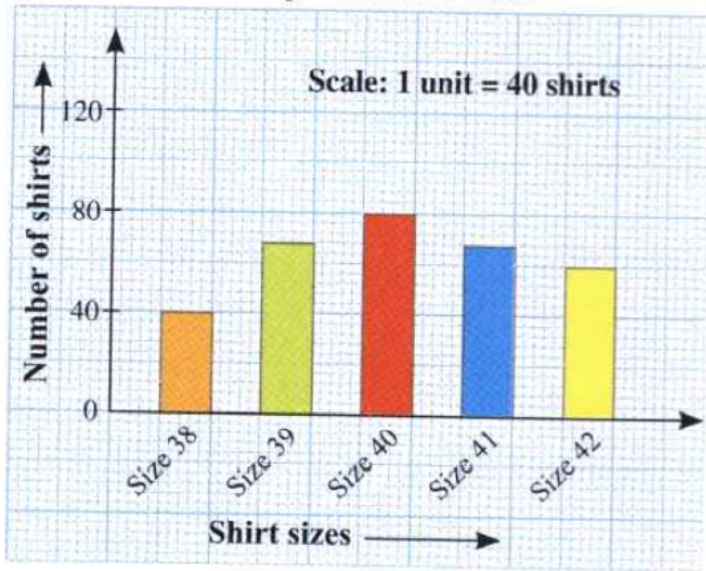
What information does the graph represent?

 [Watch Video Solution](#)

30. Read the following graph and answer the following question.

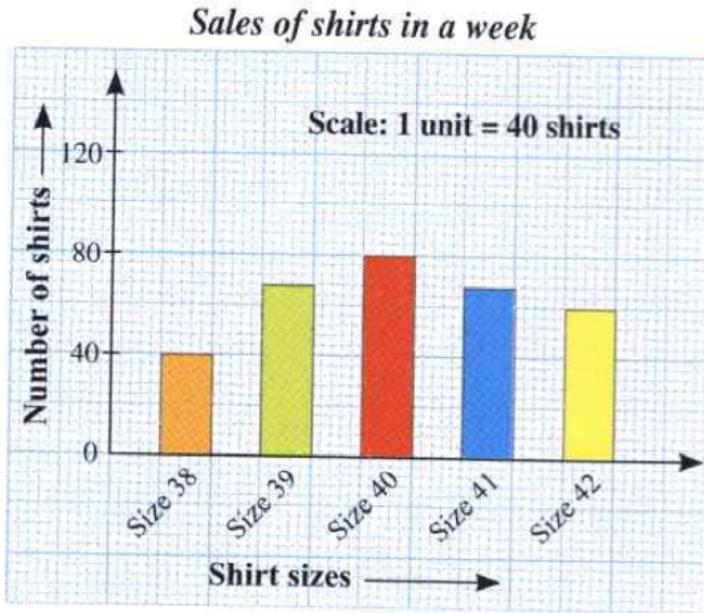
What are the different sizes of shirts that are sold?

Sales of shirts in a week



Watch Video Solution

31. How many shirt of size 40 were sold?



[Watch Video Solution](#)

32. Read the following graph and answer the following question.

What is the mode is this data?

[Watch Video Solution](#)

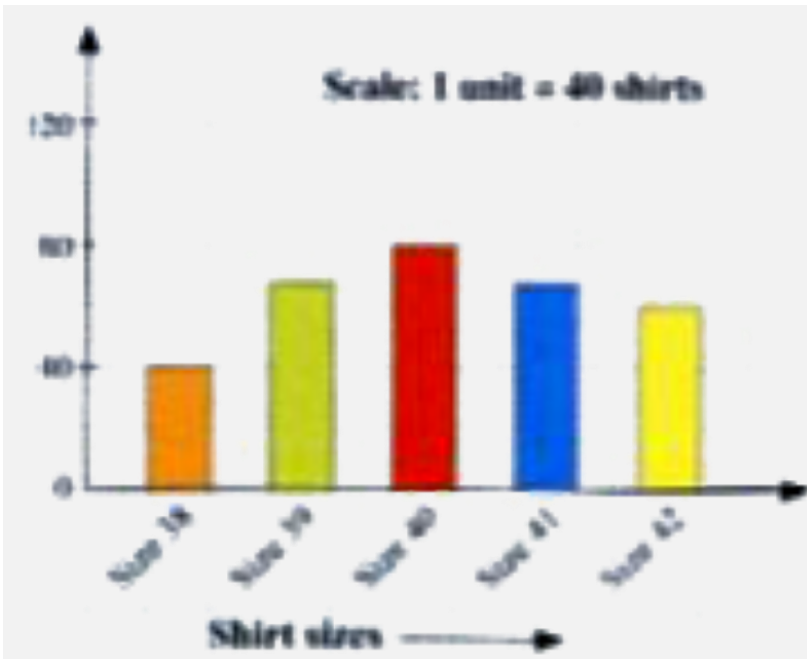
33. Read the following graph and answer the following question.

Which shirt size sells the minimum?

[Watch Video Solution](#)

34. Read the following graph and answer the following question.

Find the ratio of the number of shirts of size 38 sold to the number of shirts of size 42 sold.



[Watch Video Solution](#)

35. The following graph shows the result of a survey to test water resistant watches made by four different companies. Read the graph and answer the following question.

