Mata Sundri College For Women

Subject - sec

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TABLE

Arranging of facts or figure in form of rows & columns

TO PRODUCING A TABLE OF VALUES

- Table command tales two arguments separated by comma.
- The first describe the content of each table .
- Second is an interatot.

Q- Table of sequence of first ten positive no.

In : [1] = f [x_] : = x^2

In : [2] = Table [f[x] ,{x,1,10}]

Out : [2] = {1,4,9,16,25,36,49,64,81,100}

Interor :- to contain only 2 items

- the name of the variable.

- stopping no.

In : [3] = Table [f[x],{x,1,10}]

out : [4] = {1,4,9,16,25,36,49,64,81,100}

List :- The output of the table command is a basic data structure in Mathematica.

Table will also accept a special interior structure of the form

{ var ,}{value1,value2,----------}}

In : [3] = Table [f[x],{x,{1,7,12,20}}]

out : [4] = {1, 49,144,400}

Grid :- The result in order to create a two – dimensional display in which each list become a row.

In : [5] = data = Table [{x, f[x]}{x,5}]

out : [5] = {1, 1},{2,4},{3,9},{4,16},{5,25}}

In : [5] = Grid [data]

out : [5] = 1 1
2 4
3 9
4 16
5 25

The most simple formatting tip to apply Text to an entire grid .

This will apply textual formatting to the individual items that occupy each grid cell we use prefix form @ instead of square bracket when applying the text command

add grid option setting alignment → right to align each column to the right

In : [7] = Text @ Grid [data, Alignment → right]

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out : [7] = 1      1
            2      4
            3      9
            4     16
            5     25
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To add headings to the columns of a table by perpending an additional row containing these headings to your table data each item in a header row is a string

In : [8] = table contents = prepend [data,{"x","x^2"}]

out [8] = {{ (x, x^2), {1,1}, {2,4} ,{3,9},{4,16},{5,25}}

In : [7] = Text @ Grid [table contents , Alignment → right, dividers →

{ Center, {false , true }}, spacing → 2]

out : [7] =

x	x^2
1	1
2	4
3	9
4	16
5	25

Spacing = To add title bit space between two successive column.

Dividers = To add dividing lines in a grid.

The center settings specifies that there are no vertical lines on the fan left or fan right , only between the column.

[False , True] = specifies the horizontal dividing lines .

There is no lines above the ist row, while there is one above the second row , & none for any subsequent row.

+n[10] := Text @ Grid [table contents , Alignment → right, dividers →
{2 → True, 2 → True}, spacing → 2]

out : [7] =

x	x^2
1	1
2	4
3	9
4	16
5	25

In : [11] = Clear [data];

data = Table [{ 10^n,f [10^n]},{n,0,5}]

Out [11] = { {1,1}, {10,100}, {100,10000}, {10000,1000000}, {10000,10000000}, {10000,100000000}}

In : [11] = Grid [Prepend] [data, { (x, x^2)}], Alignment → right, Dividers → All, spacing → 2]

Out [12] =

x	x^2
1	1
10	100
100	10000
1000	1000000
10000	100000000
100000	10000000000

Manipulating a grid:-

A grid with header row & a second row of content . The value in 2nd row can be manipulated. This gives a compact table that allows one to display the raw of her choice

In[13] := Manipulate [Text @ Grid [{{"x", "x^2"},{x, x^2}}, Dividers → All, Item size → 5] ,{{x,5.3},1,10,.1}]

Out [13] =

x	x^2
5.3	28.09

In[13] := Manipulate [Text @ Grid[{{ "c", "f"} , { c,1.8c+32}}, }}, Dividers → All, Item size → 5},{{c,0},-40,100,1}}]

All :- which specifies that all cells have identical width & height values , determined by the content of largest cell.

Item size:- To specify numerical value in order to keep the table dimension steady as controller is adjusted.