11.1: Graphing Data

Frequency distributions:

Large amounts of data can be hard to analyze unless it is organized in some manner.

To organize lists of data points, we can construct a *frequency table*, dividing the data into groups by using *class intervals*. We can then draw a *histogram*, which is really just a particular type of bar graph.

Example 1: A random sample was chosen from among the employees of a large corporation. Their commute times (in hours) from home to work were determined and recorded in the table:

Commute Times							
0.3	0.7	0.2	0.5	0.7	1.2	1.1	0.6
0.6	0.2	1.1	1.1	0.9	0.2	0.4	1.0
1.2	0.9	0.8	0.4	0.6	1.1	0.7	1.2
0.5	1.3	0.7	0.6	1.1	0.8	0.4	0.8

a. Construct a frequency table showing the frequency, relative frequency, cumulative frequency, and relative cumulative frequency. Use intervals of equal width starting with 0.2-0.4 (inclusive).
b. Construct a histogram and a frequency polygon.
c. What is the probability that a person chosen at random from the sample will have a commute of an hour or less?