ΨΨ320
Ainsworth

Homework #2
Chapters 4 and 5

Please answer the following questions from the textbook. Do not handwrite the answers (except for graphs or plots); please use a wordprocessor (e.g. Word, Wordperfect, etc.). For writing formulas in word go to insert → object; and select Microsoft Equation 3.0.

Chapter 4

1) For the following data calculate the mode, median and mean (hint: it's already ordered) and tell me what you can know about this data by comparing the mean and the median.

11	11	11	12	14	15	15	16	16	18
18	18	18	18	18	19	19	19	19	20
20	20	23	23	24	25	27	27	28	28

2) For the following data calculate the mode, median and mean (hint: it's already ordered) and tell me what you can know about this data by comparing the mean and the median.

50	51	53	54	54	58	58	60	61	62
68	68	72	73	73	78	84	85	103	137

3) On your own, make up a data set in which the mean is greater than the median and show that this is true.
4) How can you make up a unimodal set of data wherein the mean and the median are equal but different from the mode?
5) A group of 20 undergraduate students were asked to taste test a new brand of pizza sold on campus. The frequency distribution is as follows:

Number of pizza slices	0	1	2	3	4	5	6
Number of students (frequency)	1	3	4	6	0	4	2

Calculate the mean and median number of pizza slices consumed for this group of undergrads.

6) Create a sample of 10 numbers that has a mean of 5.3. Notice carefully how you did this – it will help later when we discuss degrees of freedom.

Chapter 5

1) For the following data:

64 33 45 49 32 31 69 53 42 67 57 36 76 58 78

   a. Calculate
      i. the range
      ii. interquartile range
      iii. the sample variance
      iv. the sample standard deviation
   b. What is are the percentile ranks for each value?
   c. What value is at the 62^{nd} percentile?
   d. By hand, create a boxplot for the data on a separate sheet.