Line of Best Fit

Before you begin, record six of your classmates' shoe sizes on a piece of notebook paper like you see below. The manual fit feature allows you to manually find the line of best fit as opposed to the calculator doing it for you.

Classmate (L1)	Shoe Size (L2)
1	5
2	6
3	7
4	8
5	7
6	9

Engage

1. Enter data into L1 and L2
   A. Press [LIST] and enter the data in L1 as you see in the screen below
   B. Once you have the data in L1, ▶ to L2 and enter the data as you see in the screen below
2. Create a scatterplot from the data entered
   A. Press [2nd] [Y=] and turn Plot 1 on by pressing [1]
   B. Highlight On, press [ENTER], and then select scatterplot (⌐⨼) as your type and press [ENTER]
   C. For Xlist: press [2nd] [STAT] and [1] for L1
   D. Press the [▼] for Ylist; then press [2nd] [STAT] and [2] for L2
   E. Select the first object as your mark by pressing [ENTER] (see screen below)
3. Set [MODE] to Float 1 so the calculator rounds numbers to 1 decimal place
4. Press [ZOOM] [7] for 7: ZoomStat
5. Press [2nd] [QUIT] to return to the Home screen

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Explore

1. On the Home screen, press [2nd]STAT and [▶] to CALC
2. Press [3] for 3:Manual-Fit (Manual-Fit will appear on your Home screen)
3. Press [2nd] [APPS], which is the [VARS] key, and press [2] for 2:Y-Vars
4. Select the location you want to paste the equation in (Y1, Y2, Y3, or Y4). For this activity, we selected Y1 and press [ENTER]
5. Use the arrow keys to move the cursor, +, to the first point of the line you wish to fit. Then press [ENTER] to set the point
6. Now use the arrow keys to move the cursor, +, to the second point of the line. Press [ENTER] to set the point

Extend

1. Use the arrow keys to change the slope and intercept of this manual-fit line
2. Press [ENTER] to set the line when you position the line to the best fit. Press [Y=] to view the equation of the line