## Stats: Product Moment Correlation Co-efficient Notes NEW

Product Moment Correlation Co-efficient (PMCC), $r$, shows us the linear correlation of bivariate data. It gives a number between -1 and +1 .

- $\mathbf{- 1}$ is perfect negative correlation. The closer the PMCC is to -1 , the better the negative correlation
- $\mathbf{+ 1}$ is perfect positive correlation. The closer the PMCC is to +1 , the better the positive correlation
- $\mathbf{0}$ is perfect zero correlation. The closer the PMCC is to 0 , the less correlated the data is

How to calculate PMCC

| Casio fx-991CW Classwiz | Casio fx-CG50 |
| :--- | :--- |
| 1) Press HOME | 1) Press MENU |
| 2) Select Statistics | 2) Select 2 Statistics |
| 3) Select 2-Variable and Clear data if necessary | 3) Enter the data into the table |
| 4) Enter the data into the table | 4) Select CALC (F2) |
| 5) Press EXE | 5) Select REG (F3) |
| 6) Select Reg Results | 6) Select X (F1) |
| 7) Select $y=a+b x$ | 7) Select a + bx (F2) |
| 8) Find the r-value | 8) Find the r-value |

E1: Find the product moment correlation co-efficient of these data:

| $\mathbf{x}$ | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{y}$ | 16 | 18 | 19 | 25 |

The value of $r$ is $\qquad$
That is close to $\qquad$ , so the scatter graph would show $\qquad$ .

## Your Notes

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