

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Mean

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

- 1) 5 girls obtained the following marks in their Geography exam

42, 67, 75, 86, 90

What is their mean mark ?

Answer[1]

- 2) The following are the ages of a group of athletes

15, 22, 18, 26, 19

What is their mean age?

Answer[2]

- 3) In a small village in England in February last year, the temperatures were recorded as follows

-7 4 -6 5 -3 0 3 4

What is their mean temperature?

Answer[2]

4) Jamie's last six maths test results were as follows:

8, 5, 4, 8, 7, 10

What is his mean result?

Answer[2]

5) The heights, in metres, of a group of teenagers who attend a club is shown below.

1.6	1.7	1.6	1.8	1.8
1.7	1.5	1.5	1.7	1.6

What is the mean height? Write your answer to 1 decimal place.

Answer[2]

6) Consider the following set of numbers.

12 , 6 , 12 , 20 , 16 , 12 , 30 , 20

Work out:

a) The range

Answer[1]

b) The mean. Write your answer to the nearest whole number.

Answer[2]

7) Sophia conducted a survey in her street to know the number of pets per family.
The following are the results obtained:

3, 1, 2, 0, 1, 3, 2, 0, 1, 2, 2, 4

a) Find the range

Answer[1]

b) Find the mean.

Answer[2]

8) These are the marks for Ahmad's Arabic tests throughout the year.

70	44	82	51	74
58	77	85	50	81

Work out

i. The range of the marks

Answer[2]

ii. The mean of the marks.

Answer[2]

9) a) Fill in the frequency table.

12, 17, 13, 13, 12, 17, 15, 12, 12, 17

Age	Frequency
12	
13	
15	
17	
Total	10

b) Work out the **mean**.

Mean = _____ [5]

10) The heights, to the nearest centimetre, of 10 girls are:

159, 155, 153, 154, 157, 162, 152, 160, 161 and 154. Find:

(i) their **mean** height

Ans: _____ cm

(ii) the **range** of their heights

Ans: _____ cm

(3 marks)

11) A survey about the number of children in each family was carried out.

Family	Number of Children
Family Borg	4
Family Gatt	3
Family Axisa	2
Family Vella	3
Family Zarb	1
Family Attard	5

a) Work out the mean number of children per family.

Ans: _____

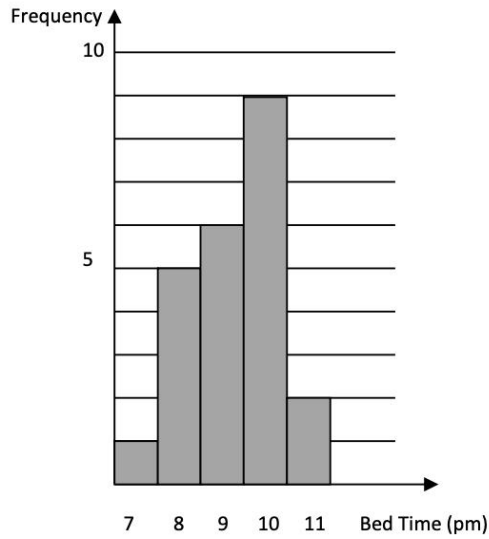
b) Work out the range of the number of children in these families.

Ans: _____

(3 marks)

12) A class of students were asked at what time they go to bed. The results are show in a bar chart below

a) What is the least common time for going to bed?



Answer[1]

b) What is the range ?

Answer[1]

c) Put the bedtimes of all the students in order. The first few have been done for you.

7 pm	8 pm	8 pm	8 pm				

[1]

d) What is the mean bedtime (to the nearest minute) ?

Answer[2]

- 16) In a class there are 30 students. The table shows the number of students that were **present** in the class for five days last week.

Days of the week	Monday	Tuesday	Wednesday	Thursday	Friday
Number of students present	26	28	27	24	25

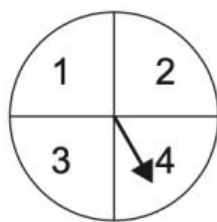
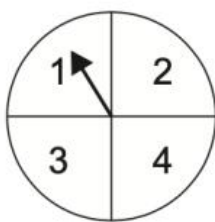
- a) On which day of the week was there the **biggest number of absent students**?

[1]

- b) Calculate the **mean** number of students **present** each day for that particular week.

Answer.....[2]

- 17) Jade has a game where she spins two spinners and add the scores. She then records the score on a table.



		Spinner 1			
		1	2	3	4
Spinner 2	+				
	1				
	2				
	3				
4	5				

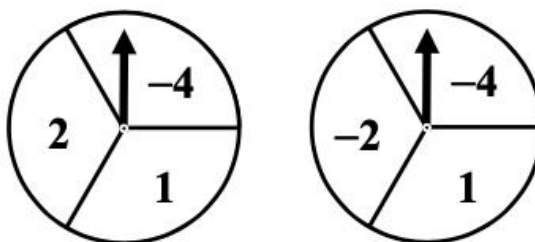
- b) Fill in the table above with all the possible results.

[2]

- c) What is the mean score? Write your answer to the nearest whole number.

Answer.....[2]

18) The spinners below are spun together and the two numbers are then **multiplied**.



a) Fill in the possibility space to show all the possible scores.

		First Spinner		
		-4	1	2
Second Spinner	×			
	-4	16	-4	
	-2		-2	-4
	1	-4	1	

b) What is the range of the scores?

Answer.....[2]

c) What is the mean score? Write your answer to the nearest whole number.

