rowshape() — Reshape matrix

**Description**

rowshape($T$, $r$) returns $T$ transformed into a matrix with \texttt{trunc}(r) rows.

colshape($T$, $c$) returns $T$ having \texttt{trunc}(c) columns.

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

**Syntax**

\begin{verbatim}
transmorphic matrix rowshape(transmorphic matrix $T$, real scalar $r$)
transmorphic matrix colshape(transmorphic matrix $T$, real scalar $c$)
\end{verbatim}

**Remarks and examples**

Remarks are presented under the following headings:

\textit{Example of rowshape()}

\textit{Example of colshape()}

**Example of rowshape()**

\begin{verbatim}
: 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
\end{verbatim}
Example of colshape()

: colshape(A, 2)

```
1  2
11 12
2  3  13 14
3  4  21 22
4  5  31 32
5  6  41 42
6  7  43 44
7  8
8
```

Conformability

\text{rowshape}(T, r): \\
\text{T: } r_0 \times c_0 \\
\text{r: } 1 \times 1 \\
\text{result: } r \times r_0c_0/r

\text{colshape}(T, c): \\
\text{T: } r_0 \times c_0 \\
\text{c: } 1 \times 1 \\
\text{result: } r_0c_0/c \times c

Diagnostics

Let \( r_0 \) and \( c_0 \) be the number of rows and columns of \( T \).
\text{rowshape()} aborts with error if \( r_0 \times c_0 \) is not evenly divisible by \( \text{trunc}(r) \).
\text{colshape()} aborts with error if \( r_0 \times c_0 \) is not evenly divisible by \( \text{trunc}(c) \).

Also see

[M-4] \text{manipulation} — Matrix manipulation