MATHS

BOOKS - ICSE

DATA HANDLING

Example

1. Given below are the heights (in cm) of 11 boys of a class :

149, 142, 154, 146, 143, 152, 148, 132, 140, 139, 128

Arrange the above data in an ascending order and find

(i) the height of the tallest boy

(ii) the height of the shortest boy

(iii) the range of the given data

(iv) the mean height

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2. Find the mean weight of 40 boys from the following data :

Weight (in kg)	27	28	29	30	31
Number of boys (Frequency)	6	12	10	8	4

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3. If the mean of the following frequency distribution is 8, find the value of p.

Variable(x_i)	3	5	7	9	11	13
Frequency(f_i)	6	8	15	p	8	4

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4. Find the median of :

16, 9, 11, 23, 7, 5, 12, 14, 8, 10, 21

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5. The marks obtained (out of 100) by 12 students in an examination are

74, 96, 87, 65, 99, 82, 76, 92, 66, 75, 85, 90

Find the median marks.

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6. Find the median of the first 10 even numbers.

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7. Find the median for the following frequency distribution :

Marks obtained(x_i)	29	32	34	27	42	37
Number of students(f_i)	2	5	10	12	8	4

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8. The shoe sizes of 30 players selected for interschool competitions are given below :

Shoe size(x_i)	7	10	9	8	5	11	6
Number of players(f_i)	4	5	8	3	5	2	3

Find the median of this frequency distribution.

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9. Given below are the number of overs thrown by 11 players of a team in a one-day match:

3, 4, 4, 0, 8, 6, 7, 4, 6, 0, 8

Find th modal number of overs thrown.

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10. Given below is the number of vehicles possessed by 100 household in a locality.

Number of vehicles	1	2	3	4	5	6
Number of households	17	21	13	34	10	5

What is the modal number of vehicles possessed?

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11. Given below are the number of family members in 50 families of a locality :

Number of members	2	3	4	5	6	7	8
Number of families	5	11	3	8	6	9	8

For this frequency distribution, calculate the mean and median.

Using empirical formula, calculate its mode.

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12. 60 students from a certain locality use different modes of travel to school as given below :

Mode of travel	Car	Bus	Scooter	Bicycle	Rickshaw
Number of students	6	15	10	18	11

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13. The percentage of marks obtained by a student in different subjects are given below.

Subject	Hindi	Science	English	Mathematics	Social Studies
Percentage of marks obtained	35	60	15	75	40

Draw a bar graph representing the above data.

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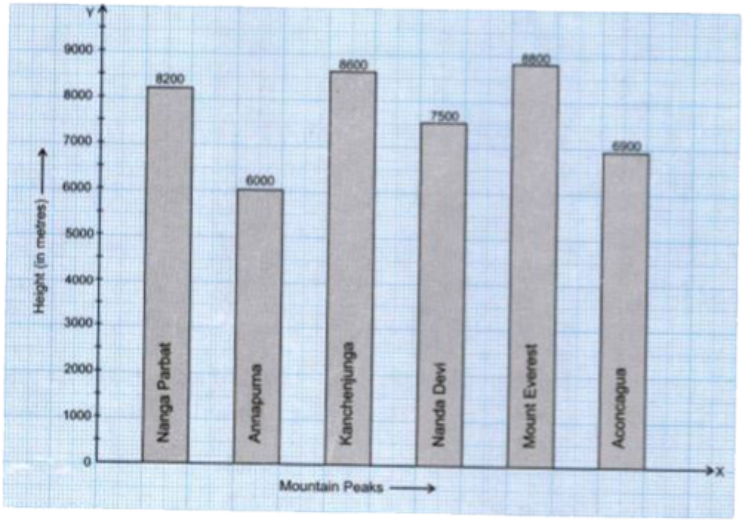
14. Given below is a bar graph showing the heights of six mountain peaks.



Read the above bar diagram and answer the following questions :

What is the highest mountain peak?