Answer.....[2]

19) Stephanie and Alex are comparing how long it takes them to get to work. The table below shows their journey times in minutes each day for two weeks.

Stephanie's time in minutes	16	22	19	21	26	27	23	20	25	19
Alex's time in minutes	23	18	20	24	27	20	19	73	21	21

i. Work out the mean score for Stephanie.

Answer.....[2]

ii. Work out the mean score for Alex. Write your answer to 1 decimal place.

Answer.....[2]

iii. Who has the longest journey time?

Answer.....[1]

20) The following are the times, in minutes, taken by a group of 18 children to arrive at school from home.

3	24	8	15	9	22
19	15	11	7	11	9
15	10	22	6	10	18

What is the mean of this data? Write your answer to 3 significant figures.

Answer [2]

21) ALFA batteries are testing how long their batteries last in a torch.

The experiment gave the following readings (in hours) for the **ALFA** batteries.

<i>ALFA</i>	1.5	2	2	2.5	3	3	3	3.5	4	4
<i>Battery</i>	4.5	5	5	5	5.5	6	6	6	6	6
<i>lifetime</i>										
<i>(hours)</i>	6	6.5	7	7	7.2	7.5	8	8.5	9	9

What is the mean lifetime (in hours) of the batteries? Write your answer to 2 significant figures

Answer[2]

22) A motorist spent the following amounts of petrol each month last year,

£110.28, £96.83 , £102.43, £88.77, £105.69, £111.51, £103.23, £96.34, £91.98, £106.89

What is the mean monthly spend on petrol last year?

Answer £[2]

- 23) The following are the number of goals scored in each game played by a football team this season,

2 0 1 2 1 0 0 3 2 4 1 2 1 1
 2 1 1 2 3 2 4 3 1 0 2 0 0 2
 3 4 2 0 0 1 1 3 2 2 0 1 2 0

- a) Complete the following frequency table:

Number of goals	0	1	2	3	4
Frequency	10				

[2]

- b) Write down the mean number of goals scored to 1 decimal place.

Answer[1]

- 24) The mean mass of 12 boys is 52 kg. The mean mass of 15 girls is 44 kg.

- (i) Work out the **total** mass of the 12 boys.

Total mass = _____ kg

- (ii) Work out the **mean** mass of the 27 children. (Give your answer correct to the nearest kilogram.)

Mean mass = _____ kg

(5 marks)

25) The values below show the **goals scored** by all the football teams in the English Premier League season 2015-2016.

22 95 36 55 30 29 49 68 47 39
64 65 77 53 57 62 29 56 87 60

(a) How many teams played in the English Premier League 2015-2016 season?

Ans: _____ teams

(b) How many teams scored **between 50 and 70 goals**?

Ans: _____ teams

(c) What is the **range** of goals scored?

Ans: _____ goals

(d) Work out the **mean** number of goals scored.

Ans: _____ goals
(5 marks)

26) The table shows the amount of rainfall recorded in five towns on 4th March.

Town	Rainfall
Sliema	36 mm
Hamrun	48 mm
B'Kara	38 mm
Paola	43 mm
Zurrieq	55 mm

- a) Find the range of rainfall recorded.

Ans _____ mm

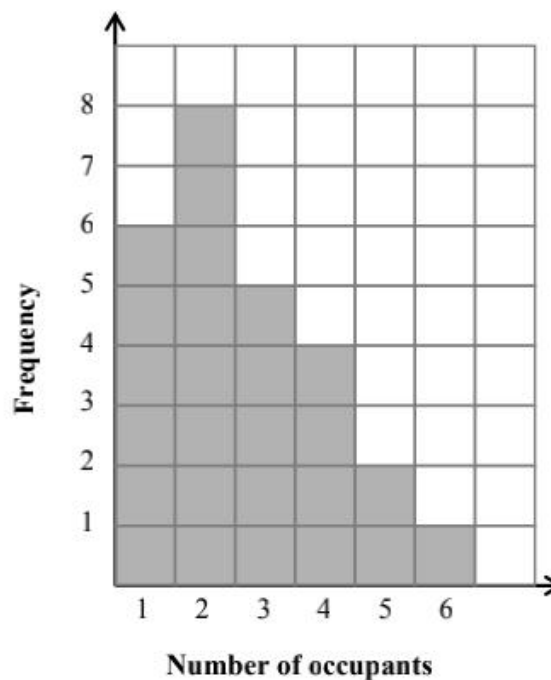
- b) Calculate the mean rainfall recorded on 4th March.

Ans _____ mm

- c) In which towns was the recorded rainfall greater than the mean for the day?

(5 marks)

- 27) A survey was conducted to find the number of occupants in cars passing in front of a school. The results are shown in the bar chart.



- (a) Complete the table below.

Number of Occupants	Frequency	Total
1	6	$1 \times 6 = 6$
2		
3		
4		
5		
6		
Total		

- (b) Work out the mean number of occupants in each car. Write your answer to the nearest whole number.

Ans: Mean = _____ [6]

28) The heights of six boys are 1.53 m, 1.49 m, 1.60 m, 1.65 m, 1.90 m and 1.43 m.

- (i) Work out the **mean** height of the six boys.

Mean = _____ metres

- (ii) Five other boys join the six boys to form a football team. The mean of these five boys is 1.55 m. Work out the **mean** of the eleven boys.
Give your answer correct to **2 decimal places**.

Mean = _____ metres

5 marks