Chapter 1:

Entering Data into a list:
Press Apps
Press 6. Data / Matrix Editor
To create a new list, press 3. New...
Choose list for the type
Pick a folder for the variable (not statvars)
Pick a variable name.

To use an existing list, press 2. Open...
Select the list you want to use.

Insert data into the list, pressing ENTER after each entry.
To clear any inserted data, arrow up to the header and press ENTER,
CLEAR, ENTER.
When finished, press HOME.

Calculating the five-number summary:
APPS
FlashApps
Stat/List Editor
F4: Calc
1: 1-Var Stats
Enter the variable name in the List box
Leave the other boxes untouched (Freq: 1, Category List: Empty, Include Categories: {})
ENTER
Scroll down; the 5-number summary is near the bottom of the text box under MinX, Q1, Med, Q3, MaxX.

Drawing a boxplot or histogram:
2ND  Y=
Arrow up to an empty plot in the Plots area.
ENTER
Use Arrow-Right to select Boxplot or Histogram at the top of the menu.
Arrow down to X and enter the name of the list the data is stored in.
Press GRAPH.
If the graph does not appear or looks weird, press F2: Zoom, 9: ZoomData.
You can get summary statistics by pressing F3: Trace and then arrowing left or right.
Using the Numeric Solver:

APPS
9: Numeric Solver
Enter the equation you want to solve, using letters as variables as necessary
Enter the values you know in the spaces provided
Put the cursor over the value you want to solve for
F2: Solve (this may take some time depending on the complexity of the equation)
The unknown will be replaced with the calculated value

CHAPTER 3:

Calculating X(bar) and S:

APPS
FlashApps
Stat/List Editor
F4: Calc
1: 1-Var Stats
Enter the list variable name in the List box
Leave the other boxes untouched (Freq: 1, Category List: Empty, Include Categories: {} )
ENTER
The average and SD are x(bar) and Sx, respectively. The (theta)x output is the SD formula in Equation 3.2 with the denominator n-1 replaced with n.

CHAPTER 4:

Calculating areas under the normal curve \( P(a \leq X \leq b) \):

Catalog
F3: Flash Apps
Arrow down to normalCDF
Input (a, b, mean, SD). Remember to type a comma between entries, and end with a parenthesis. Also note mean and SD are optional. If omitted, the default values (mean 0, sd 1) will be used.
ENTER

Calculating normal percentiles:

Catalog
F3: Flash Apps
Arrow down to invNorm
Input (percentile, mean, SD). Remember to type a comma between entries, and end with a parenthesis. Also note mean and SD are optional. If omitted, the default values (mean 0, sd 1) will be used.
ENTER
Calculating Binomial PDF:
Catalog
F3: Flash Apps
Arrow down to binomPdf
Input (n, p, j), where j is the X-value. Remember to type a comma between entries, and end with a parenthesis.
ENTER

Calculating Binomial CDF:
Catalog
F3: Flash Apps
Arrow down to binomCdf
Input (n, p, lower bound, upper bound). Remember to type a comma between entries, and end with a parenthesis. Also note lower and upper bounds are optional.
ENTER

User-Friendly way of calculating areas under the normal curve \[ P(a \leq X \leq b) \]:
APPS
FlashApps
Stat/List Editor
F5: Distr
4: Normal Cdf...
Enter the lower value, upper value, mean, and SD.
ENTER

User-Friendly way of calculating normal percentiles:
APPS
FlashApps
Stat/List Editor
F5: Distr
2: Select Inverse
Use the right arrow to select the submenu
1: Inverse Normal...
Enter the area, mean, and SD.
ENTER

User-Friendly way of calculating Binomial PDF:
APPS
FlashApps
Stat/List Editor
F5: Distr
B: Binomial Pdf...
Enter the number of trials 'n', probability of successes 'p', and X value.
ENTER

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**User-Friendly way of calculating Binomial CDF:**

**APPS**
FlashApps
Stat/List Editor
F5: Distr
C: Binomial Cdf...
Enter the number of trials 'n', probability of successes 'p', lower value, and upper value.
Enter

**CHAPTER 7:**

**Computing a confidence interval for (mu):**

...From a data list:
**APPS**
FlashApps
Stat/List Editor
F7: Ints
2: TInterval...
Choose DATA. Press ENTER.
Enter the list name and the confidence level (C level). Leave Freq at 1.
Enter

...From statistics:
**APPS**
FlashApps
Stat/List Editor
F7: Ints
2: TInterval...
Choose STATS. Press ENTER.
Enter the Average (Xbar), standard deviation (Sx), number of trials (n), and confidence level (C level).
Enter

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Computing a confidence interval for \((\mu_1 - \mu_2)\):

