

## Tips and Tricks: Retrieving Statistical Values

Once a set of statistics has been calculated in the **NUM** view of the **Statistics** applet, the user may want to retrieve some of those values in the **HOME** view. For example, suppose you suspect that the value of 27 should actually be 2, 7 in the data set below. We can check for an outlier by testing to see whether it lies in the range  $\bar{x} \mp 3\sigma$ .

$$\{2, 2, 3, 5, 4, 6, 7, 3, 9, 27, 3, 5, 10, 5, 4\}$$

Entering the data (without the 27) and pressing **STATS** gives the following:

1-VAR	H1		
N	14		
TOTΣ	68		
MEANΣ	4.857143		
PVARΣ	6.55102		
SVARΣ	5.978022		
PSDEV	2.35606		
	14		

We can now retrieve the values of the mean and population standard deviation in **HOME** using the **VAR** button. Press **VAR**, then **APLET (SK2)**, scroll down to **Stat-One** and then retrieve **MeanΣ**. Use the same technique to retrieve the value of **PSDev**. If you prefer, you can simply use the **A..Z** buttons and the **CHARS** menu to enter the variable names instead of retrieving them from the **VAR** menu.

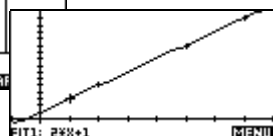
STATISTICS VARS	
Numeric	MaxΣ
Note	MeanΣ
Sketch	Median
Stat-One	MinΣ

As you can see from the screen shot of the **HOME** view shown right, the value of 27 is definitely not in the range required and so is probably an outlier.

HOME	
MeanΣ+3*PSDev	11.9253239296
MeanΣ-3*PSDev	-2.21103821536

The summary statistics of bivariate data can be retrieved in the same manner. In addition to this you can paste the equation of the fit curve into the **Function** applet using the technique shown below. To convert **PREDY(X)** into the fit equation, just highlight it and press **EVAL (SK6)**.

n	C1	C2	C3	C4
1	1	5		
2	2	11		
3	3	15		



FUNCTION SYMBOLIC VIEW	
✓ F1(X)=PREDY(X)	
F2(X)=	
F3(X)=	
F4(X)=	
F5(X)=	

FUNCTION SYMBOLIC VIEW	
✓ F1(X)=2*X+1	
F2(X)=	
F3(X)=	
F4(X)=	
F5(X)=	