1. A standard die is rolled 36 times. The results are shown in the following table.

Score	1	2	3	4	5	6
Frequency	3	5	4	6	10	8

(a) Write down the standard deviation.

(2)

(b) Write down the median score.

(1)

(c) Find the interquartile range.

(3)
(Total 6 marks)

2. Given the following frequency distribution, find

(a) the median;

(b) the mean.

Number (x)	1	2	3	4	5	6
Frequency (f)	5	9	16	18	20	7

Working:

Answers:

(a) .....

(b) .....

(Total 4 marks)

3. The following table gives the examination grades for 120 students.

Grade	Number of students	Cumulative frequency
1	9	9
2	25	34
3	35	p
4	q	109
5	11	120

(a) Find the value of

(i) p;

(ii) q.

(4)

(b) Find the mean grade.

(2)

(c) Write down the standard deviation.

(1)

(Total 7 marks)

4. The number of hours of sleep of 21 students are shown in the frequency table below.

Hours of sleep	Number of students
4	2
5	5
6	4
7	3
8	4
10	2
12	1

Find

(a) the median;

(b) the lower quartile;

(c) the interquartile range.

Working:

Answers:

(a) .....

(b) .....

(c) .....

(Total 6 marks)

5. The table shows the scores of competitors in a competition.

Score	10	20	30	40	50
Number of competitors with this score	1	2	5	k	3

The mean score is 34. Find the value of k.

Working:

Answer:

.....

(Total 4 marks)

6. A box contains 100 cards. Each card has a number between one and six written on it.
The following table shows the frequencies for each number.

Number	1	2	3	4	5	6
Frequency	26	10	20	k	29	11

(a) Calculate the value of k.

(2)

(b) Find

(i) the median;

(ii) the interquartile range.

(5)
(Total 7 marks)

7. The following table shows the mathematics marks scored by students.

Mark	1	2	3	4	5	6	7
Frequency	0	4	6	k	8	6	6

The mean mark is 4.6.

(a) Find the value of k.

(b) Write down the mode.

Working:

Answers:

(a) .....

(b) .....

(Total 6 marks)

8. In a school with 125 girls, each student is tested to see how many sit-up exercises (sit-ups) she can do in one minute. The results are given in the table below.

Number of sit-ups	Number of students	Cumulative number of students
15	11	11
16	21	32
17	33	p
18	q	99
19	18	117
20	8	125

(a) (i) Write down the value of p.

(ii) Find the value of q.

(3)

(b) Find the median number of sit-ups.

(2)

(c) Find the mean number of sit-ups.

(2)

(Total 7 marks)

9. The table below shows the marks gained in a test by a group of students.

Mark	1	2	3	4	5
Number of students	5	10	p	6	2

The median is 3 and the mode is 2. Find the **two** possible values of p.

Working:

Answer:

……..

(Total 6 marks)

10. The population below is listed in ascending order.

5, 6, 7, 7, 9, 9, r, 10, s, 13, 13, t

The median of the population is 9.5. The upper quartile Q_3 is 13.

(a) Write down the value of

(i) r;

(ii) s.

(b) The mean of the population is 10. Find the value of t.

(Total 6 marks)

11. At a conference of 100 mathematicians there are 72 men and 28 women. The men have a mean height of 1.79 m and the women have a mean height of 1.62 m. Find the mean height of the 100 mathematicians.

Working:

Answer:

.....

(Total 4 marks)

12. From January to September, the mean number of car accidents per month was 630. From October to December, the mean was 810 accidents per month.

What was the mean number of car accidents per month for the whole year?

Working:

Answer:

.....

(Total 6 marks)

13. The mean of the population $x_1, x_2, \ldots\ldots, x_{25}$ is m. Given that $\sum_{i=1}^{25} x_i = 300$ and

$\sum_{i=1}^{25} (x_i - m)^2 = 625$, find

(a) the value of m;

(b) the standard deviation of the population.

Working:

Answers:

(a) .....

(b) .....

(Total 4 marks)