

Testing Nested Arrays

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Mathcad 14 Document

ORIGIN = 1

A := READPRN("Samples_done.nested")

$$A = \begin{pmatrix} \{150,3\} \\ \{165,3\} \\ \{166,3\} \\ \{137,3\} \\ \{156,3\} \end{pmatrix}$$

Clean and simple summary of a nested array

A₁ =

	1	2	3
1	"Disp"	"Force"	"Work"
2	"(mm)"	"(N)"	"(mm*N)"
3	0	6.181	0
4	3.266·10 ⁻³	8.353	0.024
5	6.531·10 ⁻³	10.496	0.055
6	9.797·10 ⁻³	12.601	0.092
7	0.013	14.66	0.137
8	0.016	16.663	0.188
9	0.02	18.604	0.246
10	0.023	20.473	0.309
11	0.026	22.265	0.379
12	0.029	23.974	0.455
13	0.033	25.598	0.536
14	0.036	27.133	0.622
15	0.039	28.581	0.713
16	0.042	29.944	...

B := A

$$(A_1)_{2,3} = \text{"(mm*N)"}$$

$$(A_1)_{2,3} := \text{"Fred"}$$

This produces an error in Mathcad 14 (and earlier versions) which Development has been told about for over 4 years.

They claim it should be fixed, but never is.

Here is a silly workaround, but it will not work in Prime because programming does not exist.

A := B The above killed A

$$A := \begin{cases} \text{tmp} \leftarrow A \\ (tmp_1)_{2,3} \leftarrow \text{"Fred"} \\ \text{tmp} \end{cases} \quad (A_1)_{2,3} = \text{"Fred"}$$

Why can't we do this without the local programming assignment operator ????????

C := B₁

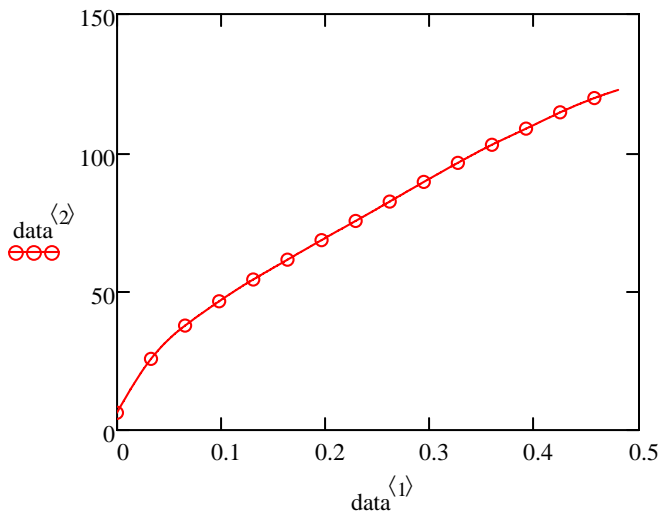
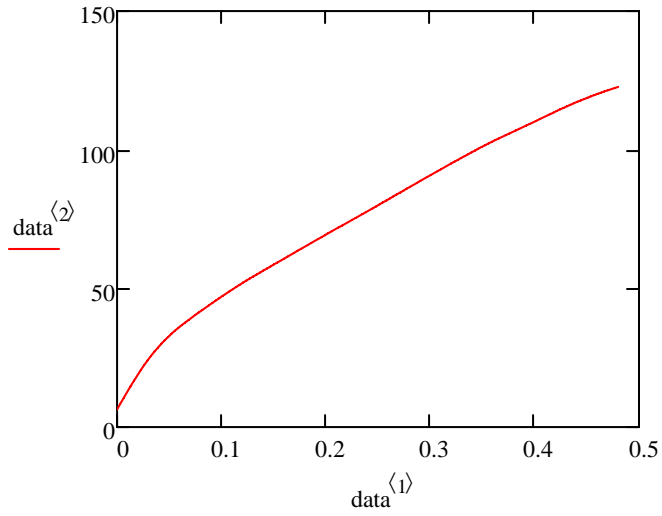
$$\text{data} := \text{submatrix}(C, 3, \text{last}(C^{(1)}), 1, 3)$$

Note that in Prime, this would mean take the last index of ROW 1 from C

MAJOR CONFUSION

	1	2	3
1	"Disp"	"Force"	"Wor
2	"(mm)"	"(N)"	"(mm*N
3	0	6.181	
4	3.266·10 ⁻³	8.353	0.02
5	6.531·10 ⁻³	10.496	0.02
6	9.797·10 ⁻³	12.601	0.02
7	0.013	14.66	0.12
8	0.016	16.663	0.18
9	0.02	18.604	0.24
10	0.023	20.473	0.30
11	0.026	22.265	0.37
12	0.029	23.974	0.44
13	0.033	25.598	0.51
14	0.036	27.133	0.60
15	0.039	28.581	0.70

15	0.039	28.581	0.7
16	0.042	29.944	

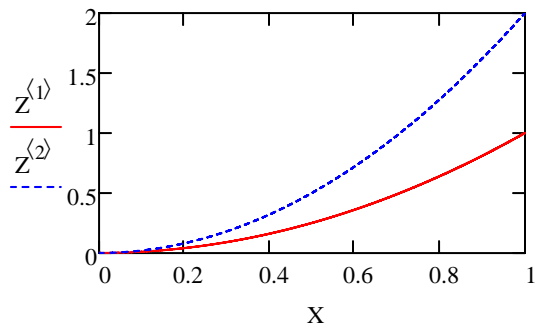


**Symbols turned on,
showing every 10th
symbol**

**You cannot do this
in PRIME**

Plotting large arrays

```
i := 1..106    j := 1..3  
Z := ""        X := ""        Xi :=  $\frac{i}{10^6}$   
Zi,j :=  $\frac{i^2}{10^{12}}$  · j    <= Computes in 2 seconds in MC 14
```



Plots in 2 seconds