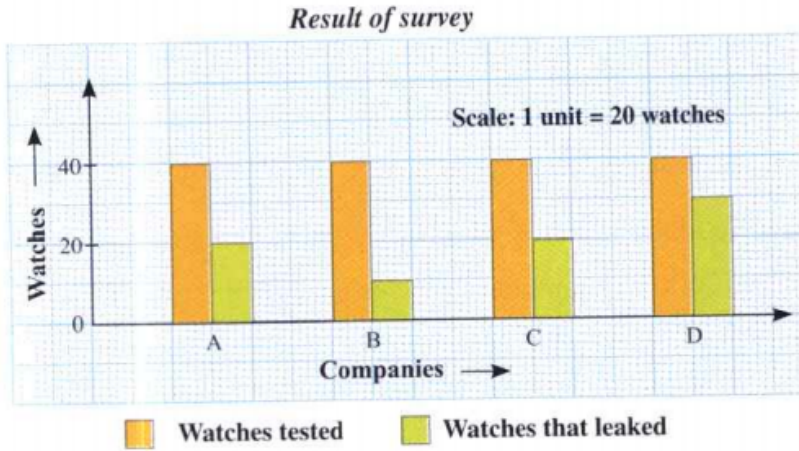
What is the fraction of the number of watches that leaked to the number tested for each company?



Watch Video Solution

36. The following graph shows the result of a survey to test water resistant watches made by four different companies. Read the graph and answer the following question.

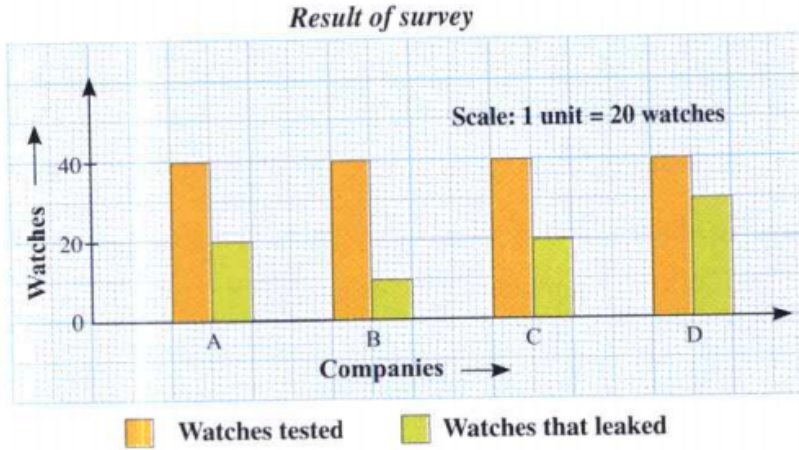
Which company has the best watches?



[Watch Video Solution](#)

37. The following graph shows the result of a survey to test water resistant watches made by four different companies. Read the graph and answer the following question.

Which company has the worst watches?



[Watch Video Solution](#)

38. The following graph shows the result of a survey to test water resistant watches made by four different companies. Read the graph and answer the following question.

What percentage of watches of the best company leaked?



[Watch Video Solution](#)

1. Simran notes down the number of hours she spent on studying in a week. Her observations are as follows:



Find the average number of hours Simran studies in a day.

 [Watch Video Solution](#)

2. The marks of 12 students in a Math test are as follows:
8, 10, 4, 8, 5, 6, 9, 7, 6, 8, 9, 10 Find the: a. maximum marks, b. minimum marks, c. range of marks, and d. mean marks.

 [Watch Video Solution](#)

3. If the mean of 12 observations is 9, find the sum of the 12 observations.

 [Watch Video Solution](#)

4. If the mean of 15 observations is 16, find the sum of the 15 observations.

 [Watch Video Solution](#)

5. Create a set of 6 observations with mean 10.

 [Watch Video Solution](#)

6. Create a set of 5 observations with mean 8.

 [Watch Video Solution](#)

7. The mean of 9 numbers is 6. If one more number is added, the mean remains 6. Find the number that is added.

 [Watch Video Solution](#)

8. If the arithmetic mean of 5 consecutive numbers is 16, find the sum of the smallest and the largest integer.



[Watch Video Solution](#)

9. If the mean of 7 consecutive multiples of 3 is 18, find the 4th and 5th numbers.

A. 25, 26

B. 18, 21

C. 11, 12

D. 28, 29

Answer: B



[Watch Video Solution](#)

10. The mean of 8 numbers is 11. If 3 of these numbers are in the ratio 1:2:3 and the remaining 5 numbers are 9, 10, 13, 14, and 18, find the 3 numbers.

A. 4, 8, 12

B. 4, 9, 13

C. 6, 10, 13

D. 7, 10, 13

Answer: A



[Watch Video Solution](#)

11. Is mean always one of the observations in a given data?



[Watch Video Solution](#)

12. If a collection of data has 20 observations, how will the median be calculated?



[Watch Video Solution](#)

13. When will the median be one of the observations in a given data?



[Watch Video Solution](#)

14. Find the median of the given data:

24, 19, 13, 15, 12, 36, 21, 30

A. 17

B. 18

C. 19

D. 20

Answer: D



[Watch Video Solution](#)

15. Find the median of the given data:

8, 9, 12, 7, 5, 4, 18, 20, 6, 3



[Watch Video Solution](#)

16. Find the median of the given data:

23, 55, 38, 29, 35, 45, 31, 59, 25

A. 29

B. 38

C. 36

D. 35

Answer: D



[Watch Video Solution](#)

17. Find the median of the given data:

9, 7, 12, 16, 8, 11, 16, 13, 10

A. 12

B. 11

C. 16

D. 13

Answer: B



[Watch Video Solution](#)

18. The median of 8 numbers is 11. If 7 of these numbers are 26, 12, 3, 8, 5, 20, and 14, find the eighth number.

A. 11

B. 8

C. 10

D. 9

Answer: C



Watch Video Solution

19. The median of 10 numbers is 22. Find the tenth number given that 9 of the numbers are 39, 7, 44, 10, 14, 16, 24, 35, and 29.



