

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Mode

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) Write down the mode of the following numbers.

11 , 15 , 11 , 14 , 14 , 13 , 14

Answer [1]

- 2) Six students obtained the following marks in a Geography test : 58, 70, 42, 65 51 and 65. What is the mode in this set of marks?

Answer [1]

- 3) Write the mode of the following set of numbers.

13 , 12 , 11 , 13 , 10 , 13

Answer [1]

- 4) The marks obtained by 7 students in a Computer Science exam were 2, 3, 4, 6, 6, and 8. What is the mode of these marks?

Answer [1]

- 5) The shoe sizes of a group of children are:

38, 40, 39, 38, 39, 40, 39.

What is the mode of these sizes?

Answer [1]

6) From the following set of numbers:

36 , 32 , 37 , 31 , 32 , 35 , 32 , 34 , 37

Find the mode

Answer [1]

7)

10	5	8	20	8	1	4
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For the numbers above, find

(a) the mode

Answer: _____

(b) the range

Answer: _____

(3 marks)

8)

5, 5, 7, 7, 9, 9, 9, 11, 11, 11, 11

Use the above numbers to find the

(a) mode

Answer: _____

(b) range

Answer: _____

[2]

9) Consider the following set of numbers.

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

Work out:

(a) the mode.

Ans: _____ [1]

(b) What is the range of this data?

Answer [1]

10) The temperatures at noon for a certain week were as follows:

24°C, 22°C, 24°C, 23°C, 21°C, 23°C, 24°C.

a) What is the mode in this set of temperatures?

_____ [1]

b) What is the range of this data?

Answer [1]

11) 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 mode of this data?

Answer [2]

12) The marks of a Maths test of a class of 20 students are as follows:

65	70	55	45	80	77	33	62	82	70
54	63	75	70	82	63	59	23	45	28

What is the mode of this data?

Answer [2]

13) The set of numbers 1, 2, 2, 3, 3, 3, 4, 4, 4, 5, 5, 6 have

- (A) no mode (B) mode of 3 and 4 (C) mode of 1 and 6
(D) mode of 6

Which statement(s) is/are correct

Answer [2]

14) Find the **mode, or modes, if any**, for each of the following:

(i) 80, 100, 100, 100, 120, 130, 200.

Ans: _____

(ii) 80, 80, 100, 100, 120.

Ans: _____

(iii) 80, 80, 100, 100, 120, 120.

Ans: _____

[3]

- 15) Fabian asked his school friends about their favourite summer activity. Their responses are :

swimming reading swimming hiking swimming swimming
 reading hiking hiking swimming swimming gardening
 hiking swimming gardening swimming reading hiking

What is the modal activity?

Answer [2]

- 16) Fabienne asked her friends what they like to watch on television. They responded with the following:

Film News Film Documentary Sports Quiz
 Film Film Quiz Documentary News News

- a) **Fill in** the empty cells in the following table.

TV PROGRAMME	TALLY	FREQUENCY
Film		
Quiz		
News		3
Documentary		
Sports		1
TOTAL		12 Students

[2]

- b) Use the table to name the **mode**.

Answer [1]

- 17) Ruth asked the students in her class which was their favourite colour. She recorded this in the table below :

yellow	red	pink	violet	black
pink	black	orange	pink	red
red	yellow	black	violet	pink

Which was the **modal** colour?

Ans: _____ modal colour [1]

- 18) Julian noticed the colours of the cars that passed in front of his home last Sunday morning. The table shows his result.

Colour of the cars	Silver	Green	Red	Black	White
Number of cars	5	2	3	6	4

a) How many cars drove by Julian's home last Sunday morning?

b) What was the **modal** colour of the cars?

[2]

- 19) Andrew threw a **six** sided die **30 times**. The table shows the scores obtained.

SCORE	1	2	3	4	5	6
FREQUENCY	2	3	6	8		5

- (i) Fill in the missing space in the given table to show the number of times that a score of 5 was obtained.

[1]

- (ii) What is the **modal score**?

Answer [1]

- 20) A college has 250 students. The number of days that students were absent in a particular period of 15 school days was recorded as follows:

Days absent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No. of students	18	11	12	8	15	20	19	16	17	13	15	11	8	5	4

- (i) How many students were never absent during that period?

Answer

3 marks

- (ii) Write down the mode.

Answer **1 mark**

- 21) The children in a class were asked how many pets they have at home. This information is shown in the table below.

Number of pets	0	1	2	3	4
Number of children	4	6	5	7	2

- a) What is the total number of children in this class?

Ans: _____

- b) What is the modal number of pets?

Ans: _____

- c) What is the range of the number of pets?

Ans: _____

- d) How many children have more than 2 pets?

Ans: _____

(4 marks)

22) 24 students were given an English test.

Their teacher marked the test and showed the results in this table.

Mark	Frequency
4	2
5	3
6	8
7	6
8	4
9	1

(i) What is the range of the marks?

