Title

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rowshape( ) — Reshape matrix

Description

`rowshape(`*T*`,` *r*`)` returns *T* transformed into a matrix with `trunc(`*r*`)` rows.

`colshape(`*T*`,` *c*`)` returns *T* having `trunc(`*c*`)` columns.

In both cases, elements are assigned sequentially with the column index varying more rapidly. See [M-5] **vec( )** for a function that varies the row index more rapidly.

Syntax

transmorphic matrix `rowshape(`*transmorphic matrix T*`,` *real scalar r*`)`

transmorphic matrix `colshape(`*transmorphic matrix T*`,` *real scalar c*`)`

Remarks and examples

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Remarks are presented under the following headings:

Example of rowshape( )
Example of colshape( )

Example of rowshape( )

```
: A
       1    2    3    4
  +-------------------------+
1 |  11   12   13   14      |
2 |  21   22   23   24      |
3 |  31   32   33   34      |
4 |  41   42   43   44      |
  +-------------------------+

: rowshape(A,2)
       1    2    3    4    5    6    7    8
  +-------------------------------------------+
1 |  11   12   13   14   21   22   23   24    |
2 |  31   32   33   34   41   42   43   44    |
  +-------------------------------------------+
```

Example of colshape( )

```
: colshape(A, 2)
       1    2
    +---------+
  1 |  11   12 |
  2 |  13   14 |
  3 |  21   22 |
  4 |  23   24 |
  5 |  31   32 |
  6 |  33   34 |
  7 |  41   42 |
  8 |  43   44 |
    +---------+
```

Conformability

`rowshape(`*T*`, `*r*`)`:

T:	$r_0 \times c_0$
r:	1×1
result:	$r \times r_0c_0/r$

`colshape(`*T*`, `*c*`)`:

T:	$r_0 \times c_0$
c:	1×1
result:	$r_0c_0/c \times c$

Diagnostics

Let r_0 and c_0 be the number of rows and columns of *T*.

`rowshape()` aborts with error if $r_0 \times c_0$ is not evenly divisible by `trunc(`*r*`)`.

`colshape()` aborts with error if $r_0 \times c_0$ is not evenly divisible by `trunc(`*c*`)`.

Also see

[M-4] **Manipulation** — Matrix manipulation