

Stats on the TI-89

We often will have a problem in a class where we are given some data and need to find an equation to fit that data. Look at an example in the following book.

Statistics, second ed. James T. McClave and Frank H. Dietrich, II.

The power usage for a small town at various temperatures is given in the following table. Which type of model best fits this data? Find the model.

temp, ° F	68	76	85	92	100
Power	96.3	100.9	111.4	135.1	143.6

We can choose the following types of regression:

1-Var Stats the statistics results for one variable.

2-Var Stats returns the statistics results for two variables, e.g. \bar{x} , $\sum x^2$, σy .

LinReg(a+bx) for linear regression, $y = a + bx$

LinReg(ax+b) for linear regression, $y = ax + b$.

QuadReg for quadratic regression, $y = ax^2 + bx + c$.

CubicReg for 3rd order regression, $y = ax^3 + bx^2 + cx + d$.

QuartReg for 4th order regression, $y = ax^4 + bx^3 + cx^2 + dx + e$.

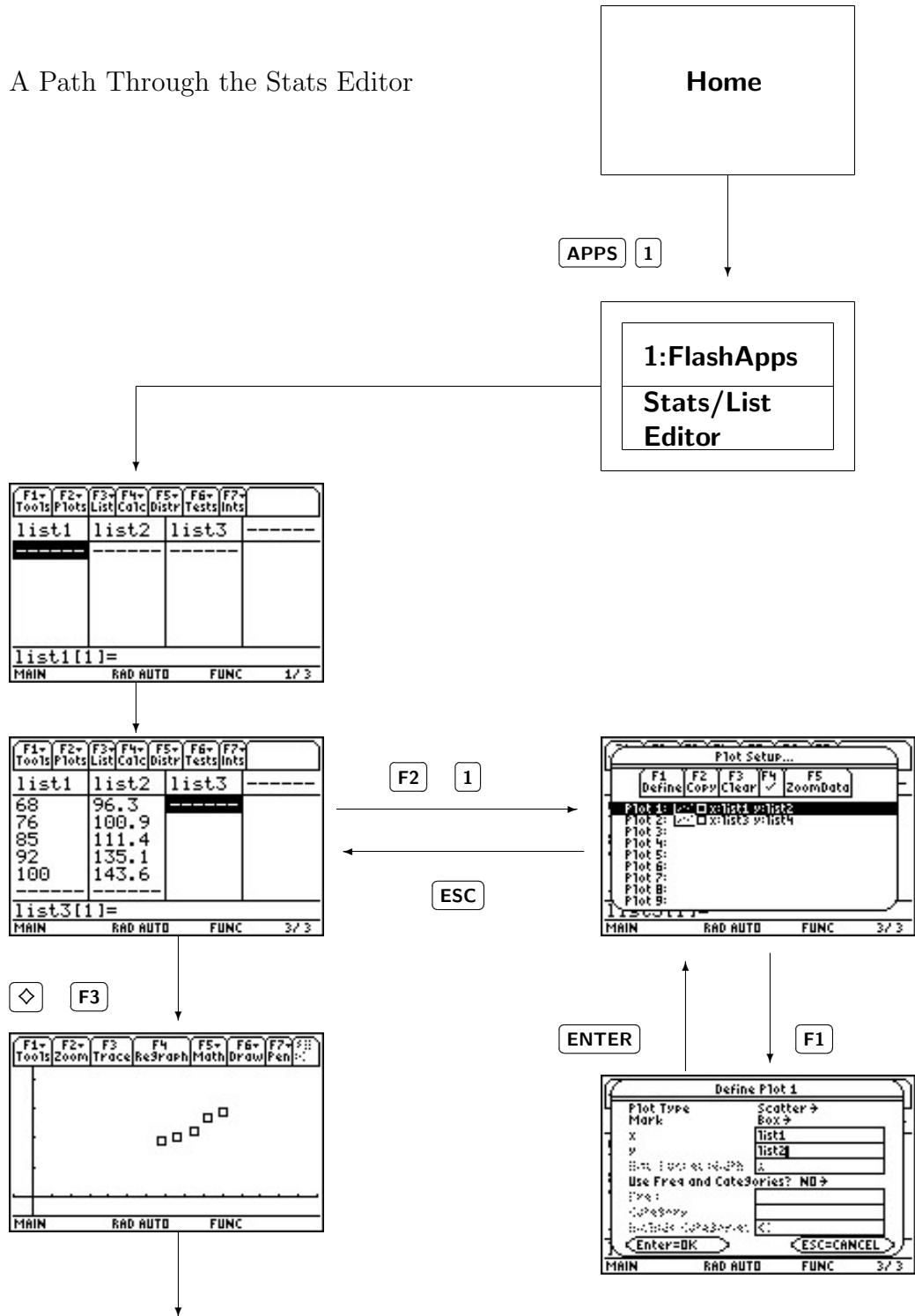
LnReg for logarithmic regression, $y = a + b \ln(x)$.

