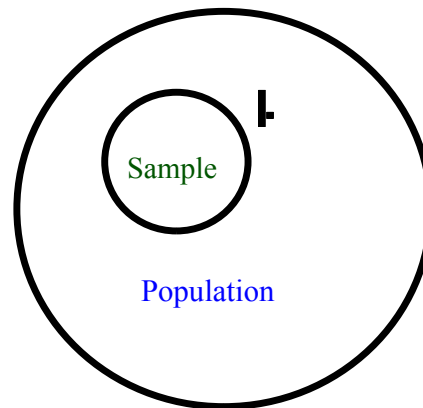


Ch. 4 Collecting, Displaying, & Analyzing Data

Population - the entire group being studied

Sample - the part of the population being surveyed



Biased Sample - not a good representation of the population

3 Ways to get Samples

Random Sample - by chance

Systematic Sample - has a rule put to it

Stratified Sample - double random

Ways to display data:

Bar graph

What is the difference between a bar graph
and a histogram?

Histogram

Line graph

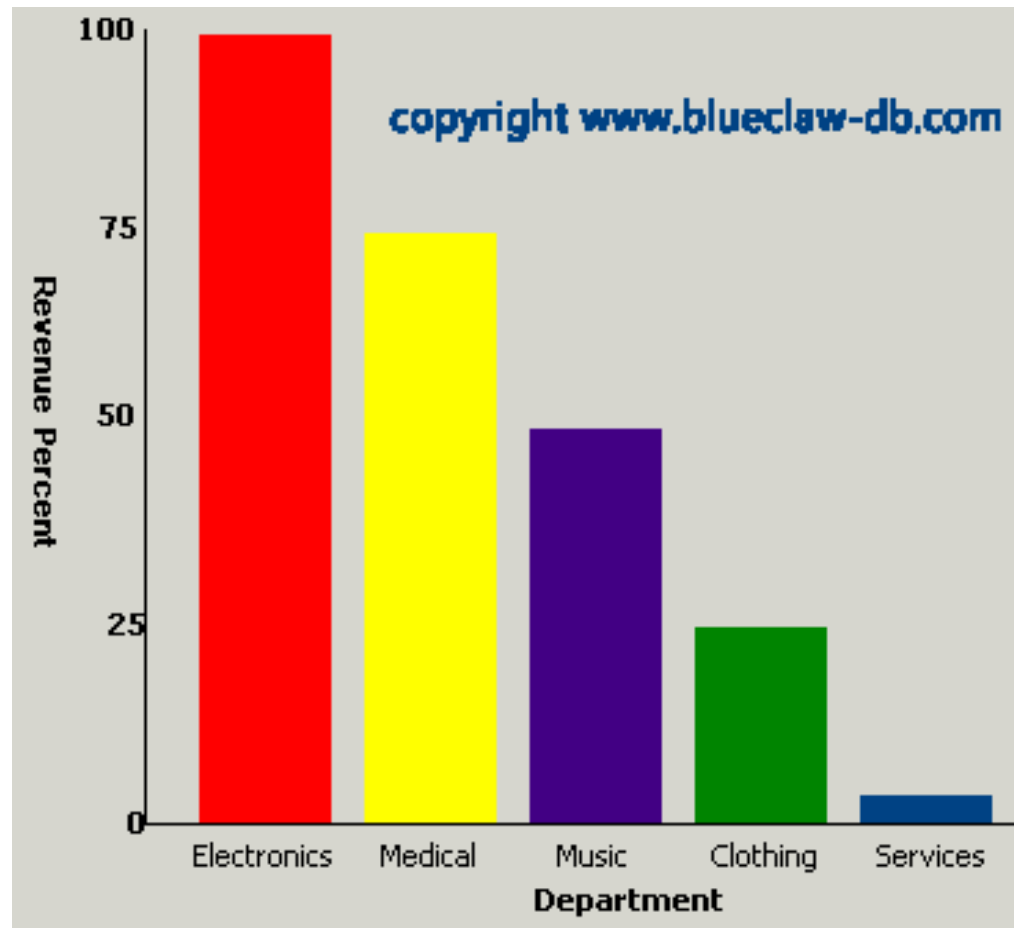