Watch Video Solution

20. A collection of 20 'distinct numbers have 13 as their median. A number is added to this collection but the median does not change. What number has been added?

A. 13

B. 14

C. 1

D. 10

Answer: A

 [Watch Video Solution](#)

21. A collection of 31 'distinct numbers has 18 as their median. When a number is added to this collection, the median remains the same. What number is added?

 [Watch Video Solution](#)

22. State true or false.

In a data collection, if each observation occurs only once, then the data collection does not have a mode.

 [Watch Video Solution](#)

23. State true or false.

In a data collection, three observations occur 'most' number of times.
None of them is a mode.



[Watch Video Solution](#)

24. Find the mode in each of the following data collection.

5,7,9, 11, 14, 16, 20, 22, 25



[Watch Video Solution](#)

25. Find the mode in each of the following data collection.

, 14, 14, 14, 16, 17, 18, 18, 18, 20, 22, 22, 22, 25, 28, 28, 30



[Watch Video Solution](#)

26. Find the mode of the each of the following data collection.

5, 2, 7, 3, 5, 2, 9, 12, 13, 15, 2, 7, 3, 5, 7, 6



[Watch Video Solution](#)

27. Find the mode in each of the following data collection.

12, 13, 12, 15, 16, 16, 13, 12, 14, 18, 12, 12, 14, 15, 19, 12, 14

A. 10

B. 12

C. 9

D. 8

Answer: B



[Watch Video Solution](#)

28. Find the mode in each of the following data collection.

8, 6, 7, 6, 5, 4, $\frac{1}{2}$, $7\frac{1}{2}$, $6\frac{1}{2}$, $8\frac{1}{2}$, 10, 7, 5, $5\frac{1}{2}$, 8, 9, 5, 6, $8\frac{1}{2}$, 6



Watch Video Solution

29. A spinner is spun several times. The number that the spinner stops at after every spin is as follows:

1, 3, 2, 4, 5, 7, 6, 8, 4, 6, 7, 8, 2, 3, 4, 7, 3, 5, 1, 8, 5, 2, 7, 3, 6, 4, 5, 7, 8, 4

Find the: a range of the data,

b. median, c. mode, and d. mean.



Watch Video Solution

30. The following table gives the number of challans issued by the traffic police at a busy crossing of an area in eight different months:



Find the mean, median and mode,



[Watch Video Solution](#)

31. The following data gives the number of minutes by which the arrival of 12 trains was delayed at a station: 0 1 0 6 2 5 0 4 0 1 0 43 25 Find the mean, median, and mode.



[Watch Video Solution](#)

32. Following is a data sample in ascending order. The data has mean 4.1 and mode 4.9. Find the missing numbers. 2.4 3.1 3.8 X 4.9 Y 5.4



[Watch Video Solution](#)

33. The number of complaints received on 8 different days of two different models of mobile phones sold by a shop are as follows:

Model A: 22 18 25 20 16 17 12 22

Model B: 16 14 22 12 14 20 10 12 What measure of central tendency should

be used to determine which model is better? Find the measure of this central tendency and state which model has better performance?

 [Watch Video Solution](#)

34. The following table gives the marks of 5 students in Science and Maths.

Students	Amit	Geeta	Jyoti	Deepak	Sonia
Science	8	6	3	8	4
Maths	5	5	9	8	5

Find the mean, median, and mode of the marks scored in Science

 [Watch Video Solution](#)

35. The following table gives the marks of 5 students in Science and Maths.



Find the mean, median, and mode of the marks scored in Maths.



 [Watch Video Solution](#)

36. The following table gives the marks of 5 students in Science and Maths.



Which measure of central tendency should be used to argue that the students perform better in Science?

 [Watch Video Solution](#)

37. The following table gives the marks of 5 students in Science and Maths.



Which measure of central tendency should be used to argue that the students perform better in Maths?

 [Watch Video Solution](#)

1. The following bar graph gives the data about the pets owned by families in a colony.



Read the graph and answer the following.

Which is the most common pet in the colony?

 [Watch Video Solution](#)

2. The following bar graph gives the data about the pets owned by families in a colony.

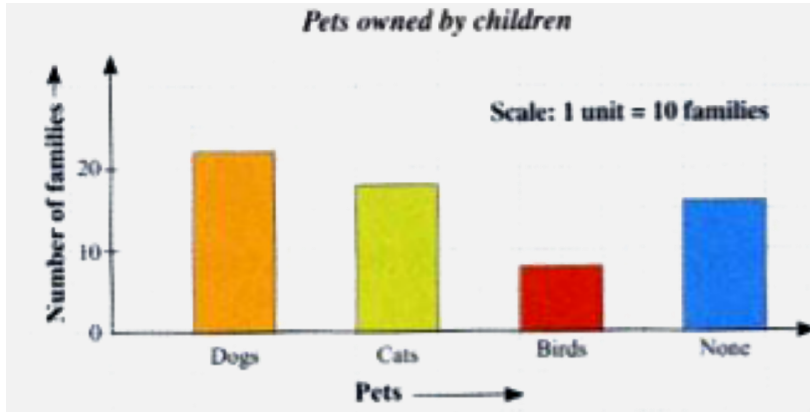


Read the graph and answer the following.

Which is the least common pet?

 [Watch Video Solution](#)

3. The following bar graph gives the data about the pets owned by families in a colony.



Read the graph and answer the following.

How many families do not have any pets?

- A. 10
- B. 20
- C. 19
- D. 16

Answer: D

 [Watch Video Solution](#)

4. The following graph gives the number of times the numbers 1 to 6 show when a die is rolled 40 times.



Read the graph and answer the following.

Which number appears the maximum number of times?



