

# Calculating the Standard Deviation using a Casio Scientific Calculator fx-83ES

Relevance to the syllabus? May 2009 syllabus LC OL






























Section 1.6 (7<sup>th</sup> bullet point of learning outcomes)

## Example 1 :

Calculate the standard deviation of the following data from census at school showing the heights of a sample of 10 students from 5<sup>th</sup> year.

### (i) Data not sorted into a frequency table

gender	height/cm
boy	165
girl	165
boy	150
boy	171
girl	153
boy	171
girl	153
girl	153
boy	166
boy	179

- ,  (STAT),  (1-Var)
- Fill in the table which appears as follows :  
 =  =  =  =  =  =  =  
 =  =  =
- Press  button after the last =
- ,  (STAT)  (Data) – Shows the list of data and allows changes
- Press AC 
- To find mean of the data :  
,  (STAT)  (Var)  :  $\bar{x}$  =  162.6 cm
- Press AC
- To find standard deviation of the data:  
,  (STAT)  (Var)  :  $\sigma n$  =  9.32cm
- Press 








(ii) Organise the data into a frequency table first and then input the frequency table into the calculator









$h/\text{cm}$	165	150	171	153	166	179
$f$	2	1	2	3	1	1












Data may be ordered according to height if wished but it is not necessary







$h/\text{cm}$	150	153	165	166	171	179
$f$	1	3	2	1	2	1






### (ii) Putting data into a frequency table using the calculator

- , , ,  :STAT, 1(ON)
- , , (STAT), , (1-Var)
- Fill in the table which appears as follows (filling in all the data values first)
 

165  150  171  153  166  179 
- Press , then  to get back to the beginning of the table to fill in the frequencies
 

2  1  2  3  1  1 
- Press  button after the last =
- , , (STAT) , (Data) – Shows the list of data and allows changes if necessary to the data
- Press 
- To find mean of the data :
 

, , (STAT) , (Var) ,  $\bar{x}$   162.6 cm
- Press 
- To find standard deviation of the data:
 

, , (STAT) , (Var) ,  $\sigma n$   9.32cm
- Press 