Example

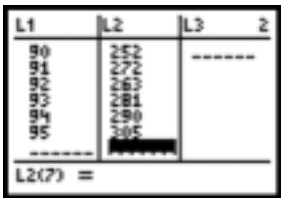
Enter the data from the table at the right. Find the line of best fit.

Travel to Australia from the U. S.

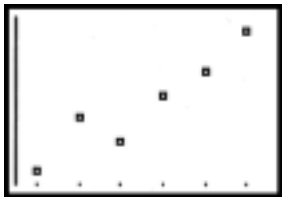
Year	Tourists (in thousands)
1990	252
1991	272
1992	263
1993	281
1994	290
1995	305

Source: *USA Today*

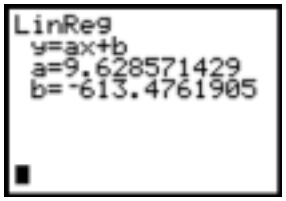
STEP 1: Press STAT ENTER to enter the years into **L1**. Subtract 1900 from each year. Enter the numbers of tourists into **L2**.



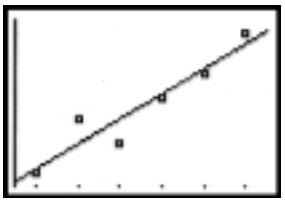
STEP 2: Press 2nd [STAT PLOT] **1** to set up **Plot1**. Select **On**, point graph, **L1** for **XList**, and **L2** for **Y1ist**. View the plot by pressing ZOOM **9**.



STEP 3: Press STAT ▶ **4** 2nd [**L1**] , 2nd [**L2**] ENTER to compute the line of best fit.*



STEP 4: Press Y= CLEAR VARS **5** ▶ ▶ **1** GRAPH to graph the line.



MORE FITS: Below are more fits that can be used. Press STAT ▶ . Select the desired fit model. Follow STEP 4 to graph any best fit. (TI-83: also logistic and sin fits.)

*Note: By default, the TI-83/TI-83 Plus looks for **Xlist** and **Ylist** in **L1** and **L2**, respectively. Therefore, **L1** and **L2** do not need to be included with the command 'Lin Reg'.

Exercises

Enter each set of data. Calculate the indicated best-fit model.

1. Linear:

Middle Income Households

Year	Households (millions)
1975	38.0
1980	42.1
1985	43.9
1990	46.5
1994	46.5

Source: *US. Census Bureau*

2. Quadratic:

Year Lengths of the Outer Planets

Distance From Sun (Gm)	Year Length (days)
778.3	4,332.6
1427	10,759.2
2869.6	30,685.4
4496.6	60,268
5900.1	90,950

Source: *The Universal Almanac 1996*