**Chapter 2. Tabular and Graphical Methods**

**Using R to construct a Pie chart**

* Import the ***Marital\_Status*** data into a data frame (table) in R.
* We create a pie chart using the **pie** function. As outlined in Appendix A, we are able to choose variables from a data frame by attaching the expression $‘variable name’ to the data frame. For options within the function, we use *labels* to indicate the names for each category and *main* to designate a title. For readability purposes, we have used a few lines to show the command; however, you may enter the entire command in one line. Enter:

> pie(Marital\_Status$'1960', labels = Marital\_Status$'Marital Status', main = "Marital Status, 1960")

**Using R to construct a Histogram, a Polygon, and an Ogive**

A Histogram

* Import the ***MV\_Houses*** data into a data frame (table) in R.
* We make a histogram using the **hist** function. For options within the function, we use *breaks* to denote the number of distinct intervals, *main* to designate a title, and *xlab* to label the *x*-axis. Enter:
* We make a histogram using the **hist** function. For options within the function, we use *breaks* to denote the number of distinct intervals, *main* to designate a title, and *xlab* to label the *x*-axis. Enter:

> hist(MV\_Houses$'House Price', breaks = 5, main = "Histogram", xlab = "House Prices (in $1,000s)")

A Polygon

* Import the ***Polygon*** data into a data frame (table) in R.
* We make a scatterplot using the **plot** function. For options within the function, we use *ylab* and *xlab* to label the *y*-axis and the *x*-axis, respectively. Enter:

> plot(Polygon$'y' ~ Polygon$'x', ylab="Relative Frequency", xlab="House Prices (in $1,000s)")

* We add lines to the scatterplot using the **lines** function. Enter:

> lines(Polygon$'y' ~ Polygon$'x')

An Ogive

* We replicate the ogive in Figure 2.9.
* Import the ***Ogive*** data into a data frame (table) in R.
* Since the commands for the ogive are identical to the ones for the polygon, we are brief. Enter:

> plot(Ogive$'y' ~ Ogive$'x', ylab="Relative Frequency", xlab="House Prices (in $1,000s)")

> lines(Ogive$'y' ~ Ogive$'x')

**Using R to Construct a Scatterplot**

* Import the ***Edu\_Inc*** data into a data frame (table) in R.
* Since we used the **plot** function in Section 2.2, we simply provide the command. Enter:

> plot(Edu\_Inc$'Income' ~ Edu\_Inc$'Education', ylab = "Income", xlab = "Education")