...From a data list:

- APPS
- FlashApps
- Stat/List Editor
- F7: Ints
- 4: 2-SampTInt...
  Choose DATA. Press ENTER.
  Enter the list names and the confidence level (C level). Leave Freq at 1.
  Set Pooled to YES.
  ENTER

...From statistics:

- APPS
- FlashApps
- Stat/List Editor
- F7: Ints
- 4: 2-SampTInt...
  Choose STATS. Press ENTER.
  Enter the Averages (Xbar1 and Xbar2), standard deviation (Sx1 and Sx2),
  number of trials (n1 and n2), and confidence level (C level). Set Pooled to YES.
  ENTER

Computing the Paired T-Confidence interval from two data lists:

Suppose your data is in lists named L1 and L2. Find the differences and store them in L3 as follows:

(If not already in the stats editor)

- APPS
- FlashApps
- Stat/List Editor

  Arrow up to the header of L3.
  Press ENTER.
  Using the Alpha key as needed, type: L1-L2
  Press ENTER.

Then follow the directions above for computing a confidence interval for \((\mu)\) from a data list.

Computing a confidence interval for \((p)\):

- APPS
- FlashApps
- Stat/List Editor
- F7: Ints
- 5: 1-PropZInt...

Enter the successes, \((x)\), number of trials \((n)\), and confidence level \((C)\) level.

ENTER

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Computing a confidence interval for \((p_1 - p_2)\):

APPs
FlashApps
Stat/List Editor
F7: Ints
6: 2-PropZInt...
Enter the successes, \((x_1\) and \(x_2)\), number of trials \((n_1\) and \(n_2)\), and confidence level \((C\) level). ENTER

CHAPTER 8:

Calculating a t-test for \(\mu_1-\mu_2\):

APPs
FlashApps
Stat/List Editor
F6: Tests
4: 2-SampTTest...
Choose DATA or STATS. Press ENTER.
Enter the list names or summary statistics.
Choose the type of alternative hypothesis: (two tailed \(\mu_1\) is not = \(\mu_2\), left-tailed \(\mu_1 < \mu_2\), right-tailed \(\mu_1 > \mu_2\)).
Choose YES or NO for Pooled as applicable.
ENTER

Calculating a paired t-test for \(\mu_1-\mu_2\):

Suppose your data is in lists named L1 and L2. Find the differences and store them in L3 as follows:
(If not already in the stats editor)

APPs
FlashApps
Stat/List Editor
Arrow up to the header of L3.
Press ENTER.
Using the Alpha key as needed, type: L1-L2
Press ENTER.
Then follow the directions above for calculating a t-test for \(\mu_1-\mu_2\) from a data list.
Calculating a z-test for $p$:

APPS
FlashApps
Stat/List Editor
F6: Tests
5: 1-PropZTest...
Enter the null hypothesized value $p_0$, successes ($x$), and number of trials ($n$).
Choose the type of alternative hypothesis: (two tailed $\mu_1$ is not $= \mu_2$, left-tailed $\mu_1 < \mu_2$, right-tailed $\mu_1 > \mu_2$).
Choose calculate.
ENTER

Calculating a z-test for $p_1-p_2$:

APPS
FlashApps
Stat/List Editor
F6: Tests
6: 2-PropZTest...
Enter the successes ($x_1$ and $x_2$) and number of trials ($n_1$ and $n_2$).
Choose the type of alternative hypothesis: (two tailed $\mu_1$ is not $= \mu_2$, left-tailed $\mu_1 < \mu_2$, right-tailed $\mu_1 > \mu_2$).
Choose calculate.
ENTER

CHAPTER 9:

Creating a new matrix:

APPS
6: Data/Matrix Editor
3: New
Arrow right to choose Type: 2: Matrix
Choose an appropriate folder (not statvars), press ENTER
Enter variable name
Enter the number of rows
Enter the number of columns
ENTER
Enter data into the matrix

Entering data into an existing matrix:

APPS
6: Data/Matrix Editor
2: Open
Choose Type: 2: Matrix
Choose the appropriate folder and variable names
F1: Tools
8: Clear Editor
Say yes at the prompt if you're sure you want to clear data
Enter data into the matrix

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**Changing the size of a matrix:**
With the matrix open, press F6: Util 6: Resize Matrix
Enter the appropriate dimensions

**Calculating a Chi-Square Test for an r by c table:**

APPS
FlashApps
Stat/List Editor
F6: Tests
8: Chi2 2-way...
Enter the name of the data matrix in Observed Mat
Ignore the other two boxes, the defaults (statvars\expmat and statvars\compmat) are fine.
Choose Calculate
ENTER
Note: Your T-Stat is listed as Chi-2

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