5. Data Handling

Q 1 Define raw data.

Mark (1)

Q 2 Define frequency.

Mark (1)

Q 3 Define width or size of the class interval.

Mark (1)

Q 4 Define upper class limit and lower class limit.

Mark (1)

Q 5 What is a circle graph or pie chart?

Mark (1)

Q 6 Define an event.

Mark (1)

Q 7 What is the probability of an event?

Mark (1)

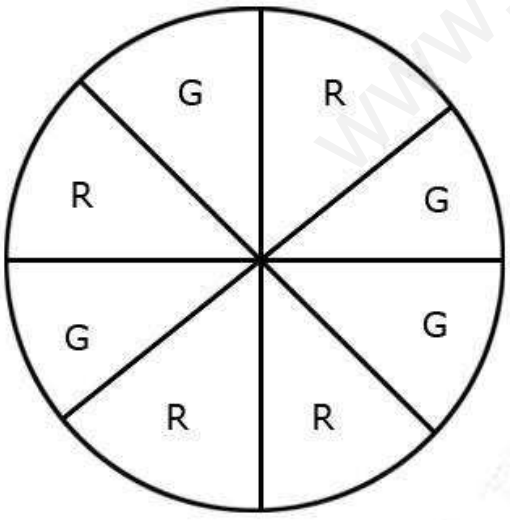
Q 8 In an experiment of tossing a coin once, what is the probability of getting a head?

Mark (1)

Q 9 If a die marked with 1, 2, 3, 4, 5, 6 on its faces is thrown, what is the probability of getting the number 3?

Mark (1)

Q 10



On spinning the wheel,

(i) what will be the probability of getting a green (G) sector?
(ii) what will be the probability of not getting a green (G) sector?

Marks (2)

Q 11 A bag has 10 red marbles and 6 blue marbles. A marble is drawn from the bag without looking into the bag. What is the probability of getting a blue marble?

Marks (2)

Q 12 A bag has 4 red balls and 6 yellow balls. A ball is drawn from the bag without looking into the bag. Find the probability of getting a red ball.

Marks (2)

Q 13 Define random experiment.

Marks (2)

Q 14

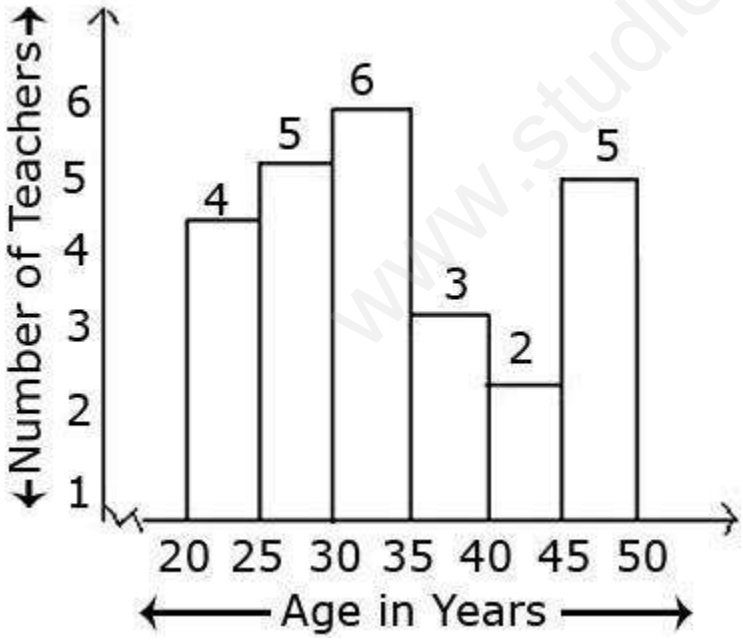
Subject	Number of students
Art	7
Maths	8
Science	6
English	5

Answer the following question from the table given above.

1. Which is the most liked subject?
2. Which is the least liked subject?

Marks (2)

Q 15



Answer the following questions from the above histogram.

1. How many teachers are of age 45 years or more but less than 50 years?
2. How many teachers are of age less than 35 years?

Marks (2)

Q 16 Frequency distribution of income of 20 workers

Class interval (Daily income in Rs)	Frequency (No. of Workers)
100 – 125	5
125 – 150	6
150 – 200	4
200 – 250	3
250 – 300	2

Answer the following questions from the frequency table.

1) What is the class size of the class interval?

2) Which class has the highest frequency?

