

Directions for using Best Fit 1.2 (BFIT) on the HP 48 and HP 49 calculators.

Download the BFIT program to your calculator. The BFIT program is really a directory or folder with several programs in it.

The screen shots in these directions assume that you have a directory named MATH where BFIT is stored. These directions also assume that your calculator is in RPN mode. If you have a 48 series it is. If you have a 49G press your **H** key and make sure that Operating Mode is RPN and that the calculator is in approximate mode. You should see a ~ on the top line. Hold down ... and press ~ to change. Your screen should look similar to the following:



HP 48G screen



HP 49G screen

1. Press the menu key which corresponds to the \$BFIT# folder (note the little tab above the B). This would be the **a** key if your screen looks like the one above. Your screen should look like the following:



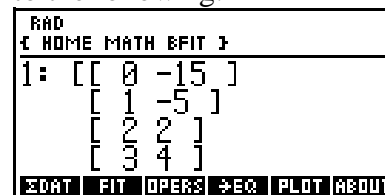
2. Press the menu key which corresponds to the #BFIT# program. You should now have:



3. Enter your data on the stack as a matrix with the first column as the X variable and the second column as the Y variable. It is generally easiest to do this with the Matrix Writer: MATRIX on the HP 48 and **2** on the HP 49. Enter the following data

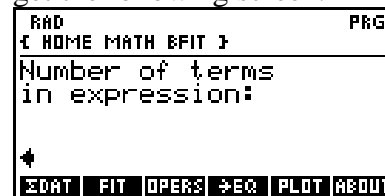
as an example: 
$$\begin{bmatrix} 0 & -15 \\ 1 & -5 \\ 2 & 2 \\ 3 & 4 \\ 4 & 9 \\ 5 & 15 \end{bmatrix}$$

Your stack should now look similar to the following:

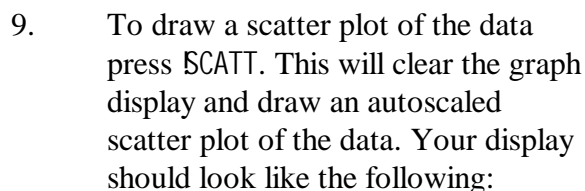
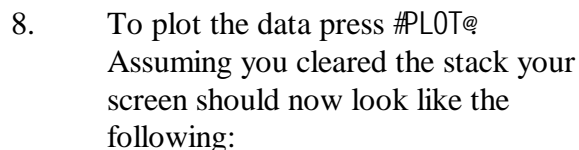
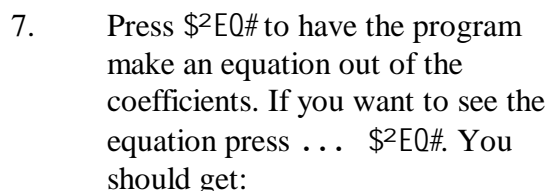


Press **„** **€** **DAT** **@**. This will store the matrix in **€** **DAT** **@**. The matrix will disappear from the stack.

4. To begin fitting the data to a polynomial press **%** **FIT** **#**. You should get the following screen:



6. If you want to see a matrix of coefficients of the polynomial press  
`... %FIT#` The elements in the matrix are in ascending order according to the degree of the respective term. The first value is the constant term and so on. If you are using the numbers in our example you should get:



11. If you want to graph the equation over the scatter plot press  $\text{F}_{\text{UNC}}$ . If you want to plot the equation without the scatter plot press  $\text{ERASE}$  first then  $\text{F}_{\text{UNC}}$ . You should get the following:



- These directions created by David D. Nelson, Columbia Adventist Academy, Battle Ground, WA  
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