[Watch Video Solution](#)

5. The following graph gives the number of times the numbers 1 to 6 show when a die is rolled 40 times.



Read the graph and answer the following.

Which number(s) appears/appear the least number of times?



[Watch Video Solution](#)

6. The following graph gives the number of times the numbers 1 to 6 show when a die is rolled 40 times.



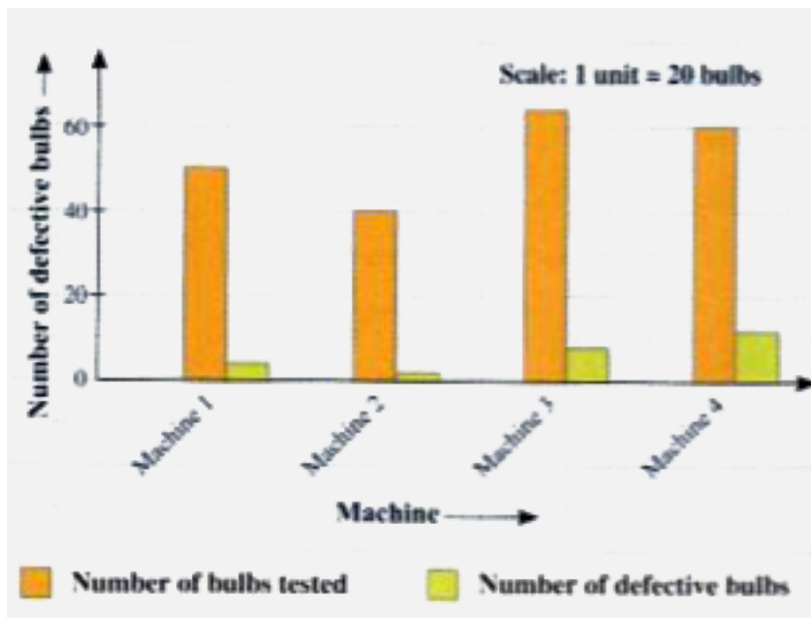
Read the graph and answer the following.

How many times does the number 4 appear?



[Watch Video Solution](#)

7. A bulb manufacturing company tests the bulbs produced by four different machines. The following graph gives the number of bulbs tested that are produced by each machine and the number that are found to be defective.

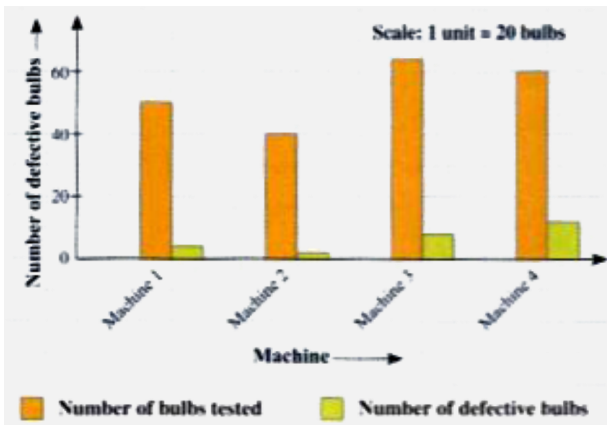


Read the graph and answer the following.

What percentage of bulbs produced by each of the four machines is defective

[Watch Video Solution](#)

8. A bulb manufacturing company tests the bulbs produced by four different machines. The following graph gives the number of bulbs tested that are produced by each machine and the number that are found to be defective.



Read the graph and answer the following.

Which is the best machine?

A. Machine 1

B. Machine 3

C. Machine 2

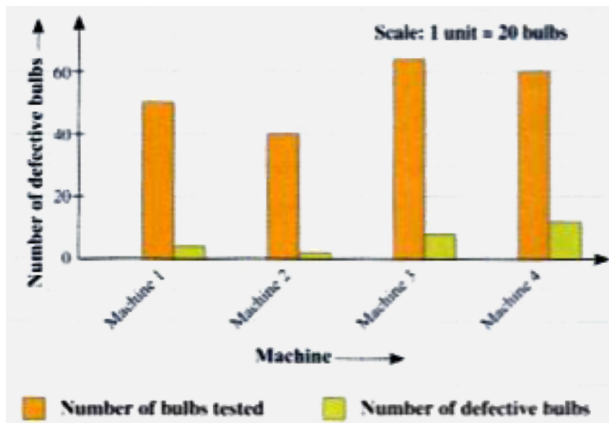
D. Machine 4

Answer: C



[Watch Video Solution](#)

9. A bulb manufacturing company tests the bulbs produced by four different machines. The following graph gives the number of bulbs tested that are produced by each machine and the number that are found to be defective.



Read the graph and answer the following.

Which is the worst machined?

- A. Machine 1
- B. Machine 3
- C. Machine 4
- D. Machine 2

Answer: C

 [Watch Video Solution](#)

10. The following table gives the height of five trees in a garden.

Tree	1	2	3	4	5
Height (in feet)	10	15	20	5	25

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw

the bar graph.

1 unit = 5 trees

 [Watch Video Solution](#)

11. The following table gives the height of five trees in a garden.

Tree	1	2	3	4	5
Height (in feet)	10	15	20	5	25

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 1 trees

 [Watch Video Solution](#)

12. The following table gives the height of five trees in a garden.

Tree	1	2	3	4	5
Height (in feet)	10	15	20	5	25

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 20 trees



[Watch Video Solution](#)

13. The following table gives the height of five trees in a garden.

Tree	1	2	3	4	5
Height (in feet)	10	15	20	5	25

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 8 trees



[Watch Video Solution](#)

14. Following table represents the data collected from a group of children who were asked about their favourite sports. Represent the data as a bar graph.

