

Calculating the mean

Calculator steps for a CASIO fx-82 AU PLUS II

Enter the statistics mode of the scientific calculator.

MODE **2**

2 : STAT

1:COMP 2:STAT
3:VERIF

Select

1

1 : 1-VAR

1:1-VAR 2:A+BX
3:_+CX² 4:ln X
5:6^X 6:A·B^X
7:A·X^B 8:1/X

Turning on the Frequency column

If there is no Frequency column:

SHIFT MODE
(SETUP)

▼

1:MthIO 2:LineIO
3:Deg 4:Rad
5:Gra 6:Fix
7:Sci 8:Norm

3

3 : STAT

1:ab/c 2:d/c
3:STAT 4:Disp
5:**4:CONT**

1

1 : ON

Frequency?
1:ON 2:OFF

Enter the data.

STAT | FREQ |

STAT | FREQ |

Calculating the mean

Press AC

AC

Then analyse STAT data.

SHIFT 1

1

4

4 :Var

1:Type 2:Data
3:Sum 4:Var
5:MinMax

Choose \bar{x}

2 =

2 : \bar{x}

1:n 2: \bar{x}
3: s_x 4: s_x

\bar{x}

2.34

Calculating the median and quartiles

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Enter the statistics mode of the scientific calculator.

MODE **2**

2 : STAT

1:COMP 2:STAT
3:VERIF

Select

1

1 : 1-VAR

1:1-VAR 2:A+BX
3:_+CX² 4:ln X
5:e^X 6:A·B^X
7:A·X^B 8:1/X

Turning on the Frequency column

① see instructions for calculating the mean

Enter the data.

STAT X FREQ
1 2 3

STAT X FREQ
4 3 2

Calculating the median

Press AC

AC

Then analyse STAT data.

SHIFT **1**

1 STAT

1

6

6 : MinMax

1:Type 2:Data
3:Sum 4:Var
5:MinMax

Choose med

4 **=**

4 : med

1:minX 2:maxX
3:Q1 4:med
5:Q3

STAT X
med
2.5

Calculating the quartiles

Press AC

AC

Then analyse STAT data.

SHIFT **1**

1 STAT

1

6

6 : MinMax

1:Type 2:Data
3:Sum 4:Var
5:MinMax

Choose Q1 for the lower quartile
or Q3 for the upper quartile

3 **=**

3 : Q1

1:minX 2:maxX
3:Q1 4:med
5:Q3

5 **=**

5 : Q3

STAT X
Q1
1

Calculating the standard deviation

Calculator steps for a CASIO fx-82 AU PLUS II

Example data set: 12, 17, 16, 9, 11, 12, 14, 16, 11, 10, 8, 14, 9

Enter the statistics mode of the scientific calculator.

MODE **2** **2 : STAT**

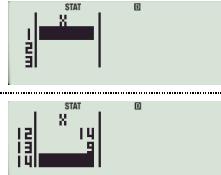
1:COMP 2:STAT
3:VERIF

Select

1 **1 : 1 - VAR**

1:1-VAR 2:a+bX
3:-+cX² 4:ln X
5:e^X 6:a·b^X
7:a·X^b 8:1/X

Enter the data.



Calculating the population standard deviation

Press AC

AC

Then analyse STAT data.

SHIFT **1**

STAT **1**

4

4 : Var

1:Type 2:Data
3:Sum 4:Var
5:MinMax

Choose σ_x

3 **=**

3 : σ_x

1:n 2: \bar{x}
3: σ_x 4:sx



Calculating the sample standard deviation

Press AC

AC

Then analyse STAT data.

SHIFT **1**

STAT **1**

4

4 : Var

1:Type 2:Data
3:Sum 4:Var
5:MinMax

Choose s_x

4 **=**

4 : sx

1:n 2: \bar{x}
3: σ_x 4:sx



Calculating the correlation coefficient

see also gomaths.net/4297

Calculator steps for a CASIO fx-82 AU PLUS II

Enter the statistics mode of the scientific calculator.

MODE **2** 2:STAT

1:COMP 2:STAT
3:VERIF

Select

2 2:A+BX

1:1-VAR 2:A+BX
3:_+CX² 4:ln X
5:e^X 6:A·B^X
7:A·X^B 8:1/X

Enter the data.

	STAT	0
	X	Y
1	24.5	167
2	25.6	168
3	26.1	170

Press AC

AC

Then analyse STAT data.

5 5:Reg

1:Type 2:Data
3:Sum 4:Var
5:Reg 6:MinMax

Choose r

3 **=** 3:r

1:A 2:B
3:r 4: Σ
5: σ

STAT 0
 r
0.9478183177

Determining the line of best fit

see also gomaths.net/4297

(gradient and y -intercept)

Calculator steps for a CASIO fx-82 AU PLUS II

Enter the STAT options.

SHIFT 1 STAT 1

Choose 5 : Reg for ‘Regression’.

5 5 : Reg

1 : Type 2 : Data
3 : Sum 4 : Var
5 : Reg 6 : MinMax

The calculator represents the straight line as
 $A + BX$

where A is the y -intercept and
 B is the gradient.

1 : A 2 : B
3 : r 4 : α
5 : β

Determine the y -intercept.

1 = 1 : A

STAT A
-65.63424252,

$A = -65.63$

Determine the gradient.

SHIFT 1 STAT
5 5 : Reg
2 = 2 : B

STAT B
0.7512323365)

$B = 0.75$

Using the gradient-intercept formula, the line is:

$$y = mx + c$$

Substitute A for c and B for m

$$y = Bx + A$$

$$y = 0.75x - 65.63$$