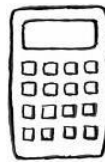


Name: _____

Teacher
Assessment



Section A Statistics From Raw Data Grade E → B

1. The number of aircraft landing at an airport each hour is shown below.

2 3 8 5 6 10 4 9 4 11 4

(a) Find the median of these numbers.

.....
.....

Answer (2)

(b) Write down the mode of these numbers.

.....

Answer (1)

(c) Work out the range of these numbers.

.....

Answer (1)

(d) Calculate the mean of these numbers.

.....
.....

Answer (3)(Total 7 marks)

2. Twelve adults were asked how many keys were on their key-ring.
Their replies were

8 6 4 9 4 7 6 3 4 6 4 2

(a) Work out the median number of keys.

.....
.....

Answer (2)

(b) Write down the mode.

Answer (1)(Total 3 marks)

3. The number of points scored by the Tigers in the last 10 rugby matches is listed.

38 16 18 76 32 16 16 40 60 42

(a) (i) Calculate the range of these scores.

.....

Answer points

(1)

(ii) Calculate the interquartile range of these scores.

.....

.....

Answer points

(2)

(b) (i) Write down the mode of these scores.

Answer points

(1)

(ii) In the next match the Tigers score 25 points. What effect does this have on the mode? Tick the correct box.

Decrease

No change

Increase

(1)(Total 5 marks)

4. The sizes of shoes sold in a shoe shop one lunchtime are shown below.

6 5 7 9 7 6 11 7 9 9 9 8 10

(a) What was the median shoe size sold?

.....

Answer

(2)

(b) Write down the mode. Answer

(1)

(c) Which average would be more useful to the shopkeeper when buying more stock? Tick a box. Give a reason for your answer.

Median

Mode

.....

.....

(1)(Total 4 marks)

5. The Quickpass driving school records the number of lessons that each person had before passing their driving test.
The results for seven men are shown.

10 17 15 10 12 8 19

- (a) Work out the interquartile range of these numbers.

.....
.....

Answer

(2)

- (b) Calculate the mean of these numbers.

.....
.....
.....

Answer

(3)

- (c) The number of driving lessons taken by a sample of women is summarised in the table.

Women

Interquartile Range	10
Mean	9

Write down **two** comparisons between the number of driving lessons taken by the men and the women.

Comparison 1

.....

Comparison 2

.....

(2)

(Total 7 marks)

6. A company puts this advert in the local paper.

AQA Motor Company
Mechanic needed
Average wage over £400 per week

The following people work for the company.

Job	Wage per week (£)
Apprentice	200
Cleaner	200
Foreman	350
Manager	800
Mechanic	250
Parts Manager	520
Sales Manager	620

- (a) What is the mode of these wages?

.....
.....

Answer £

(1)

- (b) What is the median wage?

.....

Answer £

(2)

- (c) Calculate the mean wage.

.....
.....

Answer £

(3)

- (d) Explain why the advert is misleading.

.....
.....

(1)

(Total 7 marks)

7. Alia has a pack of numbered cards.
Each card is numbered with a single digit 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.
Alia selects the following three cards from the pack.



- (a) Alia says the numbers on her cards have a median of 5 and a range of 6.

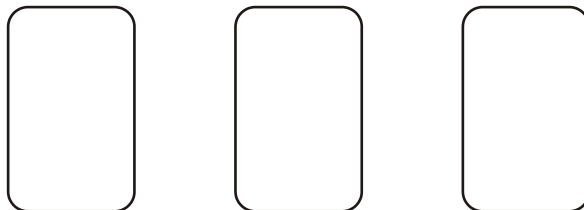
Explain why Alia is correct.

.....
.....
.....

(2)

- (b) Write one number onto each of the three cards below so that the median is 4 and the range is 7.

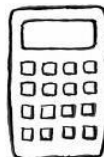
.....
.....



