

**Testing Nested Arrays
Ted Diehl**

Prime 1 Beta 1

ORIGIN = 1

A := READPRN ("Samples_done.nested")

How do I get the nested array to NOT show expanded ==>

$$A_1 = \begin{bmatrix} \text{"Disp"} & \text{"Force"} & \text{"Work"} \\ \text{"(mm)"} & \text{"(N)"} & \text{"(mm *N)"} \\ 0 & 6.181 & 0 \\ 0.003 & 8.353 & 0.024 \\ 0.007 & 10.496 & 0.055 \\ 0.01 & 12.601 & 0.092 \\ 0.013 & 14.66 & 0.137 \\ 0.016 & 16.663 & 0.188 \\ 0.02 & 18.604 & 0.246 \\ 0.023 & 20.473 & 0.309 \\ 0.026 & 22.265 & 0.379 \\ 0.029 & 23.974 & 0.455 \\ \vdots & & \end{bmatrix}$$

B := A

$A_{1,2,3}$ =

I cannot access sub elements of a nested array. This used to work in Mathcad

This works, look identical to above. Difference was I had A [1 all scoped when I did the other subscripts

$A_{1,2,3} = \text{"(mm *N)"}'$

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

Now I have to add () to get this to work. This will break old worksheets.

The error message above does not suggest this is the problem.

I still cannot redefine nested entities.

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

Mathcad development has been told of this BUG/ISSUE for over 4 YEARS!

You keep saying you will fix it but you do not!

WHY?????

"Disp"	"Force"	"Work"
"(mm)"	"(N)"	"(mm *N)"
0	2.293	0
0.003	4.07	0.009
0.006	5.806	0.023
0.008	7.494	0.041
0.011	9.132	0.064
0.014	10.715	0.092
0.017	12.239	0.123
0.019	13.702	0.159
0.022	15.102	0.199
0.025	16.437	0.243
		⋮

A =

"Disp"	"Force"	"Work"
"(mm)"	"(N)"	"(mm *N)"
0	6.956	0
0.003	8.645	0.025
0.007	10.315	0.056
0.01	11.963	0.093
0.013	13.584	0.135
0.016	15.174	0.182
0.02	16.729	0.234
0.023	18.243	0.291
0.026	19.712	0.353
0.029	21.133	0.42
		⋮

"Disp"	"Force"	"Work"
"(mm)"	"(N)"	"(mm *N)"
0	5.529	0
0.003	8.115	0.022
0.006	10.648	0.052
0.01	13.119	0.091
0.013	15.514	0.137
0.016	17.824	0.191
0.019	20.038	0.252
0.023	22.148	0.32
0.026	24.147	0.395
0.029	26.032	0.476
		⋮

"Disp"	"Force"	"Work"
"(mm)"	"(N)"	"(mm *N)"
0	8.206	0
0.003	10.219	0.03
0.007	12.207	0.067
0.01	14.168	0.109
0.013	16.094	0.159
0.016	17.981	0.214
0.02	19.822	0.276
0.023	21.612	0.343
0.026	23.345	0.417
0.029	25.015	0.495
		⋮

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		⋮
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"(mm)"	"(N)"	"(mm *N)"

$$C := B_1$$

$$\text{data} := \text{submatrix}(C, 3, \text{last}(C_1), 1, 3)$$

B =

0.003	4.07	0.009
0.006	5.806	0.023
0.008	7.494	0.041
0.011	9.132	0.064
0.014	10.715	0.092
0.017	12.239	0.123
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0.026	23.345	0.417
⋮		



fred := data

fred²

I am trying to re-define the 2nd col of fred to be something else, but I cannot do it - WHY???

This is a row operator in Prime

fred¹

Also, the col and row operators are now INCOMPATIBLE with the ALL previous versions of Mathcad.

This is a COLUMN operator in ALL other versions of Mathcad.

fred¹

I guess that Mathcad is NOT intended to be used for clearly documentation of engineering calculations.



No symbols



Using Circles as symbols

You cannot see them, it looks like one fat line.

There is no way to plot symbols like every 10th data point

This has existed in Mathcad for a long time.

Plotting large arrays

$i := 1..10^6$ $j := 1..3$

$Z := ""$ $X := ""$ $X_i := \frac{i}{10^6}$

$Z_{i,j} := \frac{i^2}{10^{12}} \cdot j$ < = Computes in 2 seconds in Prime

The above can easily be plotted
in Mathcad 14, but it causes
PRIME to HANG forever.

Below I tried to do it with 10^5 array - but the graph
hung again.

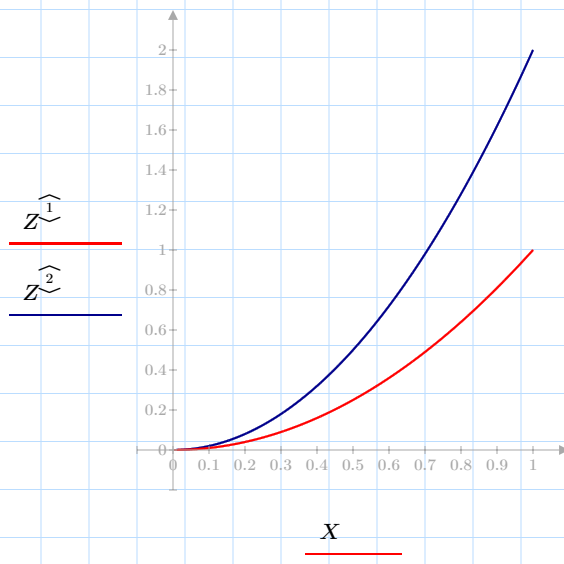
It did work with 10^4 (10,000 points), but the graph
took 30 minutes and now the document is very
sluggish (including printing)

10^5

$i := 1..10^4$ $j := 1..3$

$Z := ""$ $X := ""$ $X_i := \frac{i}{10^4}$

$Z_{i,j} := \frac{i^2}{10^8} \cdot j$



took 30 seconds to plot

and another 15 seconds to get
the cursor back