Sports	Number of Students
Football	20
Hockey	12
Cricket	16
Tennis	8
Swimming	4



[Watch Video Solution](#)

15. Following is a data collected from a survey of a colony about their favourite sports.

Favourite sports	Cricket	Basket-ball	Swim-ming	Hockey	Athletics
Watching	1240	480	520	460	260
Participating	640	340	340	260	120

Draw a double bar graph choosing appropriate scale

 [Watch Video Solution](#)

16. Following is a data collected from a survey of a colony about their favourite sports.

Favourite sports	Cricket	Basket-ball	Swim-ming	Hockey	Athletics
Watching	1240	480	520	460	260
Participating	640	340	340	260	120

Draw a double bar graph choosing appropriate scale

 [Watch Video Solution](#)

Revision Exercise

1. The ages of 15 students (in years) in a summer camp are as follows: 11, 14, 13, 15, 16, 10, 12, 12, 14, 11, 10, 12, 13, 15, 11 Find:
the maximum age.



[Watch Video Solution](#)

2. The ages of 15 students (in years) in a summer camp are as follows: 11, 14, 13, 15, 16, 10, 12, 12, 14, 11, 10, 12, 13, 15, 11 Find:
the minimum age.



[Watch Video Solution](#)

3. The ages of 15 students (in years) in a summer camp are as follows: 11, 14, 13, 15, 16, 10, 12, 12, 14, 11, 10, 12, 13, 15, 11 Find:
the range of age.



[Watch Video Solution](#)

4. The ages of 15 students in years) in a summer camp are as follows: 11, 14, 13, 15, 16, 10, 12, 12, 14, 11, 10, 12, 13, 15, 11 Find: The mean age.



[Watch Video Solution](#)

5. Create a set of 8 observations with mean 14.



[Watch Video Solution](#)

6. Find the sum of 8 numbers with mean 12.

A. 96

B. 86

C. 89

D. 112

Answer: A



[Watch Video Solution](#)

7. The mean of three numbers is 50. If two of them are 30 and 50, what is the third number?

A. 65

B. 70

C. 72

D. 79

Answer: B



[Watch Video Solution](#)

8. The mean of 12 numbers is 10. If one more number is added, the mean remains unaltered. Find the number that is added.



[Watch Video Solution](#)

9. If the mean of 5 consecutive odd integers is 13, find the sum of the largest and the smallest integers.

 [Watch Video Solution](#)

10. If the mean of 8 consecutive multiples of 6 is 45, find the 3rd and 6th numbers.

A. 30, 42

B. 30, 54

C. 36, 54

D. 24, 48

Answer: C

 [Watch Video Solution](#)

11. After 9 games, the mean number of goals scored by a football team is

3. If after one more game

they score 5 goals, what is the new mean value of goals scored?

A. 4

B. 2.5

C. 3

D. 3.2

Answer: D



[Watch Video Solution](#)

12. After 9 games, the mean number of goals scored by a football team is

3. If after one more game

they score no goals, what is the new mean value of goals scored?



[Watch Video Solution](#)

13. After 9 games, the mean number of goals scored by a football team is 3. If after one more game the new mean value of goals scored is 2.9, how many goals did they score in this game?

- A. 3
- B. 2
- C. 1
- D. 4

Answer: B



[Watch Video Solution](#)

14. The mean of 5 numbers is 34. Three of the numbers are 29, 26, and 35. If the remaining two numbers are in the ratio 1:3, find the numbers.



[Watch Video Solution](#)

15. Find the median of the following data.

43, 12, 55, 69, 24, 99, 25, 34, 78, 52



[Watch Video Solution](#)

16. Create a set of data of 7 observations with 88 as the median.



[Watch Video Solution](#)

17. A set of data has observations such that no two observations are equal. The median of this data is 12. A number is added to the data and the median remains 12. Find the number.



[Watch Video Solution](#)

18. A data collection has 10 numbers, 9 of which are 35, 70, 15, 59, 19, 15, 57, 26, and 34. If the median of this data is 32, find the tenth number.



[Watch Video Solution](#)

19. A data Collection has 20 distinct observations with median 22. One more number is included in the data, but the median does not change. Find this number



[Watch Video Solution](#)

20. Following is the number of children in 28 families of a colony.
1, 2, 1, 3, 2, 1, 2, 4, 2, 2, 1, 3, 1, 2, 2, 2, 1, 1, 2, 3, 1, 2, 1, 2, 2, 1, 2, 3. Represent the above data in the form of frequency distribution.



[Watch Video Solution](#)

21. The hourly wages of 8 people are as follows.

Rs 200, Rs 150, Rs 50, Rs 30, Rs 60, Rs 150, Rs 180, Rs 60 Find a Mean b

Median c. Mode

What average will the employer use to show that the workers are well paid?



[Watch Video Solution](#)

22. Which central tendency has been used to arrive at the following statements?

Mickey noticed that half of the chocolate brands in the store cost more than 22.



[Watch Video Solution](#)

23. Which central tendency has been used to arrive at the following statements?

The average score of Sachin in the series was 85 runs.



[Watch Video Solution](#)

24. Which central tendency has been used to arrive at the following statements?

The most common height in the basketball team is 183 cm.



[Watch Video Solution](#)

25. Which central tendency has been used to arrive at the following statements?

The weights of players in the football team vary by 12 kg.



[Watch Video Solution](#)

26. Which central tendency has been used to arrive at the following statements?

The most common price of a certain type of calculator is 125.



[Watch Video Solution](#)

 [Watch Video Solution](#)

27. Which central tendency has been used to arrive at the following statements?

Prices for tickets to the movie vary by 25.

 [Watch Video Solution](#)

28. Which central tendency has been used to arrive at the following statements?

One-half of the laptops at a store cost more than Rs 55,000.

