



TECHNOLOGY CORNER

28. Confidence interval for slope with HP Prime

Let's use the data from the previous example to construct a confidence interval for the slope of a population (true) regression line on the HP Prime. We will use the *Inference for Regression* app; your teacher will send you the app or you can download it yourself.

- Press **Apps** and tap the *Inference* app icon. The app opens in Symbolic view.
- Tap the **Method** field and choose Regression. Tap the **Type** field and choose Interval: Slope.
- Tap **Calc** and enter 0.90 as the confidence level for the interval.

- You will be prompted to enter the x-values (miles driven) in C1 and the y-values (price in dollars) in C2. The data can be found on Page 750.

	Xlist	Ylist
8	4,447	37,991
9	34,077	34,995
10	58,023	29,988
11	44,447	22,896
12	68,474	33,961
13	144,162	16,883
14	140,776	20,897
15	29,397	27,495
16	131,385	13,997
17		

- Tap **OK** to see the results shown below.

Results	
X	
C	0.9
Crit. T	1.76131014
DF	14
β_1	-0.162918553
serrSlope	0.030956425
Lower	-0.217442418
Upper	-0.108394688
Minimum calculated critical slope	

The results agree with our previous calculations. The results include the required confidence interval for the slope (-0.217442, -0.108395) as well as the standard errors for the slope, the estimate of the slope, and the critical t-value.

Note that the *Inference* app can also calculate confidence intervals for the mean response and prediction intervals for future values. The significance t-test for linear regression is covered in HP Prime Technology Corner 29.