Edexcel GCSE
Mathematics (Linear) – 1MA0

FREQUENCY TABLES

Materials required for examination
Ruler graduated in centimetres and
millimetres, protractor, compasses,
pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to
spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication
will be assessed – you should take particular care on these questions with your spelling, punctuation
and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. Amanda collected 20 leaves and wrote down their lengths, in cm.

   Here are her results.

   5   6   5   2   4   5   8   7   5   4

   7   6   4   3   5   7   6   4   8   5

   (a) Complete the frequency table to show Amanda's results.

Length in cm	Tally	Frequency
2		
3		
4		
5		
6		
7		
8		

   (2)

   (b) Write down the modal length   ………………………cm **(1)**

   (c) Work out the range.   ………………………cm **(1)**

   (4 marks)

2. Rosie had 10 boxes of drawing pins.

   She counted the number of drawing pins in each box.

   The table gives information about her results.

Number of drawing pins	Frequency	
29	2	
30	5	
31	2	
32	1	

   Work out the mean number of drawing pins in a box.

   ....
   (3 marks)

3. Andy did a survey of the number of cups of coffee some pupils in his school had drunk yesterday.

The frequency table shows his results.

Number of cups of coffee	Frequency
2	1
3	3
4	5
5	8
6	5

(a) Work out the number of pupils that Andy asked.　　.....................................

(2)

(b) Work out the mean number of cups of coffee drunk.　　.....................................

(3)
(5 marks)

4. 20 students scored goals for the school hockey team last month.
The table gives information about the number of goals they scored.

Goals scored	Number of students	
1	9	
2	3	
3	5	
4	3	

(a) Write down the modal number of goals scored.

....
(1)

(b) Work out the range of the number of goals scored.

....
(1)

(c) Work out the mean number of goals scored.

....
(3)
(5 marks)

5. Bob asked each of 40 friends how many minutes they took to get to work.

The table shows some information about his results.

Time taken (*m* minutes)	Frequency
$0 < m \le 10$	3
$10 < m \le 20$	8
$20 < m \le 30$	11
$30 < m \le 40$	9
$40 < m \le 50$	9

a) Work out an estimate for the mean time taken.

.... minutes   **(4)**

b) State the modal class interval

....   **(1)**

c) Find the group containing the median

....   **(2)**

(7 marks)
_____

6. The table shows information about the numbers of hours 40 children watched television one evening.

Number of hours (h)	Frequency
$0 \leqslant h < 1$	3
$1 \leqslant h < 2$	8
$2 \leqslant h < 3$	7
$3 \leqslant h < 4$	10
$4 \leqslant h < 5$	12

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

(1)

....

(b) Work out an estimate for the mean number of hours.

(4)

.... hours

(5 marks)

7. 80 people work in Jenny's factory.
The table shows some information about the annual pay of these 80 workers.

Annual pay (£x)	Number of workers
10 000 < x ≤ 14 000	32
14 000 < x ≤ 16 000	24
16 000 < x ≤ 18 000	16
18 000 < x ≤ 20 000	6
20 000 < x ≤ 40 000	2

(a) Write down the modal class interval.

....
(1)

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

....
(2)

(c) Work out an estimate for the mean annual pay.

....
(3)

(d) Why is your answer to part (c) and estimate?

....

....

....
(1)
(7 marks)

8. Caleb measured the heights of 30 plants.
The table gives some information about the heights, h cm, of the plants.

Height (h cm) of plants	Frequency		
$0 < h \leq 10$	2		
$10 < h \leq 20$	8		
$20 < h \leq 30$	9		
$30 < h \leq 40$	7		
$40 < h \leq 50$	4		

(a) Work out an estimate for the mean height of a plant.

....
(3)

(b) Write down the modal class interval.

....
(1)

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

....
(2)

(d) Why is your answer to part (a) and estimate?

....

....

....
(1)
(7 marks)

9. Marcus collected some pebbles.
He weighed each pebble.

The grouped frequency table gives some information about weights.

Weight (*w* grams)	Frequency		
$50 \leq w < 60$	5		
$60 \leq w < 70$	9		
$70 \leq w < 80$	22		
$80 \leq w < 90$	27		
$90 \leq w < 100$	17		

(a) Work out an estimate for the mean weight of the pebbles.

....
(3)

(b) Write down the modal class interval.

....
(1)

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

....
(2)

(d) Why is your answer to part (a) and estimate?

....

....

....
(1)
(7 marks)