(2)
(Total 4 marks)

Success:

Target:



Section B **Statistics from tables** **Grade B / A**

1. Chloe records the number of goals scored by her favourite football team in each of 40 matches.

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

Answer

(1)

Number of goals	Frequency
0	7
1	15
2	13
3	2
4	2
5	1

(b) Calculate the mean number of goals scored per match.

.....
.....

Answer

(3)(Total 4 marks)

2. A quiz has five questions.

The table shows the number of correct answers given by the people who took the quiz.

(a) Calculate the mean number of correct answers. You **must** show your working.

.....
.....

Answer

(3)

Number of correct answers	Number of people
0	6
1	10
2	13
3	21
4	49
5	1

(b) A mark of 4 is given for every correct answer.
A mark of -1 is given for every blank or incorrect answer.

Find the mean mark.

.....
.....

Answer

(2)

(Total 5 marks)

3. Jane records the times taken by 30 pupils to complete a number puzzle.

Time, t (minutes)	Number of pupils
$2 < t \leq 4$	3
$4 < t \leq 6$	6
$6 < t \leq 8$	7
$8 < t \leq 10$	8
$10 < t \leq 12$	5
$12 < t \leq 14$	1

(a) Calculate an estimate of the mean time taken to complete the puzzle.

.....
.....

Answer minutes

(4)

(b) Which time interval contains the median time taken to complete the puzzle?

.....

Answer

(1)

(Total 5 marks)

4. The table shows the length of some cinema films.

(a) Calculate an estimate of the mean length of these 20 films.

.....
.....
.....

Length, l (minutes)	N° of films
$80 < l \leq 100$	10
$100 < l \leq 120$	3
$120 < l \leq 140$	6
$140 < l \leq 160$	1

Answer minutes

(4)

A film of length 145 minutes is added to the data above.

(b) Which class interval contains the median length of these 21 films?

.....
.....

Answer

(2)(Total 6 marks)

5. The table shows the heights of some children.

Height, h (cm)	Frequency
$60 < h \leq 80$	6
$80 < h \leq 100$	8
$100 < h \leq 120$	10
$120 < h \leq 140$	3

(a) Which class interval contains the median height?

.....
.....

Answer $< h \leq$

(2)

(b) Only children over 100 cm in height are allowed on a ride at a funfair.
Estimate how many of a group of 70 children would be allowed to use this ride.

.....
.....

Answer

(3)

(Total 5 marks)

6. (a) 120 men took part in a fitness test.

Time, t (minutes)	Frequency
$10 < t \leq 12$	21
$12 < t \leq 14$	49
$14 < t \leq 16$	37
$16 < t \leq 18$	13
Total	120

Calculate an estimate of the mean time taken by these 120 men to complete the test.

.....
.....

Answer minutes

(4)

(b) 90 women also took part in this fitness test. An estimate of the mean time taken by these 90 women was calculated. It was found to be 15.8 minutes.

Calculate an estimate of the mean time taken by all the 210 people to complete this test.

.....
.....
.....

Answer minutes

(3)(Total 7 marks)

7. The time taken, in minutes, for a group of students to complete their homework is summarised in the grouped frequency table.

Time, t (minutes)	Frequency
$5 \leq t < 15$	3
$15 \leq t < 25$	f
$25 \leq t < 35$	7
$35 \leq t < 45$	6
$45 \leq t < 55$	4

The grouped data was used to calculate an estimate of the mean.
This was found to be 30 minutes.

Calculate the value of the missing frequency, f .
You **must** show your working.

.....

.....

.....

.....

.....

.....

.....

.....

Answer

(Total 4 marks)

8. Jane and Mitzi have both done the same number of practice papers for their mathematics examination.
They both have the same total mark, T .
They do one more practice paper.
Jane scores 89 and her average score increases to 68.
Mitzi scores 57 and her average score decreases to 64.

Find the final number of practice papers taken by each student.
You **must** show your working.

.....

.....

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.....

.....

.....

.....

Answer

(Total 4 marks)