3) Which class has the lowest frequency?

4) Which class has 3 as its frequency?

Marks (2)

Q 17 Make a discrete frequency distribution table for the given ages of 25 students of class VIII.

15, 16, 16, 14, 17, 17, 16, 15, 15, 16, 16, 17, 15, 16, 16, 14, 16, 15, 14, 15, 16, 16, 15, 14, 15

Marks (2)

Q 18 The following pie chart shows the times spent by a child during a day.

Answer the following questions based on the given pie chart.

1. What proportion of the sector for hours is spent in sleeping?
2. What proportion of the sector for hours is spent in school?

Marks (2)

Q 19 Draw a pie chart for the following data:

Flavours	Percentage of students preferring the flavours
Chocolate	25%
Strawberry	25%
Vanilla	50%

Marks (2)

Q 20 List the outcomes of tossing two coins together.

Marks (2)

Q 21 A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is a black king.

Marks (3)

Q 22 The marks scored by 20 students in a test are given below:
54, 42, 68, 56, 62, 71, 78, 51, 72, 53, 44, 58, 47, 64, 41, 57, 89, 53, 84, 57

(i) Complete the following frequency table.

Marks as class intervals	Tally marks	Frequency (no. of students)
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		

(ii) In which class interval the greatest frequency occurs?

Marks (3)

Q 23 When a die is thrown, list the outcomes of an event of getting

(i) a prime number.
(ii) a number greater than 5.
(iii) a composite number.

Marks (3)

Q 24 A bag contains 3 red and 2 blue marbles. A marble is drawn at random. What is the probability of drawing a blue marble?

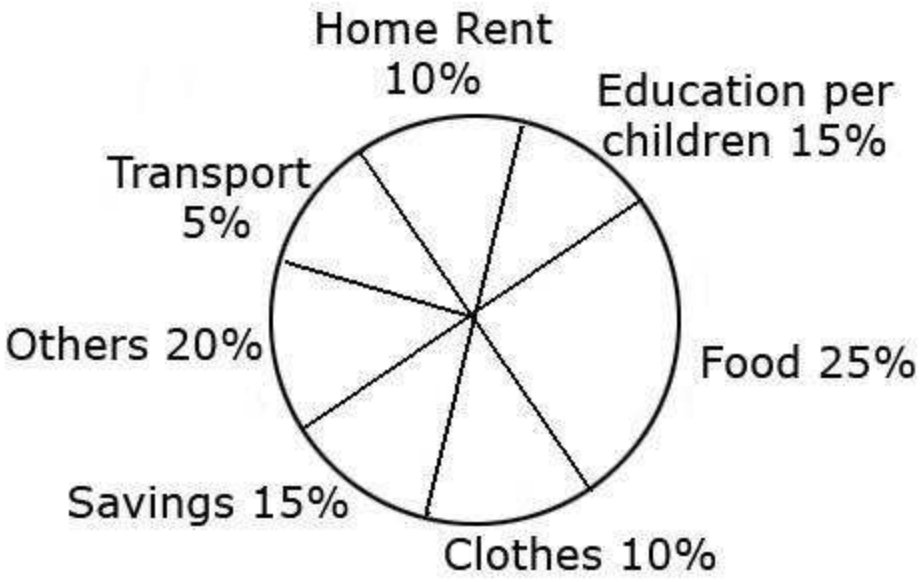
Marks (3)

Q 25 Draw a histogram for the following data:

Class Interval	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Frequency	30	20	10	90	50	10	30	10	10	40

Marks (3)

Q 26 The following pie chart gives the expenditure (in percentage) on various items and savings of a family during a month.



(1) On which item the expenditure is minimum?

(2) Expenditure on which item is equal to the total savings of the family?

(3) If the monthly savings is Rs 4500, what is the monthly expenditure on clothes?

Marks (3)

Q 27 One card is drawn from a pack of 52 cards, each of the 52 cards are equally likely to be drawn. Find the probability that the card drawn is

(i) an ace.
(ii) a face card.
(iii) red.
(iv) 2 of spades.

Marks (4)

Q 28 The number of apples collected from 50 trees is recorded below:
35, 67, 24, 111, 78, 45, 38, 52,15, 25, 73, 84, 65, 18, 82, 63, 78, 142, 23, 69, 32, 56, 12, 15, 55, 98, 71, 12, 9, 62, 6, 138, 102, 123, 46, 89, 110, 128, 48, 19, 53, 85, 70, 112, 148, 133, 63, 80, 98, 96.
Make a group frequency table and represent the data by using a histogram.

