Types of Data Analysis

When doing data analysis, we are interested in two types of summaries:

1. Statistical Summaries (e.g. descriptive, hypothesis testing)
2. Visual Summaries (e.g. tables, graphs)

Statistics is sometimes broken up into two different areas:

1. Descriptive Statistics - a situation is described by the statistics by the collection, summarization, organization and presentation of data.
2. Inferential Statistics - where inferences are made from samples of the population (e.g. smokers smoking a pack of cigarettes per day have a higher cholesterol). In this area we get into Hypothesis testing.

In the Descriptive Statistics world, we are concerned about each of the following.

Give a general description and compute each for the following three groups of numbers: (a) group #1: 1, 2, 3, 4, 5 (b) group #2: 1, 2, 3, 3, 4, 5 and group #3: 1, 2, 3, 4, 5, 6

Mean _____

Median _____

Mode_____

Problem: Create the dataset from Worksheet #1 using SPSS 17.0 for Windows. Call the data set **candy.sav**.

Step #1: Create the variables using the Variable View. Make sure that each variable has the correct **Type** and **Measure**.

Step #2: Set the decimals column as follows: Brand: 0, Name: 0, ServingPerPkg: 1, OzPerPkg: 2, Calories: 0, TotalFatInGrams: 1, and SatFatInGrams: 1.

Step #3: In the Values column, create the Value Labels for Brand where 1 = "M&M/Mars", 2 = "Hershey", and 3 = "Charms".

Step #4: Change to Data View and enter the data from Worksheet #1. You will need to go back to Variable View and edit some of the settings. Do so as necessary.

Identify each of the following for Total Fat giving your answer to 1 decimal place:

Mean: _____

Standard Deviation: _____

Minimum: _____

Maximum: _____

SPSS Worksheet #2

Problem: A paint manufacturer tested two experimental brands of paint over a period of months to determine how long they would last without fading. Here are the results:

Brand A	Brand B
10	25
20	35
60	40
40	45
50	35
30	30

You are to report on the following using two different methods.

Mean: _____

Median: _____

Standard Deviation: _____

Minimum: _____

Maximum: _____

Method #1: One way has two variable columns where the first is BrandA and the second is BrandB. Enter the above data and find the asked for information. Save this file as BrandMethod1.sav.

Q1: What are the type and measure values for BrandA _____ and BrandB _____?

Method #2: The second way has two columns where the first column is a variable called Brand and the second column is called Fading. Create value labels where 1="BrandA" and 2="BrandB". Enter the information and find the asked for information. Save this file as BrandMethod2.sav.

Q2: What are the type and measure values for Brand _____ and Fading _____?

Q3: What do the descriptive statistics tell us about the paint with regard to fading?