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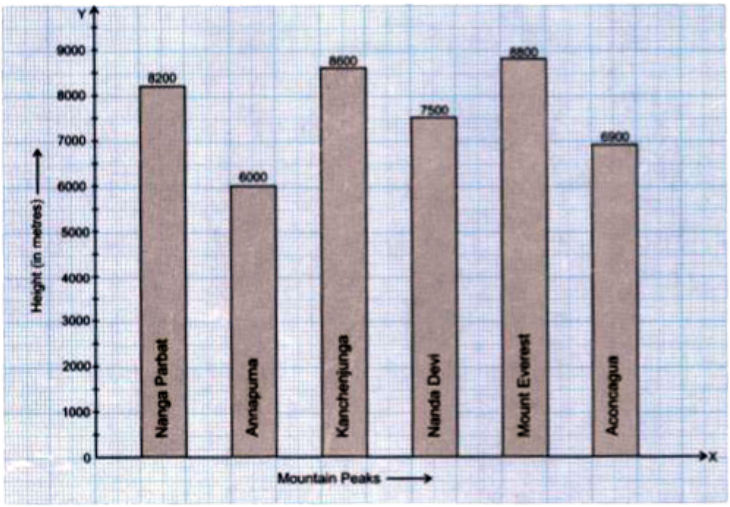
15. Given below is a bar graph showing the heights of six mountain peaks.



Read the above bar diagram and answer the following questions :

Find the ratio between highest and lowest mountain peak

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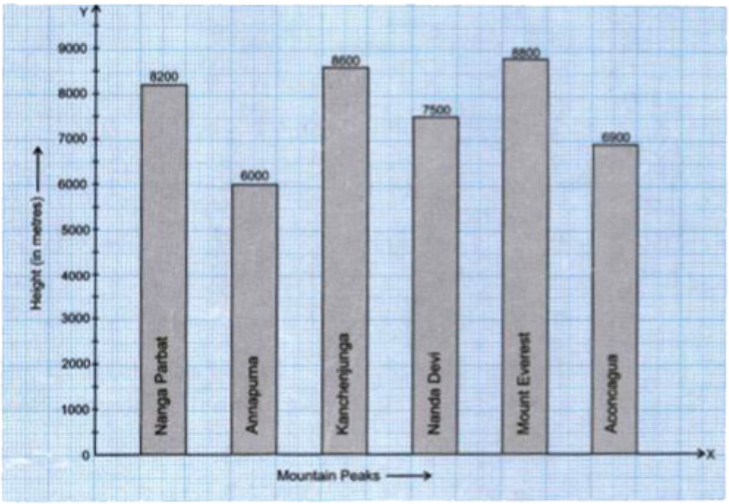
16. Given below is a bar graph showing the heights of six mountain peaks.



Read the above bar diagram and answer the following questions :

what is information given in the graph

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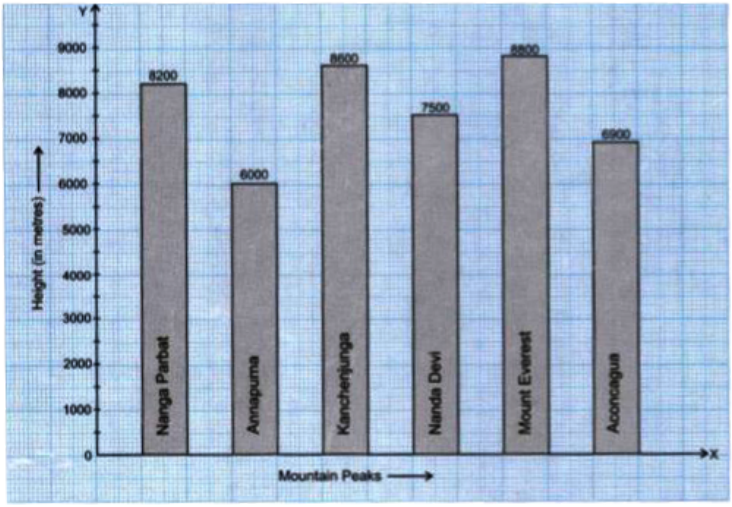
17. Given below is a bar graph showing the heights of six mountain peaks.



Read the above bar diagram and answer the following questions :

Which peak is second highest and what is it's height.

