GCSE QUESTIONS

Q1. NON-CALCULATOR

The table below shows some information about the number of times each student in a class was late last week.

Lates	Frequency
0	15
1	8
2	3
3	3
4	1

Work out the mean number of lates per student.

....

(Total for question = 3 marks)

Q2. CALCULATOR ALLOWED

Colour	Number of students
red	7
green	6
yellow	5
blue	10
other	

Debra recorded the favourite colour of each of the 30 students in her class.

The incomplete table shows some information about her results.

(a) Complete the table for Debra's results.

(1)

(b) What is the modal colour?

....

(1)

(Total for question = 2 marks)

Q3. CALCULATOR ALLOWED

The table shows some information about the dress sizes of 25 women.

Dress size	Number of women
8	2
10	9
12	8
14	6

(a)   Find the median dress size.

....

(1)

3 of the 25 women have a shoe size of 7

Zoe says that if you choose at random one of the 25 women, the probability that she has either a shoe size of 7 or a dress size of 14 is $\dfrac{9}{25}$ because

$$\frac{3}{25} + \frac{6}{25} = \frac{9}{25}$$

(b)   Is Zoe correct?

You must give a reason for your answer.

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(1)

(Total for question = 2 marks)

Q4. CALCULATOR ALLOWED

The table shows information about the numbers of points scored by 30 students in a quiz.

Number of points	Frequency
0	4
1	3
2	7
3	5
4	6
5	5

(a) Find the modal number of points.

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(1)

(b) Work out the total number of points scored.

....

(2)

(Total for question = 3 marks)

Q5. CALCULATOR ALLOWED

Ross rolled an ordinary dice 30 times.

The frequency table gives information about his results.

Score	Frequency
1	7
2	5
3	4
4	4
5	6
6	4

Ross worked out the mean score as 8

(a) Explain why it is impossible for the mean score to be 8

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....

(1)

Graham also worked out the mean score.

Here is his working.

$1 \times 7 + 2 \times 5 + 3 \times 4 + 4 \times 4 + 5 \times 6 + 6 \times 4 = 99$

$99 \div 6 = 16.5$

The mean score is 16.5

(b) Describe the mistake Graham made in his method to work out the mean score.

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....

(1)

(Total for question = 2 marks)

Q6. CALCULATOR ALLOWED

The table shows information about the heights of 80 plants.

Height (h cm)	Frequency
$10 < h \leqslant 20$	7
$20 < h \leqslant 30$	13
$30 < h \leqslant 40$	14
$40 < h \leqslant 50$	12
$50 < h \leqslant 60$	16
$60 < h \leqslant 70$	18

(a) Find the class interval that contains the median.

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(Total for question = 1 mark)

Q7. CALCULATOR ALLOWED

The table gives information about the times taken, in seconds, by 18 students to run a race.

Time (t seconds)	Frequency
$5 < t \leqslant 10$	1
$10 < t \leqslant 15$	2
$15 < t \leqslant 20$	7
$20 < t \leqslant 25$	8

Work out an estimate for the mean time.
Give your answer correct to 3 significant figures.

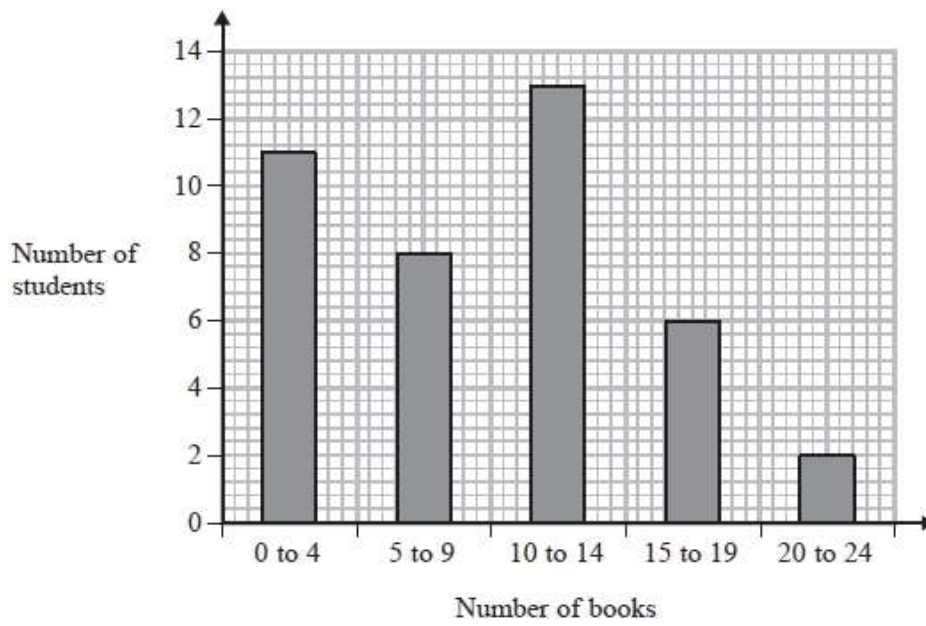... seconds

(Total for question = 3 marks)

Q8. CALCULATOR ALLOWED

Fran asks each of 40 students how many books they bought last year.

The chart below shows information about the number of books bought by each of the 40 students.

Show that an estimate for the mean number of books bought is 9.5

You must show all your working.

(Total for question = 4 marks)