**Week 7 Homework Sheet Due Next Wednesday (10/09/2014)**

**Total Marks: /52 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1. If a variable can be measured in fractions of units, it is a \_\_\_\_\_\_\_\_ variable.** [1 mark]

a. discrete

b. continuous

Your answer: \_\_\_\_\_\_

**2. Are the following sets of data continuous or discrete? Write C for continuous and D for discrete.** [4 marks]

a. Weight of a rat in grams Your answer: \_\_\_\_\_\_\_\_\_

b. Number of heart attacks Your answer: \_\_\_\_\_\_\_\_\_

c. The number of students in a class Your answer: \_\_\_\_\_\_\_\_\_

d. The yearly temperature in Melbourne. Your answer: \_\_\_\_\_\_\_\_\_

**3. Are the following variables nominal or ordinal? Write N for nominal and O for ordinal.** [4 marks]

a. Hotel service satisfaction (eg, poor, average, good, etc.) Your answer:\_\_\_\_\_\_\_\_\_

b. The kinds of fruits sold in Woolworths Your answer:\_\_\_\_\_\_\_\_\_

c. The colour of dogs Your answer:\_\_\_\_\_\_\_\_\_

d. How well steak is cooked. Your answer:\_\_\_\_\_\_\_\_\_

**4. A number of students were asked how many siblings they have and the column graph is shown below.**



a. Fill in the frequency columns below. [8 marks]

|  |  |  |
| --- | --- | --- |
| The number of siblings | Frequency | Percentage frequency |
| 0 |  |  |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| Total |  |  |

b. How many students were surveyed? [1 marks]

c. What is the most common number of siblings students have? [1 mark]

d. What percentage of students have 2 or 4 siblings (Show your work)? [4 marks]

e. Fill in the last column with percentage frequency. [8 marks]

h. How many siblings in total do these students have? [2 marks]

**5. The speed of vehicles travelling along a section of highway has been recorded in the table below.**

|  |  |  |
| --- | --- | --- |
| Speed interval (km/hour) | Frequency | Percentage Frequency |
| 60- | 40 |  |
| 70- | 65 |  |
| 80- | 120 |  |
| 90- | 100 |  |
| 100- | 80 |  |
| 110- | 16 |  |
| 120- | 12 |  |
| 130- | 8 |  |
| Total |  |  |

1. What is this table called? How many vehicles were included in this survey? [2 marks]
2. Fill in the percentage frequency column of the table. [9 marks]
3. Construct a histogram from the table. Please draw on the grid paper provided and attach it to the end of the homework sheet. Is it symmetrical, positively skewed or negatively skewed? [5 marks]
4. If the drivers travelling at 110km/h or more were fined $180 each, what amount would be collected in fines? (show your work) [3 marks]

**For Question 5(c)**



