Chapter 14 / **Example 4**
Test for the product moment correlation coefficient

The number of times students are late for school and the distance they live from school is thought to be related. A sample of eight students is selected randomly and the data for the previous six weeks is checked. The following results were obtained.

Distance from school (km)	Number of times late	Distance from school (km)	Number of times late
5.2	5	2.3	1
1.4	2	2.8	3
6.7	0	7.0	2
8.8	6	0.5	0

Test at the 5% level whether there is a linear relationship between the two variables.

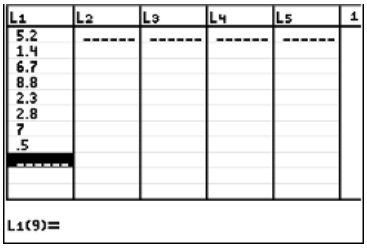
H_0: $\rho = 0$, H_1: $\rho \neq 0$

Press [STAT] 1:Edit and press [ENTER]

Type the distances in the first column.

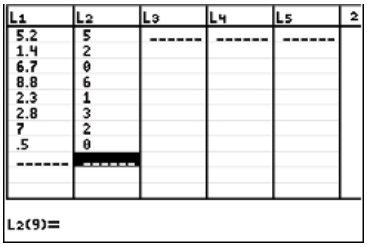
Press [ENTER] or [▼] after each number to move to the next cell.

Note: *If the list contains other numbers, you can clear it by pressing* [STAT] 4:ClrList *and press* [ENTER]. *The home screen displays* ClrList. *Press* [2nd] [1] [L1] *and press* [ENTER]. *Press* [STAT] 1:Edit *and press* [ENTER] *to return to the table.*



Press [▶] to move to the next column.

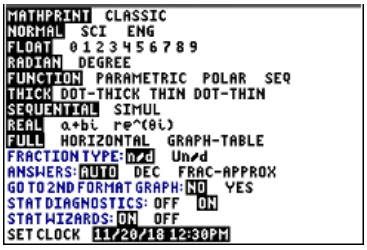
Enter the number of times in the second column.



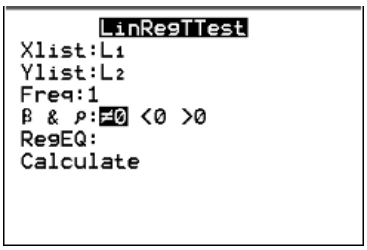
Before calculating a correlation coefficient, you must switch this option on.

Press [MODE]

Using [▼] and [▼], navigate down to STAT DIAGNOSTICS and select 'ON' by pressing [ENTER].



Chapter 14 / **Example 4**
Test for the product moment correlation coefficient

Press [STAT] [▶] [▶] F:LinRegTTest and press [ENTER] Set β & ρ to ≠0, leave all other items the same and navigate down to Calculate. Press [ENTER].	
The *p*-value is 0.190. 0.190 > 0.05 hence no reason to reject the null hypothesis.