Circle graph

Frequency table

Stem leaf plot

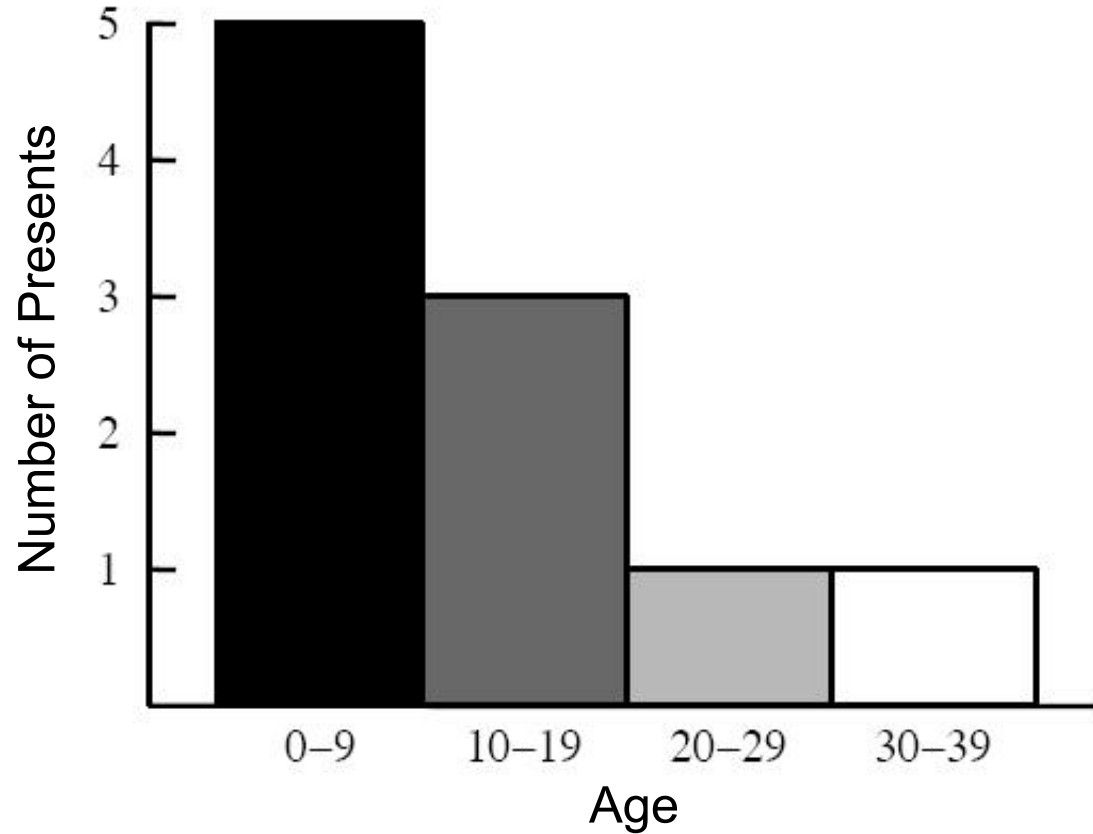
Box-whisker plot

Bar Graph



Histogram

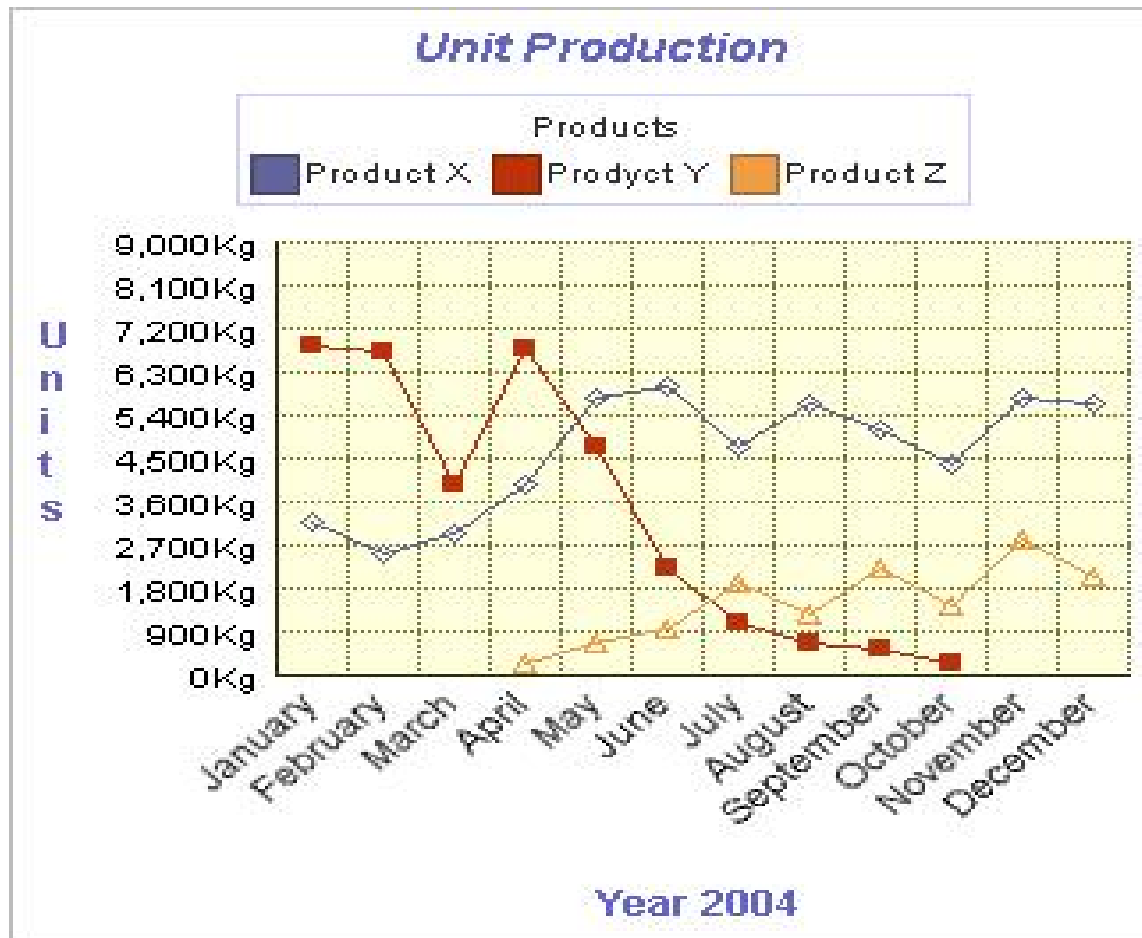
Number of presents for Birthday



What is the difference between a bar graph and a histogram?