Answer

1 mark

(ii) What is the mode of the marks?

Answer

1 mark

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 modal number of goals scored.

Answer[1]

24) Consider the nursery rhyme:

Twinkle, Twinkle Little Star, how I wonder what you are.

Complete the following table, filling in the frequency for each letter. There are 44 letters in all, some of which are repeated.

3 marks

Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
Frequency	3	0	0	1	5	0	0	2					
Letter	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Frequency													

Which letter is the mode?

Answer[1]

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

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

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

What is the modal lifetime (in hours) of the batteries?

Answer[2]

- 26) The frequency table below refers to the maximum day temperatures, in $^{\circ}\text{C}$, recorded in Berlin last April.

Temperature, $T^{\circ}\text{C}$	Frequency, f
$10 \leq T < 12$	3
$12 \leq T < 14$	7
$14 \leq T < 16$	12
$16 \leq T < 18$	5
$18 \leq T < 20$	3

What is the modal lifetime (in hours) of the batteries?

Answer[1]

- 27) The frequency table below shows the distribution of the ages of a group of 52 people.

Ages in years	Frequency
20 – 30	3
31 – 40	25
41 – 50	17
51 – 60	6
61 – 70	1

What is the **modal group**?

Answer[1]

- 28) The table shows the number of **goals scored** by all the football teams in the English Premier League season 2015-2016.

Goals scored g	Frequency
$0 < g \leq 20$	0
$20 < g \leq 40$	6
$40 < g \leq 60$	10
$60 < g \leq 80$	3
$80 < g \leq 100$	1

Use the table above to answer the following questions.

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

Ans: _____ teams

- (b) How many teams scored more than 60 goals?

Ans: _____ teams

- (c) Which class interval represents the **mode**?

Answer

(3 marks)

29) The table shows the number of **goals scored** by all the football teams in a league season.

Interval (Goals scored)	Frequency (Number of teams)
Less than 20	1
21 to 40	5
41 to 60	9
61 to 80	3
81 to 100	2

(a) **How many** football teams played in the league?

Ans: _____ teams

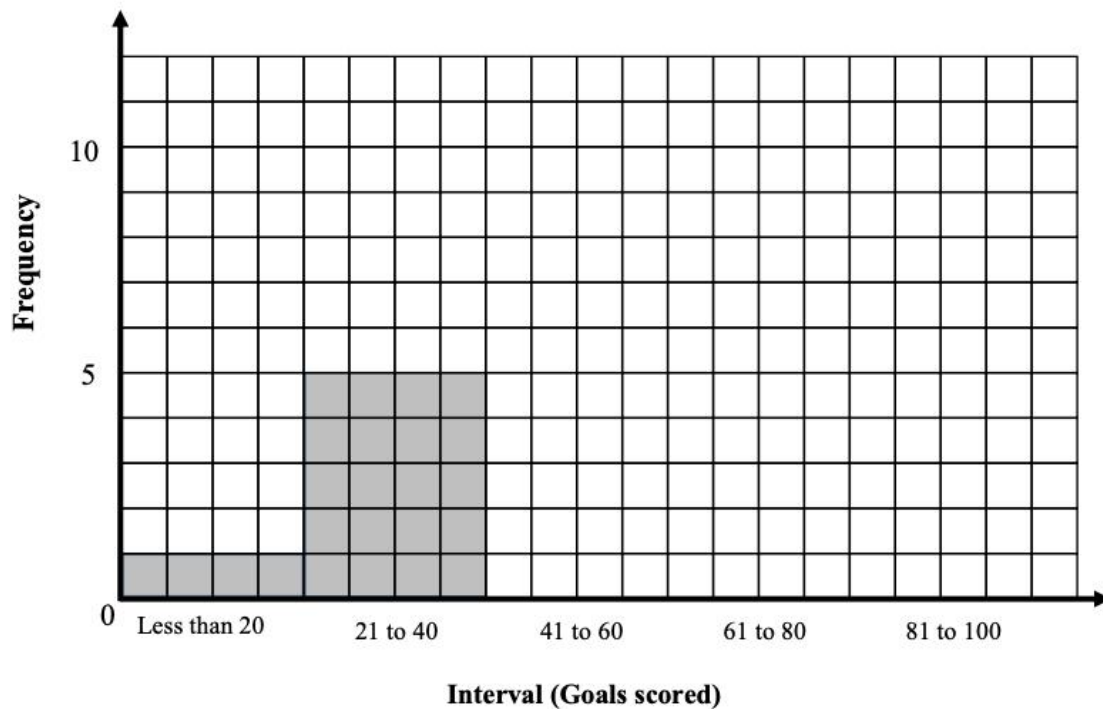
(b) How many **teams** scored **from 61 to 80** goals?

Ans: _____ teams

(c) Which **interval** represents the **mode** for goals scored?

Ans: _____ to _____

(d) Use the information in the table to complete the following bar chart.



(8 marks)