

Frequency Tables

Please write clearly in block capitals

Forename:
Surname:

Materials

For this paper you must have:

- mathematical instruments



You *can* use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

- In all calculations, show clearly how you work out your answer.

- 1** A class of 40 students measure their shoe sizes and summarise this information in a frequency table as shown. (Level 3)

Shoe Size	Frequency
3	4
4	7
5	15
6	12
7	2

- 1(a)** What is the modal shoe size?

[1 mark]

Answer _____

- 1(b)** What is the median shoe size?

[1 mark]

Answer _____

- 1(c)** Calculate the mean shoe size for the class.

[2 marks]

Answer _____

Turn over for next question

Turn over ►

2 Data on the heights of 12 students has been collected.

(Level 3)

150cm, 136cm, 142cm, 155cm, 160cm, 163cm
145cm, 139cm, 137cm, 154cm, 147cm, 149cm

2(a) Summarise the data in the grouped frequency table below.

[2 marks]

Heights (cm)	Frequency
$130 < h \leq 140$	
$140 < h \leq 150$	
$150 < h \leq 160$	
$160 < h \leq 170$	

2(b) What is the median height?

[1 mark]

Answer _____

2(c) Calculate the mean height for the class.

[1 mark]

Answer _____

Turn over for next question

- 3** Data has been collected on the number of times 50 students exercise a week.
This has been summarised in the frequency table below.

(Level 3)

Number of times a student exercises in a week	Frequency
1	5
2	16
3	15
4	7
5	7

- 3(a)** Calculate the mean number of times students exercise in a week.

[2 marks]

Answer _____

- 3(b)** What is the median number of times a student exercises in a week?

[1 mark]

Answer _____

Turn over for next question

Turn over ►

- 4** A class of 35 students were asked how many extra toppings they like to have on pizza. (Level 4)

The data has been summarised in the frequency table below.

Extra toppings	Frequency
0	2
1	4
2	17
3	10
4	2

- 4(a)** Calculate the mean number of extra toppings taken.

[2 marks]

Answer _____

- 4(b)** There are 910 students in the school.

Calculate an estimate for the number of students in the school who choose exactly one extra topping.

[1 mark]

Answer _____

- 4(c)** Give two assumptions that must be true for this to be a reliable estimate

[2 marks]

Answer _____

- 5 Data on the time taken for 90 students to complete a 200m race has been summarised in the frequency table below.

(Level 4)

Time taken (seconds)	Frequency
24	18
25	19
26	17
27	20
28	16

What is the mean time taken to run the 200m race?

[2 marks]

Answer _____



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Turn over ►

- 6 The number of pairs of shoes owned by a class of 40 students has been collected and summarised in the frequency table below. (Level 5)

However, some of the data has been lost.

Pairs of shoes	Frequency
1	
2	12
3	
4	8
5	3

The mean of the data is 2.9.

Use this information to determine the missing frequencies in the table.

[3 marks]

Answer _____



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