Entering/Editing Data

- STAT - Edit
- Use arrows to scroll to the appropriate list and position
- Enter or edit data, pressing ENTER after each (including the last)

Deleting Data (One Value at a Time)

- STAT - Edit
- Use arrows to scroll to the appropriate data value
- Press DEL to delete

Deleting Data (Entire List)

Approach #1

- STAT - Edit
- Scroll up the appropriate list to highlight the list name at the very top
- Press CLEAR, followed by the down arrow or ENTER

Approach #2

- STAT - ClrList
- Enter the list to be cleared using the 2nd feature with the numbers 1,2,3,4,5, or 6
- Press ENTER

Constructing a Histogram

- Enter data
- Turn off the function plots by ensuring that no equal signs are highlighted on the Y= screen
- Turn on the appropriate plot by pressing STAT PLOT (2nd Y=)
- In the STAT PLOT menu, choose the histogram and the appropriate list
- QUIT (2nd MODE)
- Set the window by pressing WINDOW

  Xmin = lowest class boundary Xmax = Highest class boundary

  Xscl = class width Ymin = 0

  Ymax = *guess and adjust* Yscl = *doesn't really matter*

  Xres = *doesn't really matter*

- QUIT (2nd MODE)
- GRAPH
- Use TRACE and arrows to read off frequencies

Constructing a Frequency Polygon

- Assuming you have constructed a frequency distribution, add a single class with zero frequency onto each end of the distribution
- Enter the class midpoints into one of your lists
- Enter the corresponding frequencies into another list
- Turn off the function plots by ensuring that no equal signs are highlighted on the Y= screen
- Turn on the appropriate plot by pressing STAT PLOT (2nd Y=)
- In the STAT PLOT menu, choose the frequency polygon and the appropriate midpoint and frequency lists
- QUIT (2nd MODE)
- Set the window by pressing WINDOW

  Xmin = lowest class boundary Xmax = Highest class boundary

  Xscl = class width Ymin = 0

  Ymax = *guess and adjust* Yscl = *doesn't really matter*

  Xres = *doesn't really matter*

- QUIT (2nd MODE)
- GRAPH
- By turning on multiple plots, you can superimpose a frequency polygonal on a histogram
- It is very simple to modify these steps to construct an ojive

Constructing a Scatterplot

- Enter the ordered pairs into two lists
- Turn off the function plots by ensuring that no equal signs are highlighted on the Y= screen
- Turn on the appropriate plot by pressing STAT PLOT (2nd Y=)
- In the STAT PLOT menu, choose the scatterplot and the appropriate lists
- QUIT (2nd MODE)
- Set the window by pressing WINDOW

  Xmin = lowest x-value Xmax = highest x-value

  Xscl = *something convenient* Ymin = lowest y-value

  Ymax = highest y-value Yscl = *something convenient*

  Xres = *doesn't really matter*

- QUIT (2nd MODE)
- GRAPH

Computing One-Variable Statistics (mean, median, standard deviation, etc.)

- Enter data
- STAT - CALC - 1-Var Stats, then press ENTER
- Enter the list using the 2nd feature with the numbers 1,2,3,4,5, or 6
- Press ENTER

Constructing a Boxplot

- Enter the data
- Turn off the function plots by ensuring that no equal signs are highlighted on the Y= screen
- Turn on the appropriate plot by pressing STAT PLOT (2nd Y=)
- In the STAT PLOT menu, choose the appropriate boxplot and the appropriate list
- QUIT (2nd MODE)
- Set the window by pressing WINDOW

  Xmin = lowest data value Xmax = highest data value

  Xscl = *something convenient* Ymin = 0

  Ymax = 1 Yscl = *doesn't really matter*

  Xres = *doesn't really matter*

- QUIT (2nd MODE)
- GRAPH
- Multiple boxplots can be constructed by turning on multiple plots.