Marks (4)

Q 29 When a die is thrown, list the outcomes of an event of getting a
(a) composite number.
(b) non-composite number.
(c) number greater than 4.
(d) number not greater than 3.

Marks (4)

Q 30 Numbers 1 to 20 are written on twenty separate slips (one number on one slip) kept in a box and mixed well. One slip is chosen from the box without looking into it. What is the probability of getting
(i) number 7?
(ii) a number less than 15?
(iii) a number greater than 8?
(iv) a 2-digit number?

Marks (4)

Q 31 Numbers 1 to 10 are written on ten separate slips (one number on one slip), kept in a box and mixed well. One slip is chosen from the box without looking into it. What is the probability of

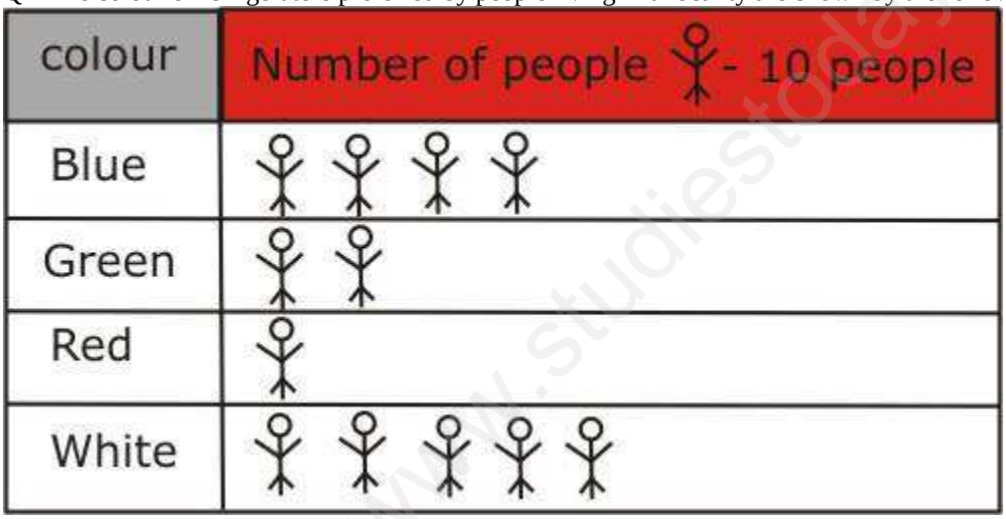
(i) getting a number 6?
(ii) getting a number less than 7?
(iii) getting a number greater than 8?
(iv) getting a one-digit number?
(v) getting a two-digit number?

Marks (5)

Most Important Questions

Q 1 Define raw Data ?

Q 2 The colour of refrigerators preferred by people living in a locality are shown by the following pictograph:



(a) Find the number of people preferring blue colour.
(b) How many people like white colour.

Q 3 A survey was carried out on 17 students of class VIII in a school . Data about the different modes of transport used by them to travel to the school is displayed as pictograph. What can you conclude from the pictograph?

Modes of travelling	Number of students ☺ - student
Private car	☺ ☺ ☺ ☺
Public bus	☺ ☺ ☺ ☺ ☺
School bus	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺

Q 4 The following are the number of electric bulbs purchased for a lodging house during the first four months of a year. Represent the details by a pictograph.

Months	Number of bulbs
January	20
February	26
March	30
April	34

Q 5 The number of Mathematics books sold by a shopkeeper on four consecutive days is shown below:

Days	Sunday	Monday	Tuesday	Wednesday	Thursday
Number of books Sold	48	40	30	50	20