Figure 1: A histogram

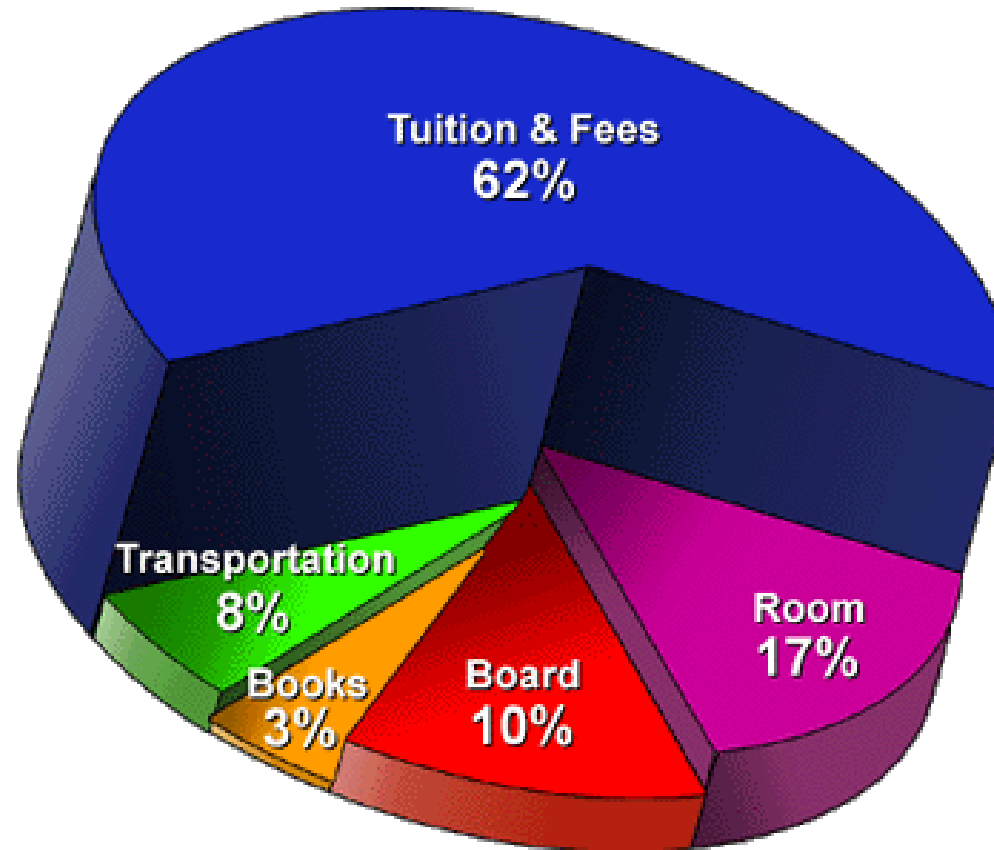
Multiple Line Graph



Frequency Table

NUMBER	TALLY	FREQUENCY
1		4
2	 	5
3		3
4		3
5		2
6		3

Circle Graph



Vocb.

4, 8, 8, 3, 6, 8, 3

Mean - the sum of the values, divided by the # of values

$$4+8+8+3+6+8+3 = \square / \#$$

Ans. 5.7

Median - if an odd # of values: then pick the middle value
if an even # of values: then the avg. of the 2
middle values

3, 3, 4, 6, 8, 8, 8

Ans. 6

Mode - the value or values that occur most often

3, 3, 4, 6, 8, 8, 8

Ans. 8

Vocab.

3, 3, 4, 6, 8, 8, 8

Outlier - a value much greater or much less than the others in the data set

Ans. No Outlier

Range - the difference between the greatest and least values in a data set

Ans. 3-8

10, 2, 13, 18, 15, 12, 13, 17, 10, 25

Mean:

Ans. 13.5

Median:

Ans. 13

Mode:

Ans. 10 &
13

Outlier:

Ans. No
Outlier

Range:

Ans. 2-25

10, 17, 12, 15, 20

Mean:

Ans. 14.8

Median:

Ans. 15

Mode:

Ans. No Mode

Outlier:

Ans. No Outlier

Range:

Ans. 10-20

10, 17, 12, 15, 20, 200

Mean:

Ans. 45.7

Median:

Ans. 16

Mode:

Ans. No Mode

Outlier:

Ans. 200

Range:

Ans. 10-200

Notice what happens when there is an outlier.

Frequency Table

18 17 16 16 17
16 16 16 19 16
16 17 16 17 18
16 18 16 19 16

Age License Received	Tally	Frequency