4(d) Read the data into Excel. Excel should have no problem opening the file

directly since it is .csv. Create a new column that is equal to the second

column plus 10. What is the result for the problem observations (rows) you

identified in part b? What specific outcome does Excel display?

* As we previously seen that there is non-numeric value present in 1463 line. So we get an undefined error, for a reason because we are trying to add string ‘two’ which is in second column and number 10 which is not possible.

------------------------------------------------------------------------------------------------------------

8(b) Why are there fewer than 117 points visible on your graph in part a?

Describe the solution we discussed in class to deal with this problem (but

don't actually do it).

* There are some data which are plotted on the same set of axes and are not visible because they were plotted on top of each other, The solution is to add a small amount of noise to the points which we have plotted in the graph.

---------------------------------------------------------------------------------------------------------------------

10 b) Compute the same value by hand and show all the steps.

* list of numbers: 19, 23, 30, 30, 45, 25, 24, 20
* mean: (19 + 23 + 30 + 30 + 45 + 25 + 24 + 20) / 8 = 216 / 8 = 27
* list of deviations: -8, -4, 3, 3, 18, -2, -3, -7
* squares of deviations: 64, 16, 9, 9, 324, 4, 9, 49
* sum of deviations: 64 + 16 + 9 + 9 + 324 + 4 + 9 + 49 = 484
* divided by one less than the number of items in the list: 484 / 7 = 69.14285
* square root of this number: square root (69.14285) = approx. 8.31521

3. Classify the following attributes as binary, discrete, or continuous. Also classify them as qualitative (nominal or ordinal) or quantitative (interval or ratio). Some cases may have more than one interpretation, so briefly indicate your reasoning if you think there may be some ambiguity.Example: Age in years. Answer: Discrete, quantitative, ratio

a) Time in terms of AM or PM.

Binary, qualitative, nominal

b) Brightness as measured by a light meter.

Continuous, quantitative, ratio

c) Brightness as measured by people's judgments.

Discrete, qualitative, ordinal

d) Angles as measured in degrees between 0 and 360.

Continuous, quantitative, ratio

e) Bronze, Silver, and Gold medals as awarded at the Olympics.

Discrete, qualitative, ordinal

f) Height above sea level.

Continuous, quantitative, interval/ratio

g) Number of patients in a hospital.

Discrete, quantitative, ratio

h) ISBN numbers for books. (Look up the format on the Web.)

Discrete, qualitative, nominal

i) Ability to pass light in terms of the following values: opaque, translucent,

transparent.

Discrete, qualitative, ordinal

j) Military rank.

Discrete, qualitative, ordinal

k) Distance from the centre of campus.

Continuous, quantitative, ratio

l) Density of a substance in grams per cubic centimeter.

Continuous, quantitative, ratio

m) Coat checks number. (When you attend an event, you can often give your coat to

someone who, in turn, gives you a number that you can use to claim your coat when

you leave.)

Discrete, qualitative, nominal