A. Mount Everest, 8800 m

B. Kanchan Junga, 8600 m

C. Nanga Parbat, 8200 m

D. Annapurma, 6000 m

Answer: B

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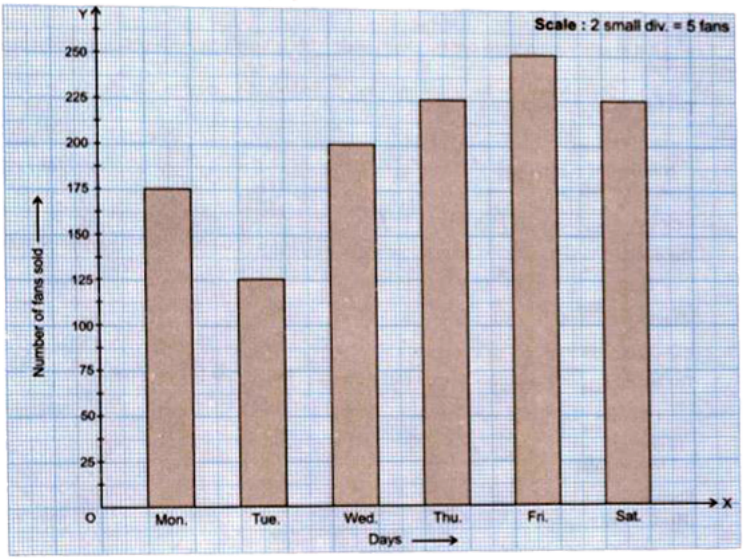
18. Observe the bar graph given below :



Read the bar graph carefully and answer the following questions :

What information is given by the bar graph?

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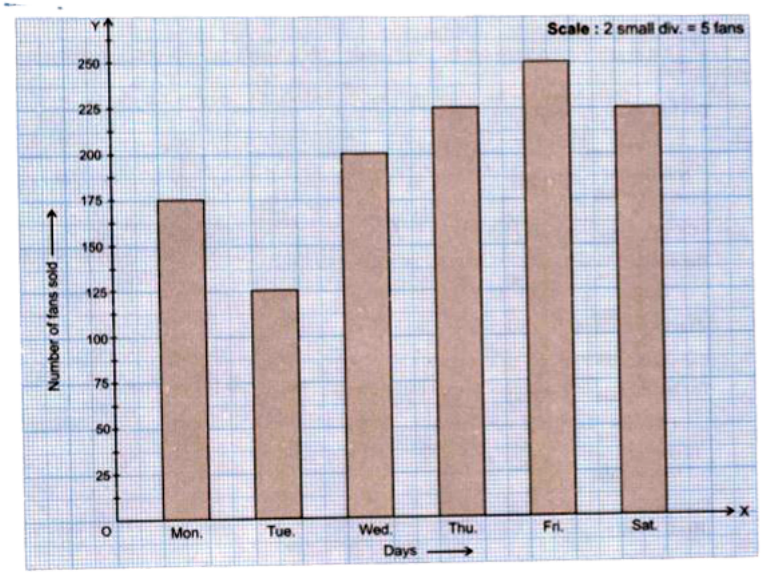
19. Observe the bar graph given below :



Read the bar graph carefully and answer the following questions :

On which day of the week was the sale maximum?

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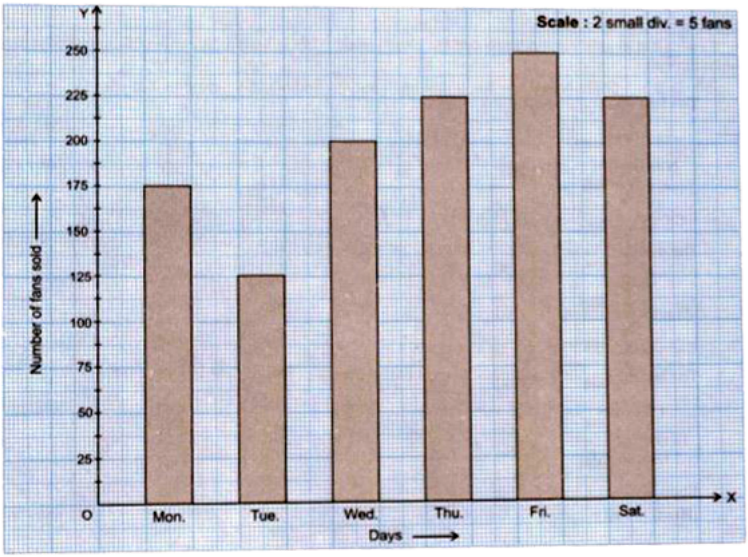
20. Observe the bar graph given below :



Read the bar graph carefully and answer the following questions :

On which day of the week there was maximum increase in sale compared to the previous day?

