Math 103 Class 2

1. Activity

2. The student will be able to construct a Pareto Chart, a time series graph and a pie graph.

3. **Pareto Chart**

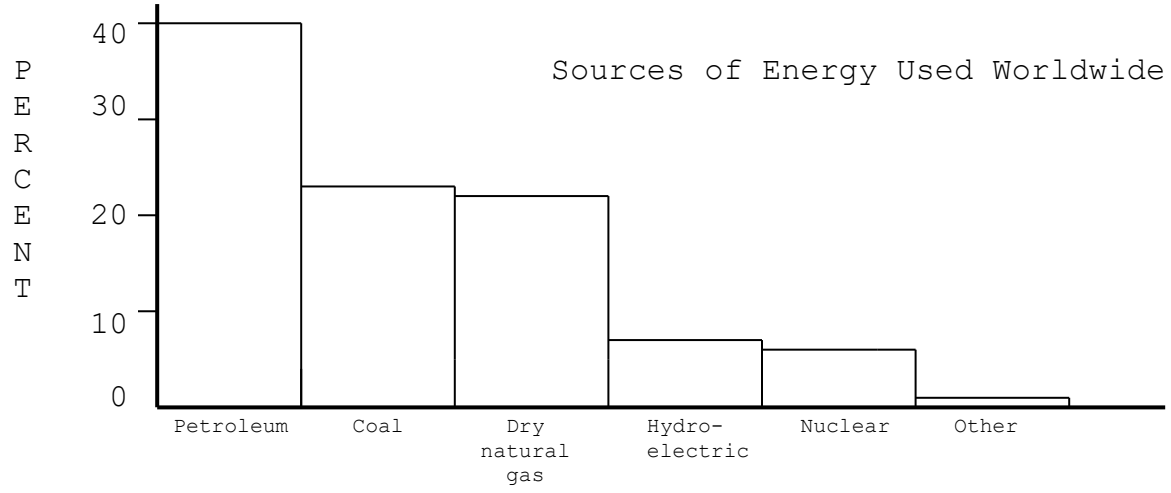
   A Pareto Chart is used to represent a frequency distribution for a categorical (qualitative) variable, and the frequencies are displayed by the heights of vertical bars, which are arranged in order from highest to lowest.

4. Example:

   The following percentages indicate the source of energy used worldwide. Construct a Pareto Chart for the energy used.

Petroleum	39.8%
Coal	23.2
Dry natural gas	22.4
Hydroelectric	7.0
Nuclear	6.4
Other (wind, solar, etc.)	1.2

(Source: N. Y. Times Almanac)



5. **Time Series Graph**

A time series graph represents data that occur over a specific period of time.

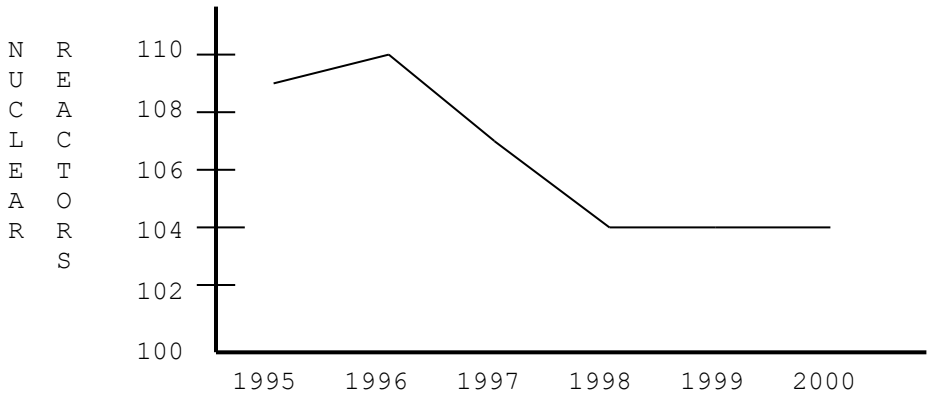
Example:

The number of operable nuclear power reactors in the United States for the given year is shown below. Draw a time series graph to represent the data.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Number Operable	**109**	**110**	**107**	**104**	**104**	**104**

(Source: The World Almanac and Book of Facts)

Operable Nuclear Power Reactors
United States



6. **Pie Graph**

Pie graph is a circle that is divided into sections, the angle for each section is

$$\frac{Category\ of\ Frequency}{Frequency\ Total} \times 360^{\circ}$$

A questionnaire about how people get news resulted in the following information from 25 respondents. Construct a pie graph for the data. (N = newspaper, T = television, R = radio, M = magazine)

Newspaper	7	28%	100.8°
Television	5	20%	72.0°
Radio	7	28%	100.8°
Magazine	6	24%	86.4°

Where do people get their news?