Factorials, Permutations, and Combinations

- MATH - PRB
- Choose 2, 3, or 4

Binomial Probability Distribution

- To find a probability in a binomial distribution, press DISTR (2nd VARS) - binompdf(
- The syntax to compute $P(x = k)$ is `binompdf(n,p,k)`, where `n` is the number of trials, `p` is the probability of success, and `k` is the value of the random variable x.
- To create an entire binomial probability distribution, use the syntax `binompdf(n,p)`. The distribution can be stored in a list by pressing STOR→, followed by the appropriate list, followed by ENTER.
- To find a cumulative probability, press DISTR (2nd VARS) - binomcdf(
- The syntax to compute $P(x \leq k)$ is `binomcdf(n,p,k)`.

Poisson Probability Distribution

- To find a probability in a Poisson distribution, press DISTR (2nd VARS) - poissonpdf(
- The syntax to compute $P(x = k)$ is `poissonpdf(μ,k)`.
- To find a cumulative probability, press DISTR (2nd VARS) - poissoncdf(
- The syntax to compute $P(x \leq k)$ is `poissoncdf(μ,k)`.

Normal Probability Distribution

- To find a cumulative probability in a normal distribution, press DISTR (2nd VARS) - normalcdf(
- (Standard Normal) The syntax to compute $P(a < z < b)$ is `normalcdf(a,b)`.
- (Standard Normal) In order to compute $P(z < b)$, use `normalcdf(-99999,b)`.
- (Standard Normal) In order to compute $P(z > a)$, use `normalcdf(a,99999)`.
- (Nonstandard Normal) The syntax to compute $P(a < x < b)$ is `normalcdf(a,b,μ,σ)`.
- (Nonstandard Normal) In order to compute $P(x < b)$ is `normalcdf(-99999,b,μ,σ)`.
- (Nonstandard Normal) In order to compute $P(x > a)$ is `normalcdf(a,99999,μ,σ)`.

Inverse Normal

- To find the value corresponding to a cumulative area, press DISTR (2nd VARS) - invNorm(
- (Standard Normal) The syntax to compute the value corresponding to a cumulative area to the left of z is `invNorm(area)`.
- (Nonstandard Normal) The syntax to compute the value corresponding to a cumulative area to the left of x is `invNorm(area,μ,σ)`.

Student's t Probability Distribution

- To find a cumulative probability in a Student t-distribution, press DISTR (2nd VARS) - tcdf(
- This command only works for the standardized t-distribution with mean 0 and standard deviation 1.
- The syntax to compute $P(a < t < b)$ is `tcdf(a,b,df)`, where `df` is the number of degrees of freedom.

Chi-Square Probability Distribution

- To find a cumulative probability in a chi-square distribution, press DISTR (2nd VARS) - χ^2cdf(
- The syntax to compute $P(a < \chi^2 < b)$ is χ^2`cdf(a,b,df)`, where `df` is the number of degrees of freedom.

Confidence Interval for Population Proportion

- STAT - TESTS - 1-PropZInt

Confidence Interval for Population Mean (Known pop std dev)

- STAT - TESTS - ZInterval

Confidence Interval for Population Mean (Unknown pop std dev)

- STAT - TESTS - TInterval

Hypothesis Test for Claim About Population Proportion

- STAT - TESTS - 1-PropZTest

Hypothesis Test for Claim About Population Mean (Known pop std dev)

- STAT - TESTS - Z-Test

Hypothesis Test for Claim About Population Mean (Unknown pop std dev)

- STAT - TESTS - T-Test

Hypothesis Test for Claim that Two Population Proportions are Equal

- STAT - TESTS - 2-PropZTest

Hypothesis Test for Claim that Two Population Means are Equal (Independent samples)

- STAT - TESTS - 2-SampTTest

Hypothesis Test for Claim that Two Population Variances are Equal

- STAT - TESTS - 2-SampFTest

Linear Regression

- Enter the x- and y-values into two different lists
- For the regression equation and the linear correlation coefficient, STAT - CALC - LinReg(ax+b) followed by the names of the lists (separated by a comma)
- To compute the P-value for determining whether a linear correlation exists, use STAT - TESTS - LinRegTTest