1) Eight houses in a street are inhabited by different numbers of people, as shown in the table below.

House	A	B	C	D	E	F	G	H
Number of inhabitants	5	4	7	6	4	3	6	4

(a) The following statements refer to the number of inhabitants per house. Write down true (T) or false (F) for each.

    (i)   The mean is 5.

    (ii)   The range is 4.

    (iii) The mode is 6.

    (iv) The standard deviation is 1.4 correct to 2 significant figures.   *[4 marks]*

(b) Calculate the interquartile range for the number of inhabitants per house.   *[2 marks]*

2)   (a) Complete the following table of values for the height and weight of seven students.   *[4 marks]*

	Values	Mode	Median	Mean	Standard deviation
Height (cm)	151, 158, 171, 163, 184, 148, 171			164	11.7
Weight (kg)	53, 61, 58, 82, 45, 72, 82	82	61		

3) In a mountain region there appears to be a relationship between the number of trees growing in the region and the depth of snow in winter. A set of 10 areas was chosen, and in each area the number of trees was counted and the depth of snow measured. The results are given in the table below.

Number of trees (x)	Depth of snow in cm (y)
45	30
75	50
66	40
27	25
44	30
28	5
60	35
35	20
73	45
47	25

(a) Use your graphic display calculator to find

    (i) the mean number of trees;

    (ii) the standard deviation of the number of trees;

    (iii) the mean depth of snow;

    (iv) the standard deviation of the depth of snow.   *[4 marks]*

4) The weights of 90 students in a school were recorded. The information is displayed in the following table.

Weight (kg)	Number of students
$40 \leq w < 50$	7
$50 \leq w < 60$	28
$60 \leq w < 70$	35
$70 \leq w < 80$	20

(a) Write down the mid interval value for the interval $50 \leq w < 60$.   *[1 mark]*

(b) Use your graphic display calculator to find an estimate for

    (i) the mean weight;

    (ii) the standard deviation.   *[3 marks]*

(c) Find the weight that is 3 standard deviations below the mean.   *[2 marks]*

5) In an experiment a vertical spring was fixed at its upper end. It was stretched by hanging different weights on its lower end. The length of the spring was then measured. The following readings were obtained.

Load (kg) x	0	1	2	3	4	5	6	7	8
Length (cm) y	23.5	25	26.5	27	28.5	31.5	34.5	36	37.5

(b) (i)   Write down the mean value of the load ($\bar{x}$).   *[1 mark]*

(ii)   Write down the standard deviation of the load.   *[1 mark]*

(iii) Write down the mean value of the length ($\bar{y}$).   *[1 mark]*

(iv) Write down the standard deviation of the length.   *[1 mark]*