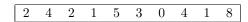**Question 4**

The following data give the marks of 10 students in a test (out of 20 marks). Calculate i) the median ii) the mean iii) the range iv) the standard deviation v) The Inter-Quartile Range

12, 17, 7, 11, 18, 6, 14, 15, 11, 9.

0.0.1 Question 1

Consider the following *sample* of numbers:

2	4	2	1	5	3	0	4	1	8

a) What is the value of n?

b) Calculate the mean and use the appropriate symbol.

c) What is the symbol for the population mean? What is its value?

d) Calculate Q_2 (hint: need to order the data first).

e) Construct a frequency table with 3 classes (let zero be the first breakpoint).

f) Draw the corresponding histogram.

0.1 Question 2

25 individuals were asked how long their laptop lasts on a full charge. The recorded times (measured in hours) are as follows:

(we saw this dataset before - lecture 1, Q5)

2.2	0.4	4.2	12.9	1.5	3.0	5.7	0.7	1.0	3.3
0.2	0.2	5.6	1.6	3.0	0.1	14.3	3.4	0.9	6.1
1.4	1.0	0.7	5.4	2.3					

a) Calculate $\bar{x}$.

b) Calculate s.

c) What is the symbol for the population standard deviation? What is our best estimate of this?

d) What is the value of μ?

e) What is the value of $\hat{p}$?