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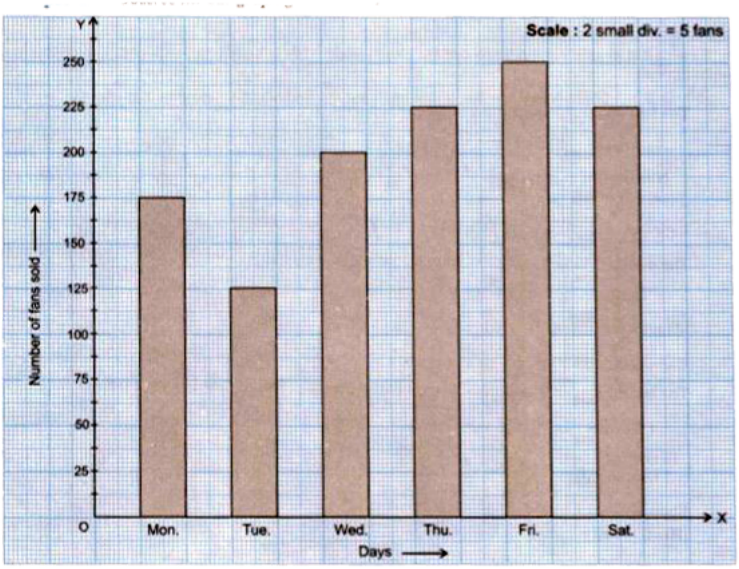
21. Observe the bar graph given below :



Read the bar graph carefully and answer the following questions :

What was the total sale during the week?

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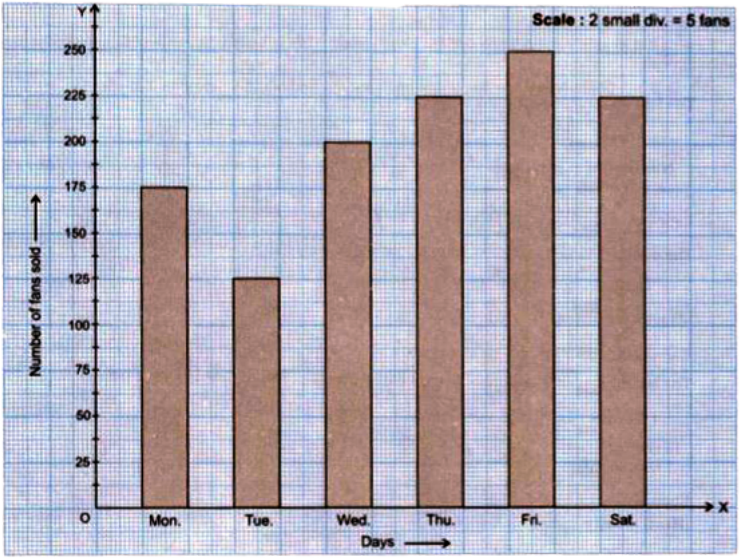
22. Observe the bar graph given below :



Read the bar graph carefully and answer the following questions :

What is the ratio between the minimum sale and the maximum sale?

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Exercise 24 A

1. Find the arithmetic mean of first five prime numbers.

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2. The marks obtained by 12 students in an examination (out of 50) are given below:

18, 35, 2, 27, 40, 0, 21, 33, 27, 8, 36, 23

Find the mean marks.

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3. In a one-day cricket match, the runs scored by the players of a team are

6, 10, 16, 20, 8, 19, 30, 57, 2, 0, 8.

Find the mean score.

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4. The following are the ages (in years) of 12 teachers in a school :

36, 44, 39, 46, 35, 53, 38, 42, 55, 45, 49, 40

Arrange the above data in an ascending order and answer the questions

given below:

What is the age of the eldest teacher in the school?

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5. The following are the ages (in years) of 12 teachers in a school :

36, 44, 39, 46, 35, 53, 38, 42, 55, 45, 49, 40

Arrange the above data in an ascending order and answer the questions given below:

What is the age of the youngest teacher in the school?

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6. The following are the ages (in years) of 12 teachers in a school :

36, 44, 39, 46, 35, 53, 38, 42, 55, 45, 49, 40

Arrange the above data in an ascending order and answer the questions given below:

What is the range of the ages of the teachers in the school?

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7. The following are the ages (in years) of 12 teachers in a school :

36, 44, 39, 46, 35, 53, 38, 42, 55, 45, 49, 40

Arrange the above data in an ascending order and answer the questions given below:

What is the mean age of the teachers in the school?

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8. The daily wages (in ₹) of 15 workers in a factory are given below :

195, 185, 145, 155, 135, 180, 175, 200, 150, 125, 190, 180, 170, 175, 190

Find the mean daily wage.