 [Watch Video Solution](#)

29. Following are the observations of a data sample in ascending order. If the mean of the sample is 18.5 and the mode is 15.5, find the missing data items. 12.5 13.8 15.5 x 19.2 20.4 y 23.5 24.6

 [Watch Video Solution](#)

30. Following table represents the lengths of six different ribbons.

Ribbons	1	2	3	4	5	6
Length (in cm)	12	9	6	15	12	18

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 3 cm



[Watch Video Solution](#)

31. Following table represents the lengths of six different ribbons.

Ribbons	1	2	3	4	5	6
Length (in cm)	12	9	6	15	12	18

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 1 cm



[Watch Video Solution](#)

32. Following table represents the lengths of six different ribbons.

Ribbons	1	2	3	4	5	6
Length (in cm)	12	9	6	15	12	18

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 5 cm

[Watch Video Solution](#)

33. Following table represents the lengths of six different ribbons.

Ribbons	1	2	3	4	5	6
Length (in cm)	12	9	6	15	12	18

If the given data has to be represented as a bar graph, then select the most appropriate scale from the given options that can be used to draw the bar graph.

1 unit = 10 cm



[Watch Video Solution](#)

34. Following is a bar graph giving the approximate heights of five mountain peaks. Read the graph and answer the following questions.

Which is the highest peak and what is its height?



[Watch Video Solution](#)

35. Following is a bar graph giving the approximate heights of five mountain peaks. Read the graph and answer the following questions.

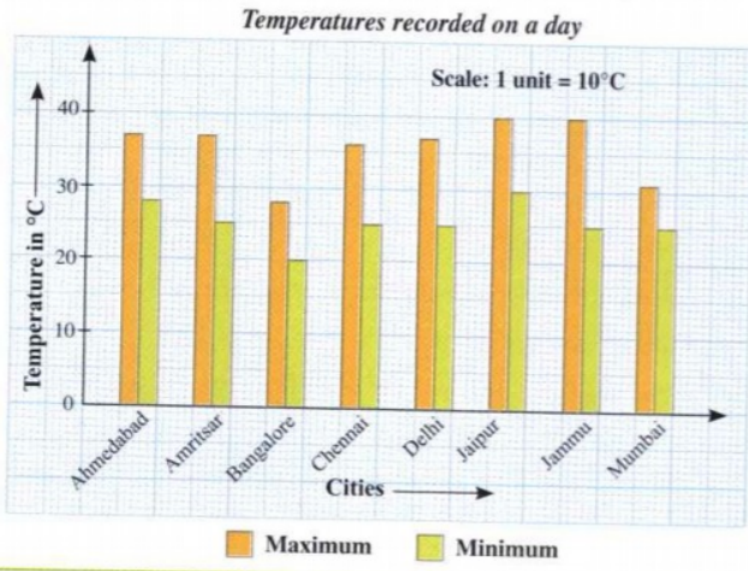
Find the ratio of the height of the highest peak to that of the lowest peak.



[Watch Video Solution](#)

36. The following graph gives the minimum and maximum temperatures of various cities on a specific day. Read the graph and answer the following questions

Which city has the largest difference between the minimum and the maximum temperatures on the given day?

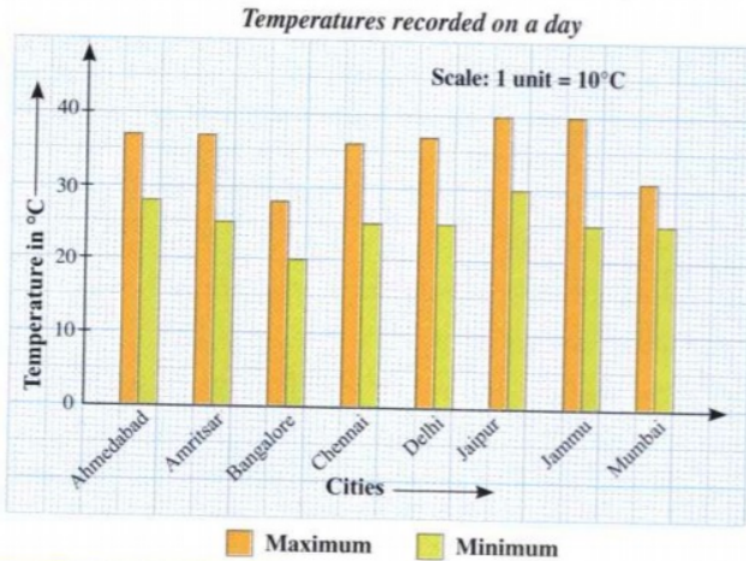


[Watch Video Solution](#)

37. The following graph gives the minimum and maximum temperatures of various cities on a specific day. Read the graph and answer the

following questions

Which are the hottest and the coldest cities on the given day?

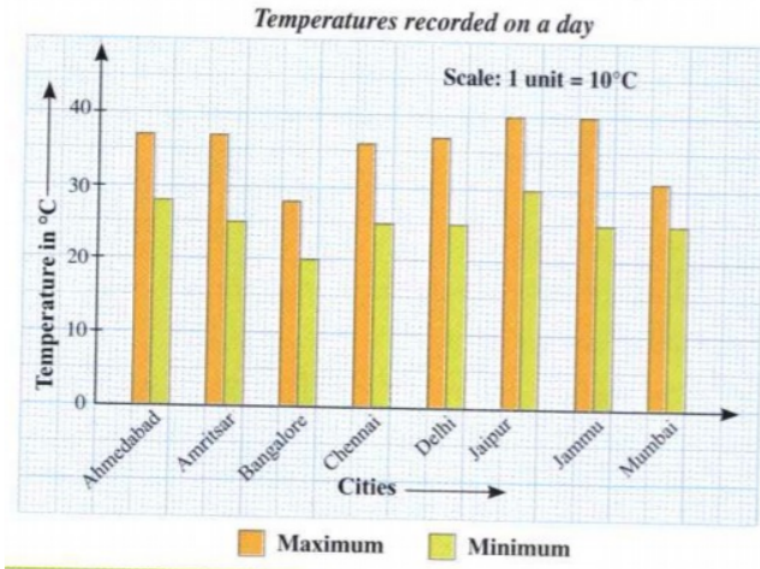


[Watch Video Solution](#)

38. The following graph gives the minimum and maximum temperatures of various cities on a specific day. Read the graph and answer the following questions

Name the two cities where the maximum temperature of one city was less

than the minimum temperature of the other city.