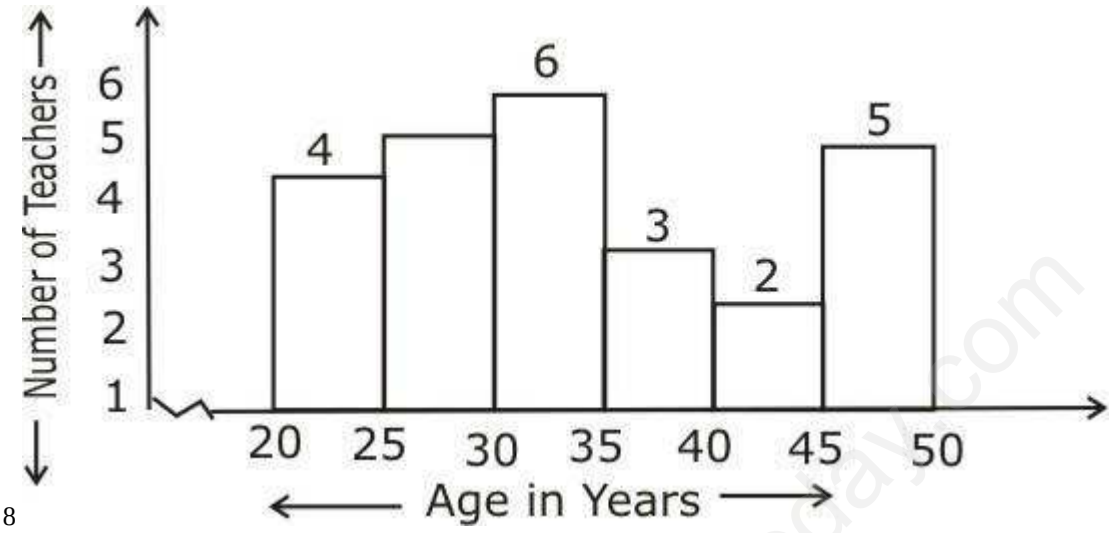
Q 6

Read the above bar graph and give answer of the following questions:
(a) What is the total number of books sold in all days?
(b) On which day the maximum number of books are sold ?

Q 7 The following data gives the amount of loans (in crores of rupees) given out by a bank during five years :

Year	Loans (in crores of rupees)
1995	20
1996	25
1997	40
1998	35
1999	50

Construct a bar graph representing the above information.



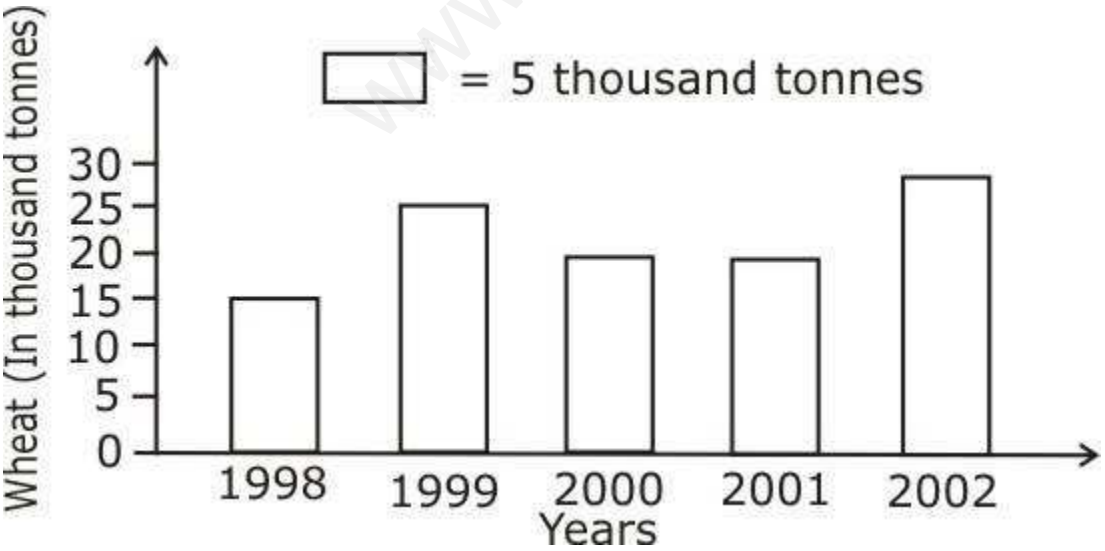
Q 8

Answer the following from the above figure.

1. How many teachers are of age 45 yrs or more but less than 50 years?
2. How many teachers are of age less than 35 years?

Q 9 Bar graph given below shows the amount of wheat purchased by government during the Year 1998-2002.

Bar graph given below shows the amount of wheat purchased by government during the Read the bar graph and write down your observations.



(a) In which year the maximum amount of wheat was purchased ?

(b) In which year the minimum amount of wheat was purchased minimum?

Q 10 The following data represents the Marks obtained by a student in 2003 and 2004. Draw a double bar Graph.

