

## TECHNOLOGY CORNER

### 8. Least-squares regression lines on the HP Prime



Let's use the Ford F-150 data to show how to find the equation of the least-squares regression line on the HP Prime. Here are the data again:

Miles driven	70,583	129,484	29,932	29,953	24,495	75,678	8,359	4,447
Price (in dollars)	21,994	9,500	29,875	41,995	41,995	28,986	31,891	37,991
Miles driven	34,077	58,023	44,447	68,474	144,162	140,776	29,397	131,385
Price (in dollars)	34,995	29,988	22,896	33,961	16,883	20,897	27,495	13,997

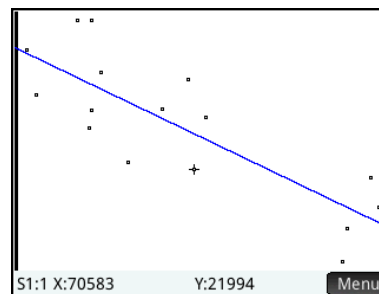
1. Press **Apps** and tap on the **Statistics 2Var** app icon. Enter the data values into the lists C1 and C2. Put the miles driven data in C1 and the price data in C2. Then make a scatterplot. Refer to the Technology Corner on page 150.

	C1	C2	C3	C4
1	70583	21994		
2	129484	9500		
3	29932	29875		
4	29953	41995		
5	24495	41995		
6	75678	28986		
7	8359	31891		
8	4447	37991		
9	34077	34995		
10	58023	29988		

2. Define the scatterplot and regression line in the Symbolic view of the app (Press **Symb**). Specify the settings shown below. Tap **Fit\*** to activate plotting the linear fit as well as the scatterplot. The small white dot after the label indicates that fit plotting is active in the Plot view. You can tap it again to de-activate fit plotting. This toggle appears in the Plot view as well.

Statistics 2Var Symbolic View	
✓ S1:	C1 C2
Type1:	Linear
Fit1:	M*X+B
S2:	
Type2:	Linear
Fit2:	M*X+B
S3:	
Enter function	

3. Press **View** and select **Autoscale** to see both the scatterplot and the linear fit. Tap to move the tracer (or use **→** and **←**). Use **↓** and **↑** to move between tracing the scatterplot and tracing the fit.



4. To find the predicted price of an F-150 truck with 100,000 miles, tap **Menu** and **Go To**. Enter 100,000 and tap **OK**. Tap **Menu** to show the tracer coordinates, indicating that an F-150 truck with 100,000 miles driven would have a price of approximately \$21,965.

