

## Data Desk Orientation

This exercise is help you develop some comfort with Data Desk - nothing needs to be handed in.

Below is some data on the sales and assets of some companies. (Don't pay too much attention to the actual numbers - they've been rounded and other details left out to make what we do with this data easier.)

<b>Assets</b>	<b>Sales</b>	<b>Name</b>
620	2250	Giant
12500	1300	City
1600	6600	A&P
2550	260	FirstEmp
2800	270	BankSouth
5400	550	CalFirst
4200	17000	Kroger
5250	530	FirstTenn
3700	360	Marine
1100	3700	Stop&Shop
33000	3200	Mellon
9000	880	Norstar
1100	5100	SupGen
21000	2500	Norwest
750	2150	Turner
2500	6000	Wool

1. Start out by entering this into Data Desk. Start the program by choosing Data Desk 6.1 → Data Desk 6.1 from the Programs menu. Then create a new variable by going to the *New* submenu of the *Data* menu and selecting *Blank Variable*. Name your first variable *Assets*. Then create two more new variables named *Sales*, and *Company*.

In order to enter data, click on the left data field. Enter a number, then *tab* to the second data field. Enter a number then use *tab* to move to the

third data field. After entering a row of data, use *enter* to move to the next row. When finished, click on the little squares in the upper right corners to close the three data fields.

As you enter data, please keep in mind the difference between having your cursor *vertical* (e.g. for editing a particular entry) and *horizontal* for inserting new cases.

**Please note you can bypass the entering of data in this exercise by just opening the file `companies_orientation` in the Math 171 Extra folder.**

**2.** Double click on the **DATA** icon in the upper right corner of the screen to open the relation. Now compute the average value of assets for these companies. You do this by first selecting the icon labeled *Assets* and then selecting *Reports* from the *Summaries* submenu of the *Calc* menu.

**3.** Now select the entry *Select Summary Statistics ...* of the *Calculation Options* submenu of the *Calc* menu. Note that by checking and unchecking various boxes you can change the summary information which appears in the report you just calculated. (The changes won't take effect until you click *OK* in the dialog box.)

**4.** Create a plot of assets vs. sales for this data. To do this, first select the *Assets* icon as y-variable by holding the *option* key down. Then select the icon *Sales* as x-variable while holding the *shift* key down. Then choosing *Scatterplots* from the *Plot* menu gives the desired graph.

**5.** Look at the plot you've just created. Notice the way it makes clear that there are two groups of companies with very different relationships of assets to sales. Doubleclick on the *Company* icon so you can inspect the names of companies. By choosing *Palettes* from the *Modify* menu if necessary, open the Palettes menu. A rectangular box with 12 icons should appear on your desktop. Click on the box with the question mark. The *information* tool now lets you click on a dot in your plot window and find out which company it is. Try it a few times ....

**6.** The *lasso* tool in the upper left of the Palettes menu lets you draw a curve fully enclosing some of your data and thereby select those. Try to do this with the companies having high assets to sales ratios, and then look inside the *companies* variable window to see which companies this is.

**7.** Examine the *hyperview menu* of the plot you just created. This is done by clicking on the small triangle just to the left of the plot window title. This contains a selection of commands that may go well with what you have just

done. Try *Add Regression Line* which tries to add a line approximating the data. Note that because of the two disparate groups, this line doesn't work very well. We'll be studying this more later.

**8.** Sometimes data is easier to understand after we transform it. By first selecting the *Sales* and *Assets* icons, and then choosing *Log()* from the *Transform* submenu of the *Manip* menu, compute the logarithms of these two variables. Doubleclick on the two icons which result. Note that these *derived variables* appear as textual formulas, but that their hyperview menus include the often useful *Show Numbers* option to see what the actual values are. Create a plot of *Log(Assets)* vs. *Log(Sales)* and note how this is in some ways easier to read information off of than the previous plot.

**9.** Try collecting some of your results here in a layout, and adding a few textual comments there.