

Albert Town High School Mathematics Department
Statistics - Averages **Graded worksheet**

Answer all questions

1. A 100m race was contested by ten **[10]**athletes and their times in seconds recorded below

9.88, 10.54, 10, 11.34, 12.2, 10.66, 9.98, 10.78, 12, 10.54,

Calculate

- (a) Describe the type of data that is presented above
- (b) Calculate the range of the times
- (c) Calculate the modal time
- (d) What is the median time?
- (e) Calculate the mean time for the race

2. Twenty-five [25] plants and their heights recorded correct to the nearest centimeter and listed below

9	7	5	4	6
4	8	6	3	7
10	6	5	7	9
7	4	4	10	4
3	10	7	7	6

- (a) Copy and complete the table below

Score x	tally	Frequency	$f \times x$
3			
4			
5			
6			
7			
8			
9			
10			

- (b) Determine
- I. The modal height
 - II. The median height
 - III. The mean height
 - IV. What percentage of the plants were at least 7 cm tall?

3. The waiting times in minutes for 60 patients at a hospital were recorded and shown below

25	12	53	8	26	5	19	73	67	18
87	42	6	21	14	19	12	15	13	36
36	16	72	36	13	37	11	51	39	32
30	47	6	22	68	25	98	23	45	22
7	9	26	35	27	48	58	56	29	20
32	62	80	41	58	17	54	15	14	74

Copy and complete the table below

(a)

Waiting time in minutes x	Frequency f	Midpoint m	Frequency x midpoint $f \times m$
0 – 9			
10 – 19			
20 – 29			
30 – 39			
40 – 49			
50 – 59			
60 – 69			
70 – 79			
80 – 89			
90 – 99			

(b) Determine for the data given

- I. The modal class
- II. The mean waiting time

(c) Using the class **30 – 39** determine

- I. The boundaries for the class
- II. The midpoint of the class
- III. The width of the class

(d) A Male patient came in with high fever and vomiting, He waited for 29 minutes and 48 seconds.

Which class interval should the patient be placed in?

(e) How many patients waited between 40 – 69 minutes?