Subject	Math	Science	English	Hindi
2003	30	50	55	50
2004	60	60	45	50

Q 11 Read above double bar graph and give the Answer of following questions:
(a) In which subject the performance of student improve?
(b) In which subject the performance of student deteriorated?
Q 12 Define frequency?

Q 13

Subject	Tally	Number of students
Art	𝍸 ||	7
Math	||||	4
Science	𝍸 |	6
English	𝍸	5

What does the friquency table represent ?
What the frequency of students who like English?
What the frequency of students who like Math?

Q 14 Make discrete frequency distribution table for the ages of 25 students of class VIII.
15, 16, 16, 14, 17, 17, 16, 15, 15, 16, 16, 17, 15, 16, 16, 14, 16, 15, 14, 15, 16, 16, 15, 14, 15
Q 15 Define width or size of the class.

Q 16 In Mathematics following marks were obtained by 25 students. Arrange
these marks in a table using tally marks.
21,10,30,22,33,5,37,12,25,40,18,13,27,28,19 12,3,24,38,21,33,7,17,22,40
Q 17 Frequency distribution table is given for income of 20 workers. Give answer of the following questions.

Class interval (Daily income in Rs.)	Frequency (No. of Workers)
100 – 125	5
125 – 150	6
150 – 200	4
200 – 250	3
250 – 300	2

Answer the following from the frequency table.
(1) What is the class size of the class interval?

(2) Which class has highest frequency?
(3) Which class has lowest frequency?
(4) Which class has 3 as its frequency?

Q 18 Study the following frequency distribution table and answer the questions given below. Frequency Distribution of daily income of 530 workers of a factory.

Class Interval (Daily Income in rupees)	Frequency (Number of workers)
100 -125	45
125 – 150	25
150 – 175	55
175 - 200	125
200 – 225	140
225 - 250	55
250 - 275	35
275 - 300	50
Total	530

(i) What is the size of class interval?
(ii) Which class has the highest frequency?
(iii) Which class has the lowest frequency?
(iv) What is the upper limit of the class interval 250 - 275?
(v) Which two classes have the same frequency?

Q 19 Construct a frequency distribution table for the data on weight (in Kg) of 20 students of a class using intervals 30-35, 35-40 and so on.
40,38,33,48,60,53,31,46,34,36,49,65,42,44,47,38,39.
Q 20 The marks scored by 20 students in a test are given below as 54, 42, 68, 56, 62, 71, 78, 51, 72, 53, 44, 58, 47, 64, 41, 57, 89, 53, 84, 57.
Complete the following frequency table.

Marks in class intervals	Tally marks	Frequency (no. of children)
40 – 50 50 – 60 60 – 70 70 – 80 80 – 90		

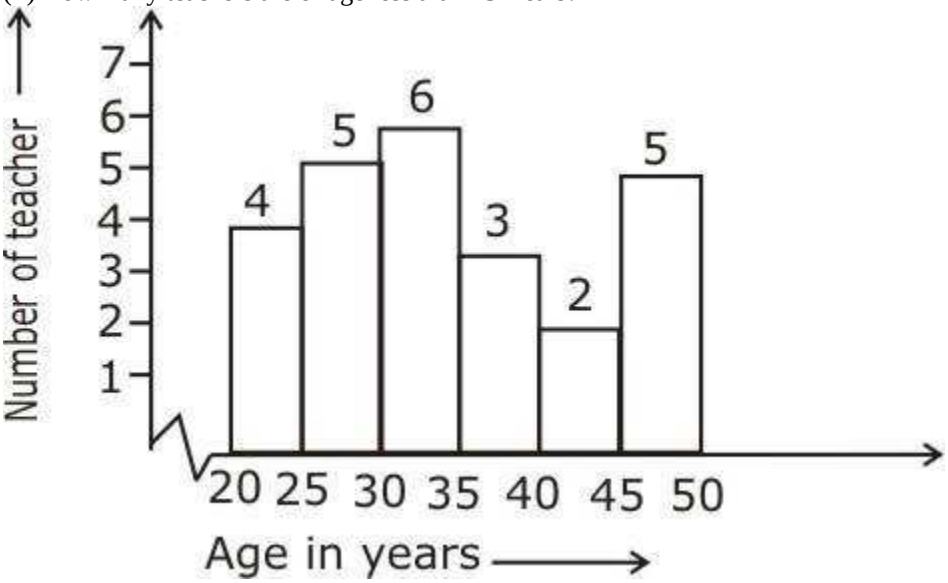
What is the class interval in which the greatest frequency occurs?