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9. The daily wages (in ₹) of 15 workers in a factory are given below :

195, 185, 145, 155, 135, 180, 175, 200, 150, 125, 190, 180, 170, 175, 190

Find the range of the data.

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10. The maximum daily temperatures (in $^{\circ}C$) of a city during a week are given below :

28.9, 32.6, 24.6, 26.1, 29.2, 30 and 27.4

Find the mean temperature.

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11. The maximum daily temperatures (in $^{\circ}C$) of a city during a week are given below :

28.9, 32.6, 24.6, 26.1, 29.2, 30 and 27.4

Fidnt the range of the data.

Watch Video Solution

12. If the mean of 4, 6, x, 9, 10, 5 is 7, find the value of x.

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13. Following is the number of children in 28 families ofa 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.

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14. A dice was thrown 30 times and the following outcomes were notes :

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

Represent the above data in the form of frequency distribution.

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15. Find the mean weight of 50 boys from the following data :

Weight (in kg)	50	52	54	56	60
Number of boys (frequency)	6	8	15	14	7

A. 54.6

B. 55.6

C. 54

D. 55

Answer: A

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16. The heights (in cm) of 90 plants in a garden are given below :

Height (in cm)	58	60	62	64	66	74
Number of plants	20	25	15	8	12	10

Find the mean height.

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17. Find the mean height of 65 boys from the following data :

Height (in cm)	142	144	146	148	150	152
Number of boys	10	13	12	7	17	6

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18. If the mean of the following frequency distribution is 15, find the value of p.

Variable(x_i)	10	12	14	16	18
Frequency(f_i)	13	p	15	32	28

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Exercise 24 B

1. Find the median of :

72, 0, 46, 34, 8, 31, 65, 25, 39, 53, 18

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2. Find the median of :

25, 18, 13, 20, 16, 9, 22, 8, 6, 15, 21, 11, 17

Watch Video Solution

3. Find the median of :

22, 9, 32, 17, 35, 10, 19, 21

Watch Video Solution

4. Find the median of :

85, 91, 51, 35, 82, 55, 60, 29, 63, 72

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5. The weights of 13 students (in kg) are :

48, 41, 52, 65, 40, 53, 34, 61, 47, 42, 44, 31, 35

Find the median weight.

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6. The marks (out of 50) of 10 students in a class are :

40, 34, 37, 50, 47, 42, 31, 46, 36, 43

Find the median marks.

A. 42

B. 47

C. 46

D. 41

Answer: D

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7. Find the median of first 15 odd numbers.

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8. Find the median of first 50 whole numbers,

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9. The daily wages (in) of 100 labourers in a factory are gien below :

Daily wages (in ₹)	360	280	420	320	400	300	380
Number of labourers	17	10	18	27	16	8	4

Find the median wages.

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10. The heights (in cm) of 35 students of a class are given below :

Height (in cm)	157	152	153	154	155	156
Number of students	7	4	3	5	9	7

Find the median height.

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Exercise 24 C

1. Find the mode of each of the following data :

9, 7, 8, 16, 12, 9, 8, 5, 9, 11

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2. Find the mode of each of the following data :

29, 34, 38, 25, 25, 19, 25, 16, 37, 21, 25

A. 19

B. 16

C. 25

D. 37

Answer: 25

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3. A shoe store sells pairs of shoes of different sizes. The number of pairs of various sizes sold on a particular day are given below :

Size of shoes	1	2	3	4	5	6	7	8	9	10	11
Number of pairs sold	3	5	1	2	8	2	4	3	5	5	2

What is the modal shoe-size?

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4. The following table shows the heights of 50 students of a class :

Height (in cm)	152	148	150	153	149	151	147
Number of students	8	3	4	7	12	10	6

Find the mean and the median.

Using empirical formula, calculate its mode.

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5. The marks (out of 10) obtained by 35 students of a class are given in the following table :

Marks obtained	7	1	10	2	8	6	4	5	9	3
Number of students	7	0	2	0	1	9	6	4	5	1

Find the mean and the median.

Using empirical formula, calculate its mode.

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6. The following table gives the weights (in grams) of 30 boxes of fruits :

Weight (in grams)	350	425	500	375	475	400	450
Number of boxes	5	3	6	4	2	3	7

Find the mean and the median.

Using empirical formula, calculate its mode.

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Exercise 24 D

1. The following table shows the favourite sports of 250 students in a school :

Sports	Cricket	Football	Tennis	Badminton	Swimming
Number of students	75	35	50	25	65

Represent the above data by a column graph.

