

USING CASIO fx83WA or fx 85WA to find the Mean**Discrete data****Example** Find the mean of: 5, 3, 4, 4, 2, 6, 7, 1, 2, 6

	<i>What you do</i>	<i>What you see</i>
Set mode	MODE 2	
Clear memory	SHIFT AC =	scl 0
Input data	5 M+	5
	3 M+	3
	4 M+	4
	4 M+	4
	2 M+	2
	6 M+	6
	7 M+	7
	1 M+	1
	2 M+	2
	6 M+	6
To obtain $\bar{X} = 4$	SHIFT 1 =	\bar{x} 4
$n = 10$	RCL hyp (red letter C on third row of calculator)	n= 10
$\Sigma x = 40$	RCL Σ (red letter B on third row of calculator)	$\Sigma x =$ 40
To clear SD mode	MODE 1	



USING CASIO fx83WA or fx 85WA to find the Mean

Grouped Data

Example Find the mean of the frequency distribution:

x	20	21	22	23	24	25
f	4	7	11	16	8	4

Set mode	<i>What you do</i> MODE 2	<i>What you see</i>
Clear memory	Shift AC =	scl 0
Input data	20 SHIFT , 4 M+	20;4 20
	21 SHIFT , 7 M+	21;7 21
	22 SHIFT , 11 M+	22;11 22
	23 SHIFT , 16 M+	23;16 23
	24 SHIFT , 8 M+	24;8 24
	25 SHIFT , 4 M+	25;4 25
To obtain		
$\bar{x} = 22.58$	SHIFT 1 =	\bar{x} 22.58
$n = 50$	RCL hyp (red letter C on third row of calculator)	$n =$ 50
$\Sigma x = 1129$	RCL "" (red letter B on third row of calculator)	$\Sigma x =$ 1129
To clear SD mode	MODE 1	



USING CASIO fx83WA or fx 85WA to find the Standard Deviation

Discrete data

Example Find the standard deviation of: 5, 3, 4, 4, 2, 6, 7, 1, 2, 6

	<i>What you do</i>	<i>What you see</i>
Set mode	MODE 2	
Clear memory	SHIFT AC =	scl 0
Input data	5 M+ 3 M+ 4 M+ 4 M+ 2 M+ 6 M+ 7 M+ 1 M+ 2 M+ 6 M+	5 3 4 4 2 6 7 1 2 6
To obtain $\sigma = 1.897$	SHIFT 2 =	$x\sigma_n$ 1.897366596
$n = 10$	RCL hyp (red letter C on third row of calculator)	n= 10
$\Sigma x = 40$	RCL "" (red letter B on third row of calculator)	$\Sigma x =$ 40
$\Sigma x^2 = 196$	RCL (-) (red letter A on third row of calculator)	$\Sigma x^2 =$ 196
Variance	SHIFT 2 = $x^2 =$	Ans = 3.6
To clear SD mode	MODE 1	



USING CASIO fx83WA or fx 85WA to find the Standard Deviation

Grouped Data

Example Find the standard deviation of the frequency distribution:

x	40	41	42	43	44
f	17	32	38	31	12

Set mode	<i>What you do</i> MODE 2	<i>What you see</i>
Clear memory	Shift AC =	scl 0
Input data	40 SHIFT , 17 M+	40;17 40
	41 SHIFT , 32 M+	41;32 41
	42 SHIFT , 38 M+	42;38 42
	43 SHIFT , 31 M+	43;31 43
	44 SHIFT , 12 M+	44;12 44
To obtain		
$\sigma = 1.170$	SHIFT 2 =	$x\sigma_n$ 1.170368879
$n = 130$	RCL hyp (red letter C on third row of calculator)	n = 130
$\sum x = 5449$	RCL "" (red letter B on third row of calculator)	$\sum x =$ 5449
$\sum x^2 = 228575$	RCL (-) (red letter A on third row of calculator)	$\sum x^2 =$ 228575
Variance	SHIFT 2 = $x^2 =$	Ans = 1.369763314
To clear SD mode	MODE 1	



USING CASIO fx83WA or fx85WA to find the Product Moment Correlation Coefficient

Example Find the correlation coefficient for the data given in the table:

x	2	3	4	5	7
y	3	5	8	8	9

	<i>What you do</i>	<i>What you see</i>
Set LR mode	MODE 3 1	0
Clear memories	SHIFT AC =	scl 0
Input data	2,3 M+	2,3 2
	3,5 M+	3,5 3
	4,8 M+	4,8 4
	5,8 M+	5,8 5
	7,9 M+	7,9 7

You now have access to

r	SHIFT (=	r 0.90098616
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You can also extract the following values to show in your working:

Σx^2	RCL red A	Σx^2 103
Σx	RCL red B	Σx = 21
n	RCL red C	n= 5
Σy^2	RCL red D	Σy^2 = 243
Σy	RCL red E	Σy = 33
Σxy	RCL red F	Σxy = 156
\bar{x}	SHIFT 1 =	\bar{x} 4.2
\bar{y}	SHIFT 4 =	\bar{y} 6.6



USING CASIO fx83WA or fx85WA to find the Product Moment Correlation Coefficient

Example Find the correlation coefficient if:
 $n = 10$, $\Sigma x = 61$, $\Sigma x^2 = 521$, $\Sigma y = 106$, $\Sigma y^2 = 1424$, $\Sigma xy = 851$

	<i>What you do</i>	<i>What you see</i>
Set L R mode	MODE 3 1	0
Clear memories	SHIFT AC =	scl 0
Input data	10 STO red C	n = 10
	61 STO red B	$\Sigma x =$ 61
	521 STO red A	$\Sigma x^2 =$ 521
	106 STO red E	$\Sigma y =$ 106
	1424 STO red D	$\Sigma y^2 =$ 1424
	851 STO red F	$\Sigma xy =$ 851
To obtain the correlation coefficient	SHIFT (=	r = 0.966459319
s_{xx}	SHIFT 2 x^2 multiply RCL red C $x\sigma_n^2xC$	148.9
s_{yy}	SHIFT 5 x^2 multiply RCL red C $y\sigma_n^2xC$	300.4
There is not an easy way to check s_{xy} . 204.4		

USING CASIO fx83WA or fx85WA to calculate Linear Regression

Feed in the data as for correlation.

Shift A = finds a or α

Shift B = finds b or β

In the last example $A = 2.226326394$

$$B = 1.372733378$$

Regression line of y on x

$$y = 2.23 + 1.37x$$