[Watch Video Solution](#)

39. The following graph gives the minimum and maximum temperatures of various cities on a specific day. Read the graph and answer the following questions

Name the city which has the minimum difference between its minimum and maximum temperatures.

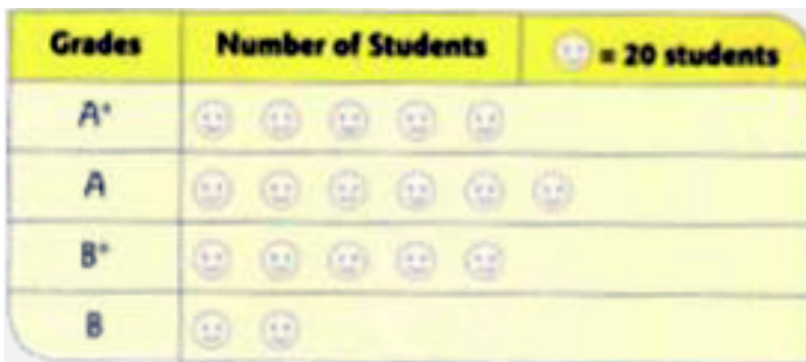


Warm Up Exercise

1. Shikha rolled a die 30 times and noted the outcomes as given below. Organize the data by completing the given table, one, six two, four, two, six, five, three, three, one, six, five, four, two, six, one, two, one, four, five, five

[Watch Video Solution](#)

2. A testing centre conducted a 'Spelling Test' for class VI students. The following pictograph represents the results of the test.

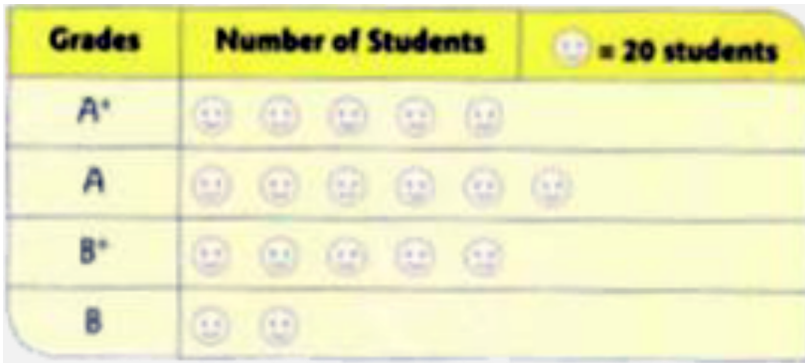


Answer the following:

Which grade was received by the maximum number of students?

 [Watch Video Solution](#)

3. A testing centre conducted a 'Spelling Test' for class VI students. The following pictograph represents the results of the test.



Answer the following:

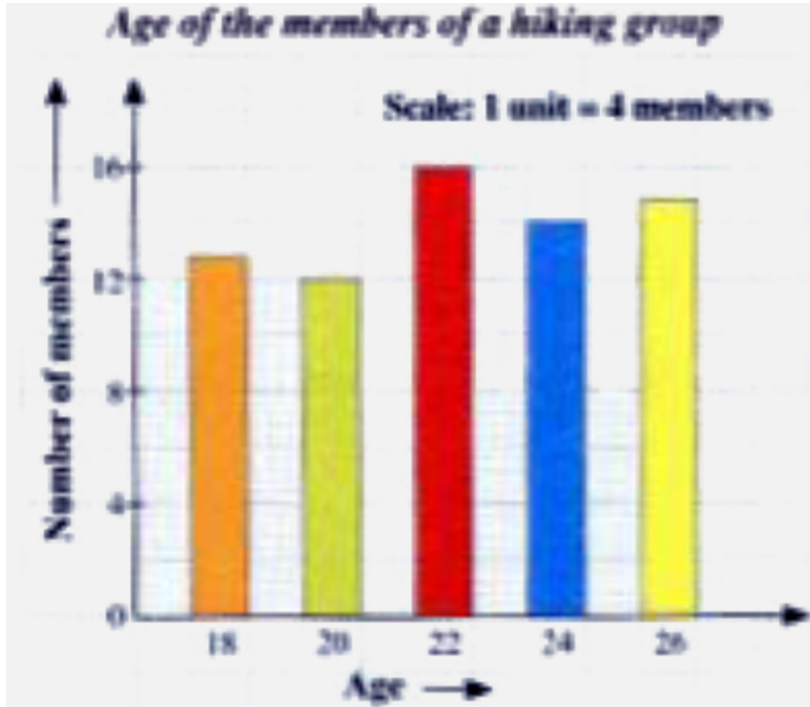
How many students received B grade?

 [Watch Video Solution](#)

4. The given graph represents the age and number of members of a hiking group who are planning an excursion. Study the graph and answer

the following question.

