***Statistics is the science of information!!***

Statistics

Unit 1: Analyzing Graphs/Data Description

Unit 2: Probability

Unit 3: Discrete Probability Distributions

Unit 4: Normal Distributions

Unit 5: Confidence Intervals/Hypothesis Testing

Aug 15-7:14 AM

What to Expect

1. A significant amount of reading and writing.

2. You will get to think and problem solve.

3. You will learn how to use your calculator, while learning statistics.

4. You will for real, actually, no doubt about it, use a lot of these ideas later in life.

5. If you need help, I will be available.

6. I honestly think (hope) you will enjoy the material.

Aug 12-12:41 PM

Unit 1 Day 1:

Frequency Distributions, Graphs, and Data Descriptions

Categorical Freq. Distr.-Bar Graph and Pie Graph

Jan 2-12:15 PM

Statistics: the science of conducting studies to collect, organize, summarize, analyze, and draw conclusions from data.

A variable is a characteristic or attribute that can assume different values.

Data: are the values that the variables can assume.

A collection of data values forms a data set.

Descriptive Statistics: consists of the collection, organization, summarization, and presentation of the data. ie: Census Bureau

Jan 2-12:01 PM

A population consists of all the subjects that are being studied.

Sample: is a group of the subjects selected from a population.

Qualitative variables: variables that have distinct categories according to some characteristic or attribute.

Quantitative variables: variables that can be counted or measured.

Discrete variables: assume values that can be counted.

Continuous variables: can assume an infinite number of values between any two specific values.They often include fractions and decimals.

Jan 2-12:07 PM

Mrs. Watkins has designed and patented the Beadomatic 9000. The machine adds colored beads to a bag. The machine is calibrated to add 15 beads to every bag on average.
Claim 1:

Does the Beadomatic 9000 add 15 beads to every bag on average?

Claim 2:

The population proportion of bead colors are equal. (For example the number of red is equal to the number of blue is equal to the number of yellow, etc.). Do you believe this claim?

Aug 12-12:42 PM

Beads

1.) Count the beads in the bag.

2.) Write down how many of each color you have in the bag.

Aug 14-9:04 AM

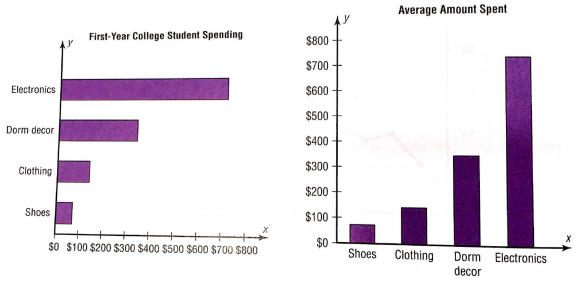
*A frequency distribution is the organization of raw data in table form using classes and frequencies.

Categorical frequency distribution: used for data that can be placed in specific categories.

| Color | Tally | Frequency | Percentage(%) | Degrees(pie chart) |
|---|---|---|---|---|

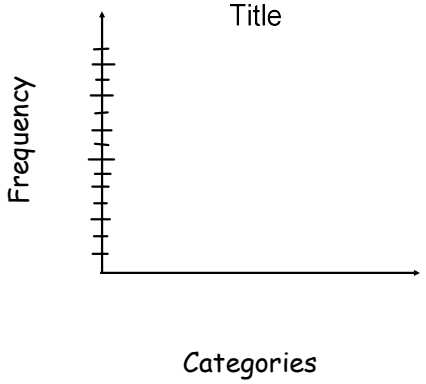
Jan 4-1:48 PM

Bar Graph: represents the data by using vertical/horizontal bars whose heights or lengths represent the frequencies of the data.




Feb 8-5:54 PM

Make a bar graph for your group data.




Aug 9-8:58 AM

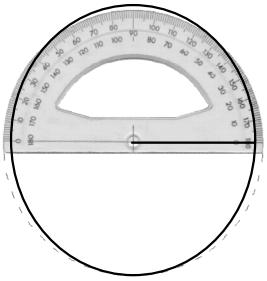
**Pie Graphs**: a pie graph is a circle that is divided into wedges according to the percentage of frequencies in each category of the distribution.

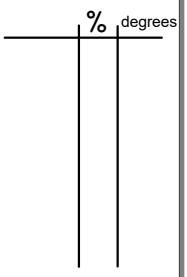
You will need a protractor
(no pie graph should be made without a protractor)

To find degrees: % (as a decimal) x 360

Aug 14-11:22 AM

I. Pie graph






Aug 14-11:11 AM

**Follow up questions:**

1. Is the information you gathered qualitative or quantitative?Why?
2. Is the information you gathered discrete or continuous?Why?
3. What could we do to get our data closer to the actual percentage?

Feb 9-1:46 PM