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2. The marks obtained by a student in his annual examination in various subjects are given below:

Subject	Hindi	Mathematics	English	Science	S.Studies
Marks obtained	64	40	52	80	36

Represent the above data by a bar graph.

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3. The birth-rate per thousand of five countries over a period of time is shown below :

Country	China	India	Germany	U.K.	Sweden
Birth-rate per thousand	42	35	14	28	21

Represent the above data by a bar graph.

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4. The air distances of four cities from Delhi (in km) are given below :

City	Kolkata	Chennai	Mumbai	Hyderabad
Distance from Delhi (in km)	1340	1700	1100	1220

Draw a bar graph to represent the above data.

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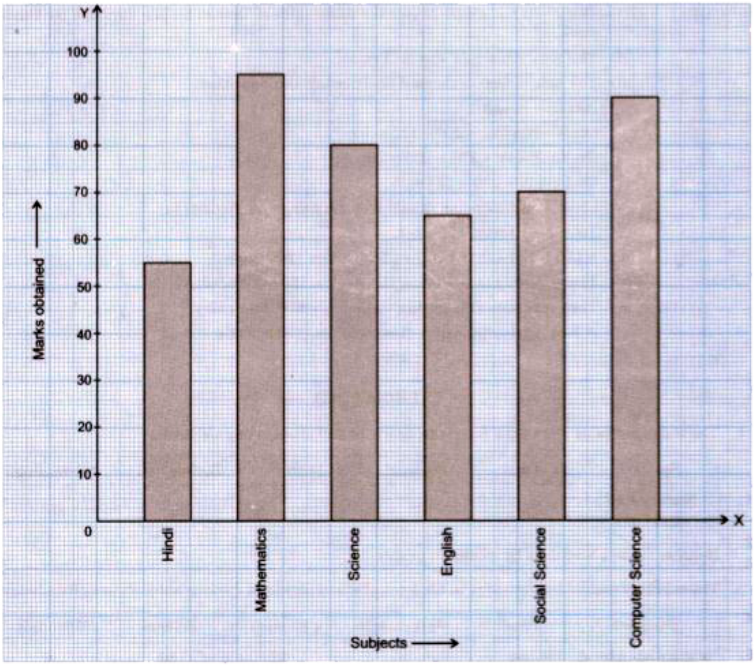
5. Read the given bar graph and answer the question that follow :



What information is represented by the bar graph?

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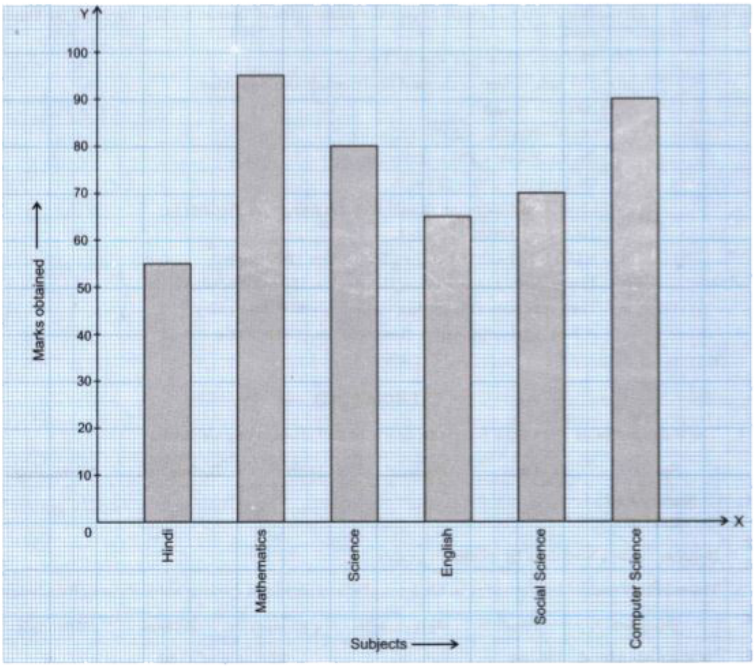
6. Read the given bar graph and answer the question that follow :



How many marks were obtained in English?

