

# FREQUENCY TABLES

[ESTIMATED TIME: 60 minutes]

# GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[3 marks]

The table shows information about the mark scored on an examination question by each of 40 students.

Mark	Number of students
0	13
1	2
2	3
3	8
4	14

Work out the mean mark.

.....

**2.****[3 marks]**

Becky counted the number of matches in each of 50 boxes.  
The table shows information about her results.

<b>Number of matches</b>	<b>Frequency</b>
45	3
46	7
47	12
48	23
49	4
50	1

Work out the mean number of matches.

.....

**3.****[2 marks]**

The table shows information about the numbers of goals scored by some football teams last week.

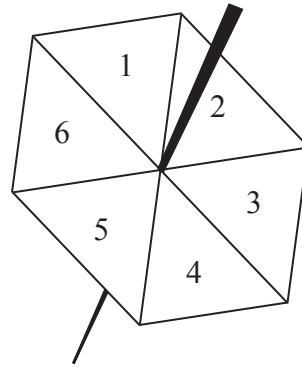
<b>Number of goals</b>	<b>Number of teams</b>
0	5
1	8
2	2
3	3
4	2

Work out the total number of goals scored by these football teams last week.

.....

Becky has a biased 6-sided spinner.  
 She spins the spinner 25 times.  
 She records the score for each spin.  
 The table shows information about her scores.

Score	Frequency
1	9
2	6
3	3
4	2
5	1
6	4



(a) Find her median score.

.....  
 (2)

(b) Work out her mean score.

.....  
 (3)

5.

[2 marks]

The table gives information about the shoe sizes of 67 people.

Shoe size	6	7	8	9	10
Number of people	20	19	0	26	2

Find the median shoe size.

.....

6.

[3 marks]

The table shows information about the amount of money, in dollars, spent in a shop in one day by 80 people.

Money spent ( $x$ dollars)	Frequency
$0 < x \leq 20$	24
$20 < x \leq 40$	20
$40 < x \leq 60$	9
$60 < x \leq 80$	12
$80 < x \leq 100$	15

Work out an estimate for the total amount of money spent in the shop that day.

..... dollars

A school has 60 teachers.

The table shows information about the distances, in km, the teachers travel to school each day.

Distance ( $d$ km)	Frequency
$0 < d \leq 5$	12
$5 < d \leq 10$	6
$10 < d \leq 15$	4
$15 < d \leq 20$	6
$20 < d \leq 25$	14
$25 < d \leq 30$	18

(a) Write down the modal class.

.....

(1)

(b) Work out an estimate for the total distance travelled to school by the 60 teachers each day.

..... km

(3)

Mr Rowland has a class of 30 students.

He gave them 24 words to spell.

The table shows information about the number of correct spellings for each student.

Number of correct spellings	Frequency
0 – 4	1
5 – 9	5
10 – 14	6
15 – 19	10
20 – 24	8

(a) Write down the modal class.

.....  
(1)

(b) Work out an estimate for the mean number of correct spellings.  
Give your answer to 1 decimal place.

.....  
(4)

Kim asked 40 people how many text messages they each sent on Monday.  
The table shows her results.

Number of text messages sent	Frequency
0 to 4	6
5 to 9	3
10 to 14	5
15 to 19	12
20 to 24	14

(a) Write down the modal class.

.....  
(1)

(b) Calculate an estimate for the mean number of text messages sent.

.....  
(4)

(c) What percentage of these 40 people sent 20 or more text messages?

..... %  
(2)

The table shows information about the numbers of text messages sent by 40 teenagers in one day.

Number of text messages	Number of teenagers	Mid-interval value	
0 to 2	3	1	
3 to 5	6	4	
6 to 8	10		
9 to 11	15		
12 to 14	5		
15 to 17	1		

(a) Write down the modal class.

.....  
(1)

(b) (i) Work out an estimate for the mean number of texts sent by the 40 teenagers in one day.

.....  
(5)



The table shows information about the time, in minutes, spent on homework by each of 32 pupils in one night.

Time ( $t$ minutes)	Number of pupils
$0 < t \leq 20$	7
$20 < t \leq 40$	16
$40 < t \leq 60$	3
$60 < t \leq 80$	6

- (a) Calculate the percentage of the 32 pupils who spent more than 60 minutes on their homework.

..... %  
(2)

- (b) Calculate an estimate for the total time spent on homework by the 32 pupils.

..... minutes  
(3)

The table shows information about the number of bananas the students in class 1B ate in one week.

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

- (a) Find the mean number of bananas.

.....  
(3)

There are 575 students in the school.

The numbers of bananas eaten by students in class 1B are typical of the numbers eaten by students in the whole school.

- (b) Work out an estimate for the number of students in the whole school who will eat exactly one banana next week.

.....  
(3)

The table shows information about the ages of 24 students.

Age (years)	Number of students
16	9
17	3
18	8
19	4

(a) (i) Write down the mode of these ages.

..... years

(ii) Find the median of these ages.

..... years

(iii) Calculate the mean of these ages.

..... years

**(6)**

Another student, aged 18, joins the group.

(b) (i) Without calculating the new mean, state whether the mean will increase or decrease or stay the same.

.....

(ii) Give a reason for your answer to (i).

.....

.....

.....

**(2)**

There are four grades of egg.

The table shows how many eggs of each grade were laid by a hen last year.

Grade	Number of eggs
Extra large	55
Large	48
Medium	35
Small	12

- (a) In the first four months of this year, the hen laid 60 eggs.

Work out an estimate for the number of Extra large eggs the hen laid in these four months.

.....  
(3)

- (b) The table below shows how the grade of an egg is related to its weight.

Grade	Weight ( $w$ grams)
Extra large	$w \geq 73$
Large	$63 \leq w < 73$
Medium	$53 \leq w < 63$
Small	$w < 53$

Work out an estimate for the total weight of 48 Large eggs and 35 Medium eggs.

..... g  
(3)

- (c) Jody wants to use the information in the table to work out an estimate for the total weight of all the eggs laid by the hen last year.

Explain why it is difficult to do this.

.....  
(1)