Q 21 Following marks (out of 50) obtained in Hindi by 20 students of class VIII. Arrange these marks in distribution table with tally marks.
36,33,18,20,38,22,44,16,5,10,1,39,41,20,31,11 35, 17,6,1

Q 22 Define Histogram?

Q 23 The following graph is histogram, give answers of the following questions:
(i) How many teachers are of age 30 years or more but less than 35 years?

(ii) How many teachers are of age less than 25 Years?



Q 24 The weekly wages (in Rs) of 20 workers in a factory are.
830,835,890,810,835,836,869,845,898,890,820,860,832,833, 855,845,804,808,812,840
Make a frequency table with intervals as 800-810,810-820 and So on.

Q 25 Draw a histogram for the above frequency table.

Q 26 Observe the above histogram and give the answer of following questions:
How many workers earn less than Rs 850?
Which group contains maximum numbers of workers?
How many workers earn Rs 850 and more?

Q 27 What is circle graph or pie chart.

Q 28 The favorite flavors of ice- creams for students of a school is given in percentages as follows. Represent this data in pie chart.

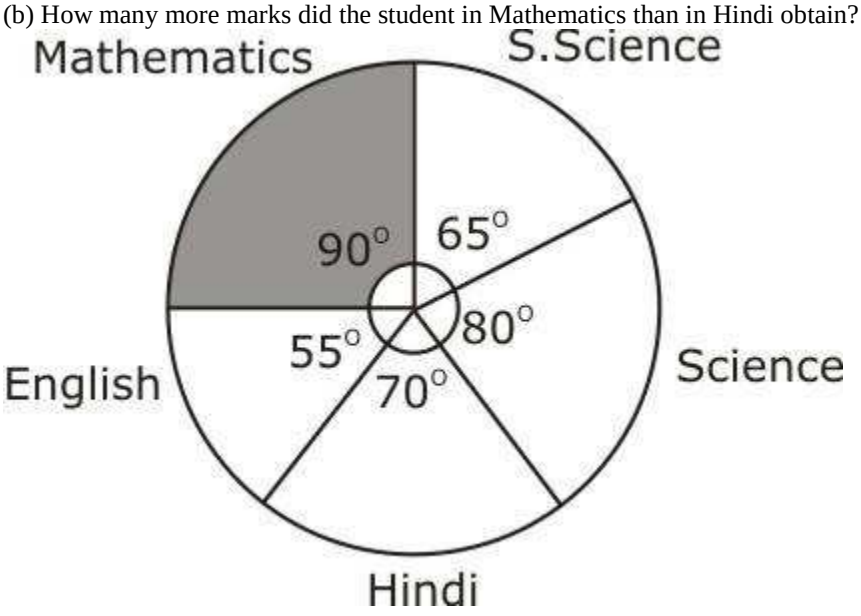
Flavors	Percentage of students Preferring the flavors
Chocolate	50%
Vanilla	25%
Other flavors	25%

Q 29 On a particular day , the sales (in rupees) of different items of a Baker's shop is given below.

Ordinary bread	: 320
Fruit bread	: 80
Cakes and pastries	: 160
Biscuits	: 120
Others	: 40
Total	: 720

Draw a pie chart for the given above information.

Q 30 The adjoining pie chart gives the marks scored in an examination by a student in Hindi, English, Mathematics, Social science and science. If the total marks obtained by the students were 540, answer the following questions:
(a) In which subject did the student score 105 marks?
(b) How many more marks did the student in Mathematics than in Hindi obtain?



Q 31 The number of students in a hostel, speaking different languages is given below. Display the data in a pie chart.

Language	Hindi	English	Marathi	Total
Number of students	50	15	7	72

Q 32 What is the probability of an event?
Q 33 A bag has 3 red balls and 2 yellow balls. A ball is drawn from the bag without looking into the bag. What is the probability of getting a yellow ball?
Q 34 In the experiment of tossing a coin once, what is the probability of getting a head?
Q 35 In tossing two coins together, list the outcomes.
Q 36 A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is a black king.
Q 37 From a well shuffled pack of 52 cards; a card is drawn at random. Find the probability that it is an ace of red colour?
Q 38 If you have a spinning wheel with 3 green sectors, 1 blue sector and 1 red sector, what is the probability of getting a green sector?