A. 55

B. 95

C. 65

D. 70

Answer: C

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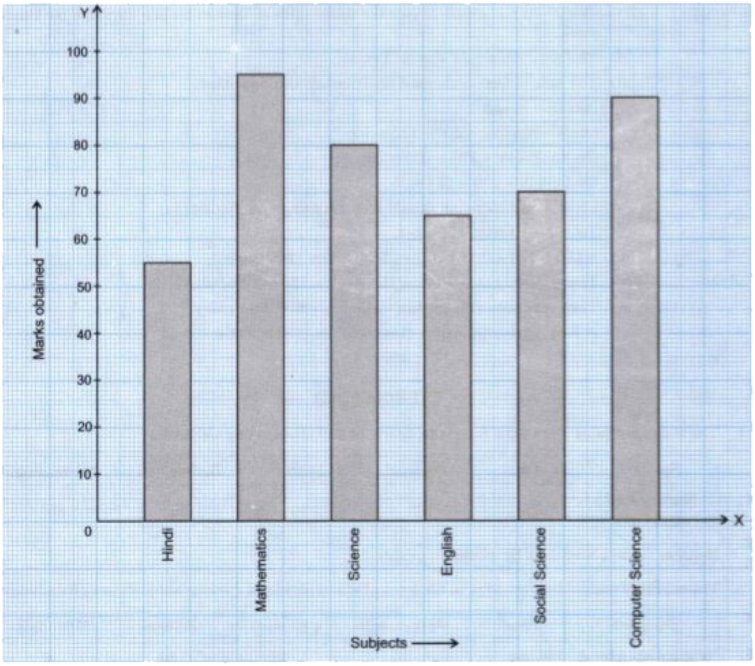
7. Read the given bar graph and answer the question that follow :



In which subject least marks were obtained?

A. HINDI

B. MATHEMATICS

C. SCIENCE

D. ENGLISH

Answer: A

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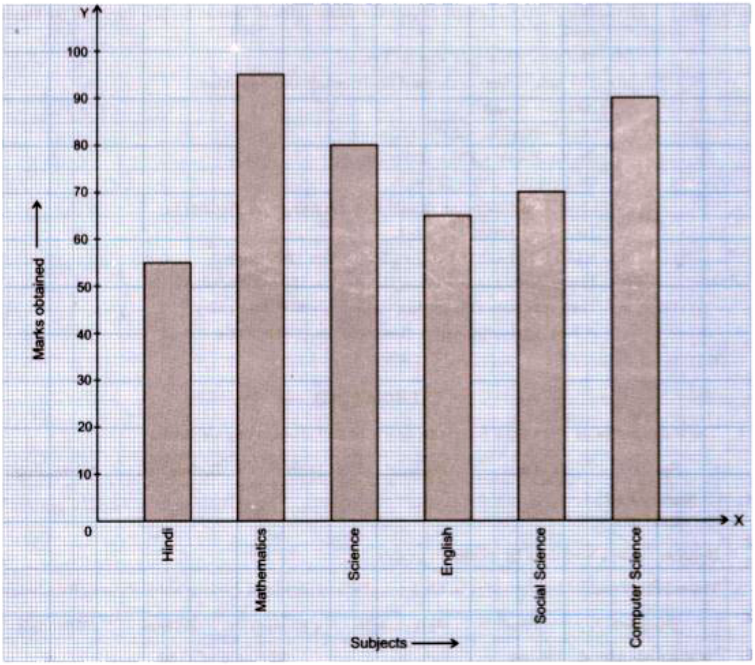
8. Read the given bar graph and answer the question that follow :



What was the total marks obtained in all the subjects together?

A. 475

B. 400

C. 365

D. 455

Answer: D

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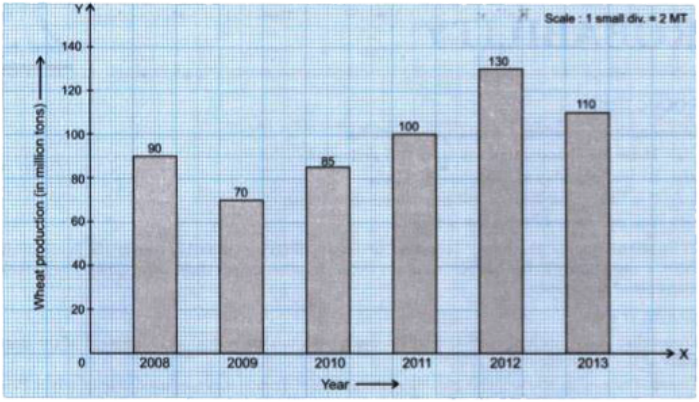
9. Read the bar graph given below :



What information is given by the bar graph?