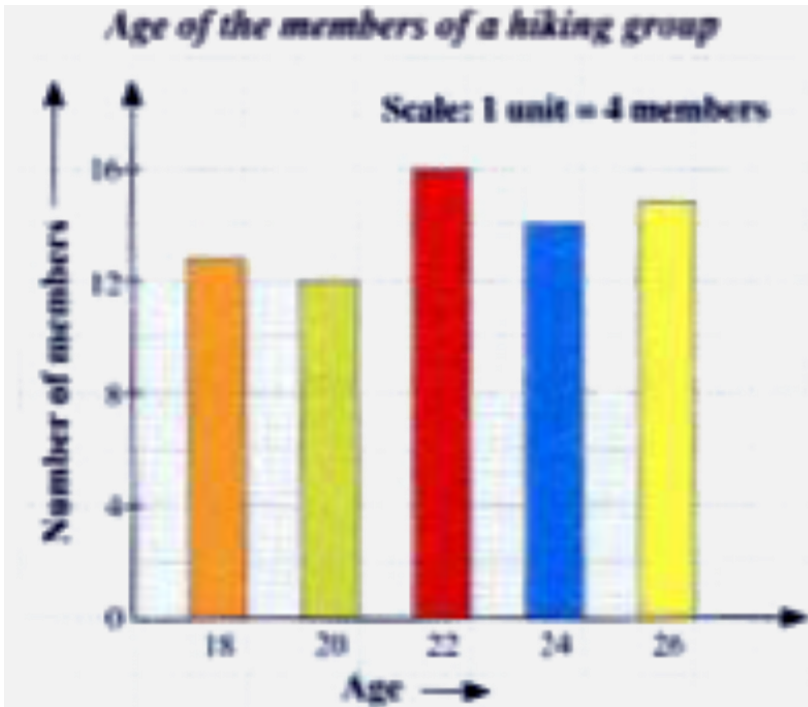
Which age group has the maximum members in the hiking group?



[Watch Video Solution](#)

5. The given graph represents the age and number of members of a hiking group who are planning an excursion. Study the graph and answer the following question.

Which age group has the least members in the hiking group?



[Watch Video Solution](#)

Try This

1. A school has wants to arrange hobby classes for the students of classes 6,7, and 8. The school wants each student of classes 6-8 to opt for any one of the following, Painting, Vocal Music, Volin, Tabla Dance

What data needs to be collected and how the data should be organised

so that the school is able to arrange these hobby classes for the students?

 [Watch Video Solution](#)

2. The number of hours Ashu studied on different days of a week are as follows.

Monday: 4 hours

Tuesday: $4\frac{1}{2}$ hours

Wednesday : 5 hours

Thursday : $3\frac{1}{2}$ hours

Friday : 4 hours

Saturday: 6 hours

Find the average number of hours in a day Ashu studied in that week.

 [Watch Video Solution](#)

3. The weights of 10 students in a class are: 35 kg; 27 kg;36 kg;30 kg;29 kg;32 kg.;33 kg. ;28 kg. ;31 kg. ;38 kg

- a. Find the mean weight,
- b. minimum weight, and
- c. number of students whose weight is more than the mean weight, and
- d. range.



[Watch Video Solution](#)

4. Create a set of 6 observation with mean 8.



[Watch Video Solution](#)

5. Find the sum of 12 numbers whose mean is 11.



[Watch Video Solution](#)

6. The mean of 9 numbers is 10. If one more number is added, the mean remains as 10. Find the number which is added.



[Watch Video Solution](#)

7. The mean of 5 consecutive multiples of 7 is 28. Find the sum of 2nd and 3rd numbers.



[Watch Video Solution](#)

8. The mean of numbers is 25, seven of these 10 numbers are 13,14,15,16,17,20,21,22 and 32. Find the remaining 3 numbers if these 3 numbers are in the ratio 2 : 3 : 5



[Watch Video Solution](#)

9. Find the median of the data:

38,42,35,45,50,32,43,40,36,38,43,38,47,



[Watch Video Solution](#)

10. Find the median of the data:

17,16,12,14,14,16,17,22,15,17,16,18



[Watch Video Solution](#)

11. The median of 8 numbers is 40. If 7 of these numbers are 22,58,31,44,25,45 and 50. find the eighth number.



[Watch Video Solution](#)

12. A data set has 13 distinct observation with median 18. If one more number is added to this data set. The median will remain unchanged. Find the number added.



[Watch Video Solution](#)

13. Find the mode of the following data.

3,7,4,5,9,1,7,2,2,8,1,2,4,7,7,12,11,9,8,4,7



[Watch Video Solution](#)

14. The number of children in 20 families were found are noted as follows,

2,3,1,1,0,1,1,2,2,2,2,1,0,0,1,2,2

Find the mode of the data.



[Watch Video Solution](#)

15. Find the mode of the following data:

23,29,41,48,25,28,47



[Watch Video Solution](#)

16. Following are the number of goals scored by a football team in different matches in a tournament. Find the mode.

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



[Watch Video Solution](#)

17. The number of challans that are issued per day by the traffic police for traffic violations committed by people at a certain road over two weeks is as follows:

First week: 0, 5, 10, 6, 3, 4, 7

Second week: 2, 6, 5, 3, 7, 5, 0

Find mean, median, and mode of the number of challans issued per day for each week.



[Watch Video Solution](#)

18. Following is a data sample of 8 observations in ascending order. If the mean of this data is 31 and the mode is 35. Find the missing observations.

20 24 x 30 31 35 y 45



[Watch Video Solution](#)

19. The runs scored by a batsman in 2 different cricket matches are as follows:

65, 32, 97, 0, 32, 160, 68, 23, 35, 75, 40

Which central tendency value will the batsman project for selection in the cricket team for a tournament?



[Watch Video Solution](#)