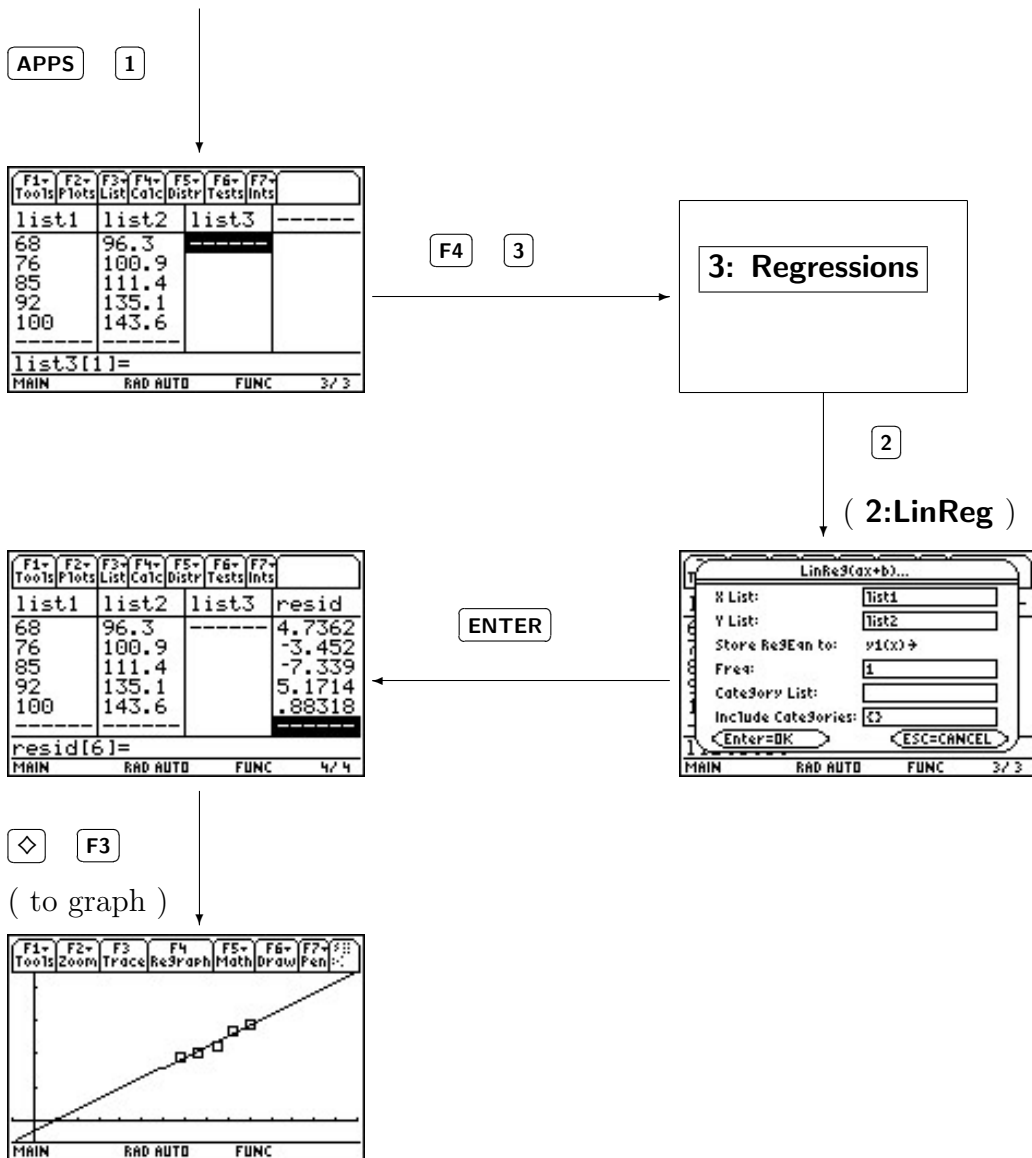
ExpReg for exponential regression, $y = a \cdot b^x$.

PowerReg for power regression, $y = a \cdot x^b$.

Below is a possible path through the Stats Editor using Linear Regression.

A Path Through the Stats Editor





Done in T_EX.