

1-5 Scatter Plots Calculator Instructions

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1-5 Scatter Plots Calculator Instructions

Step 1: Enter Data Into Lists

Data for this example:

L1: {7,2,4,2,5}

L2: {8,4,6,2,7}

L1	L2	L3	Z
NUM	NUM	---	
---	---	---	
L2(6) =			

To input data into the **STAT list editor**:

- Enter STAT edit mode by pressing [STAT] [1].
- Enter the data in the L1 and L2 lists, pressing [ENTER] after each entry.
- Press [2nd] [MODE] to QUIT and return to the home screen.

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Step 2: Graph the Scatter Plot

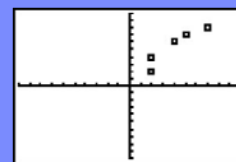
- Press [2nd] [Y=] to access the STAT PLOT editor.
- Press [ENTER] to edit Plot1.
- Press [ENTER] to turn ON Plot1.
- Scroll down and highlight the scatter plot graph type (first option in the first row).
- Press [ENTER] to select the scatter plot graph type.
- Scroll down and make sure Xlist: is set to L1 and Ylist: is set to L2. To input L1, press [2nd] [1]. To input L2, press [2nd] [2].



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Step 3: View the Scatter Plot

- Press [GRAPH] to display the scatter plot.



- To get a better view of the graph, press [ZOOM] [9] to perform a ZoomStat.

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Correlation Coefficient - Relationship Between X & Y "r" Value Interpretation

$r = +1.0$	Strong - Positive	As X goes up, Y always also goes up
$r = +0.5$	Weak - Positive	As X goes up, Y tends to usually also go up
$r = 0$	- No Correlation	X and Y are not correlated
$r = -0.5$	Weak - Negative	As X goes up, Y tends to usually go down
$r = -1.0$	Strong - Negative	As X goes up, Y always goes down

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Finding the Correlation Coefficient

Step 1) In order for the graphing calculator to be able to calculate the correlation coefficient. You must change a setting in the calculator. Press "2nd" then "CATALOG" (above the zero button)

```
CATALOG
>abs(
>and(
>angle(
>ANOVA(
>ans
>Archive
>Rsh(
```

Step 2) Scroll down to the "D" area (or select the "D" key) and stop when you are at "DiaGnosticOn". Press "Enter"

```
CATALOG
>Degree
>DelVar
>DependAuto
>del(
>DiagnosticOff
>DiagnosticOn
```

Step 3) You should see "DiaGnosticOn" displayed on the main calculator screen

```
DiaGnosticOn
_ Done
```

Step 4) Press "enter"

```
DiagnosticOn
```

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Finding the Correlation Coefficient

Step 5) Scroll Right to "Calc"

Step 6) Scroll down to "LinReg" or select the "4" key

```
EDIT [2nd] [MODE] TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:QuartReg
```

Step 7) Press "enter". Your calculator screen should look like this screen shot

```
LinReg(ax+b)
```

Step 8) Hit "enter" and the last item, 'r' represents the correlation coefficient.

- r is the correlation coefficient
- r^2 is the coefficient of determination

```
LinReg
y=ax+b
a=.25
b=7.75
r^2=1
r=1
```