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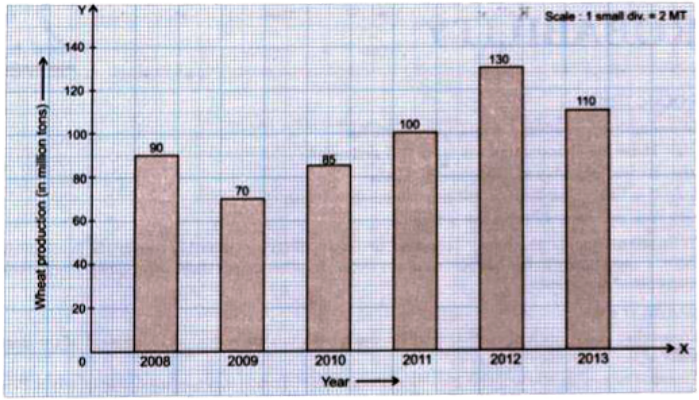
10. Read the bar graph given below :



What was the wheat production in 2010?

A. 90 MT

B. 70 MT

C. 85 MT

D. 100 MT

Answer: C

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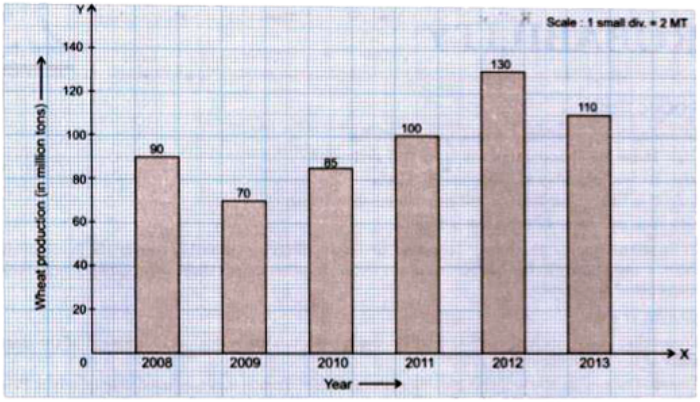
11. Read the bar graph given below :



In which year the production was minimum?

A. 2008

B. 2009

C. 2010

D. 2011

Answer: B

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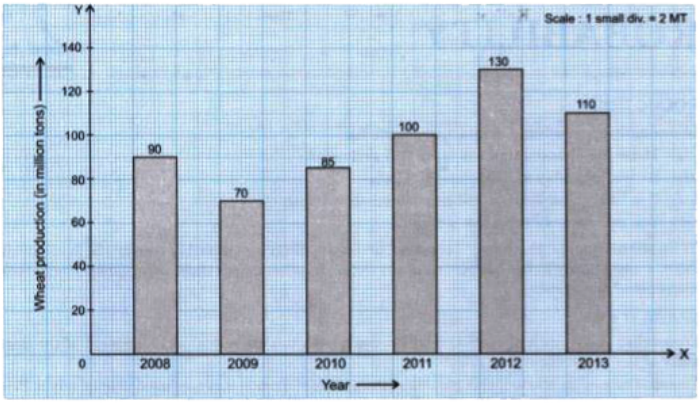
12. Read the bar graph given below :



In which year there was maximum increase in production of wheat?

A. 2010

B. 2011

C. 2012

D. 2013

Answer: C

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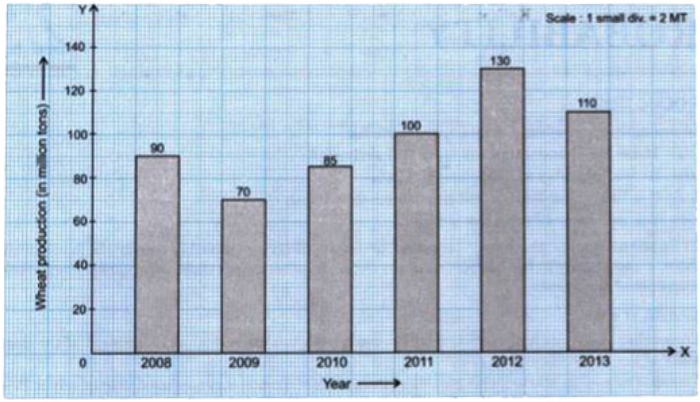
13. Read the bar graph given below :



Find the percentage increase in wheat production in the year 2012.

A. 35

B. 30

C. 40

D. 25

Answer: B

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