

# Algebra Activity 9: Creating a Scatterplot

Vicki Phillips

CALCULATORS: Casio: fx-9750G Plus • Casio: cfx-9850G Series

## Student Handout

### Introduction

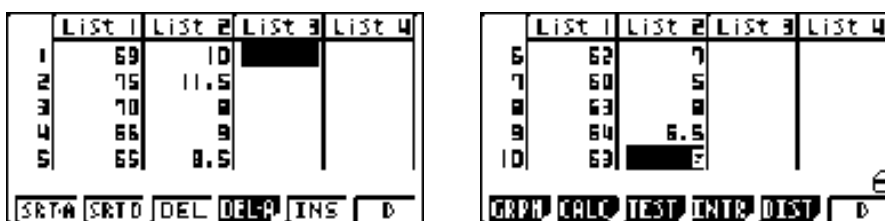
Can a person's height be used to predict his/her shoe size?

The data in List 1 (teacher's height in inches) and List 2 (corresponding shoe size) were obtained from 10 middle school math teachers. For the two male teachers, shoe size was decreased by 1 1/2 for consistency.

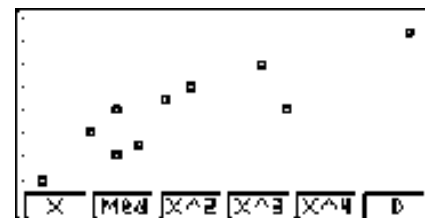
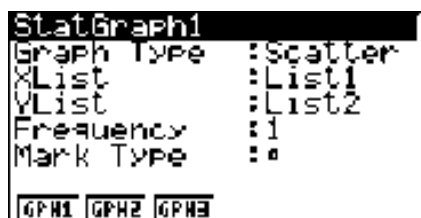
Press **MENU** 2(STAT).

To clear any data from the lists, highlight the list, press **F6** for more options, **F4** to delete all (DEL-A), **F1**(YES).

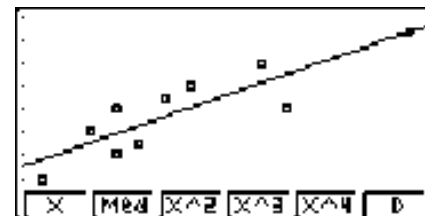
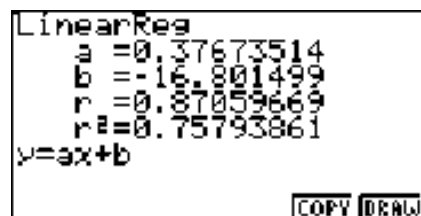
Enter the heights in List 1 and the corresponding shoe sizes in List 2.



To draw the graph, press **F1**(GRPH) **F6**(SET) Graph Type **F1**(Scat) X List **F1**(List 1) Y List **F2**(List 2) **EXE** **F1**(GPH 1).



Press **F1**(X) for the linear regression equation. Press **F5**(COPY) and **EXE** to store the equation in the y = screen. Press **F6**(DRAW).



Since this is a linear regression and  $r^2 = 0.75793861$ , this means that approximately 76% of the variation can be explained by the model. Consequently, for our small sample, height is a fairly good predictor of one's shoe size.