 How-to guide: regression analysis on a calculator

Note:

* This guide has instructions performed on a Casio FX-82AU calculator. Method may differ slightly on other calculators.
* Left, right, up or down instructions refer to the directions on the replay key.

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Part 1 – Enter regression analysis mode

Press:

1. Mode
2. 2
3. 2

Part 2 – Enter data

Imagine we wished to enter the following data:

| $$x$$ | $$y$$ |
| --- | --- |
| 2 | 3 |
| 4 | 5 |
| 6 | 9 |
| 7 | 11 |

Press:

1. 2
2. =
3. Right
4. Up
5. 3
6. =
7. Left

Repeat for the other scores until all are entered. Use the left, right, up or down buttons to move around the columns.

Once all pairs of data are entered, press AC.

Part 3 – Obtaining Pearson’s correlation coefficient

Press:

1. Shift
2. 1
3. 5
4. 3
5. =

We obtain $r=0.9880643635$.

Part 4 – The equation of the least squares line of best fit

The equation is of the form $y=Bx+A$.

We can find each of the $A$ and $B$ values.

To find the $A$ value, press:

1. Shift
2. 1
3. 5
4. 1
5. =

We obtain $A=-0.72881325593$.

To find the $B$ value, press:

1. Shift
2. 1
3. 5
4. 2
5. =

We obtain $B=1.627118644$.

Therefore, the equation is (after rounding each value to 4 decimal places):

$$y=1.6271x-0.7288$$