I() — Identity matrix

Description

I(n) returns the \( n \times n \) identity matrix.

I(m, n) returns an \( m \times n \) matrix with 1s down its principal diagonal and 0s elsewhere.

Syntax

\[
\text{real matrix } I(\text{real scalar } n) \\
\text{real matrix } I(\text{real scalar } m, \text{real scalar } n)
\]

Remarks and examples

I() must be typed in uppercase.

Conformability

\[
\begin{align*}
I(n): \\
\text{n: } & \quad 1 \times 1 \\
\text{result: } & \quad n \times n \\
I(m, n): \\
\text{m: } & \quad 1 \times 1 \\
\text{n: } & \quad 1 \times 1 \\
\text{result: } & \quad m \times n
\end{align*}
\]

Diagnostics

I(n) aborts with error if \( n \) is less than 0 or is missing. \( n \) is interpreted as \text{trunc}(n).

I(m, n) aborts with error if \( m \) or \( n \) are less than 0 or if they are missing. \( m \) and \( n \) are interpreted as \text{trunc}(m) and \text{trunc}(n).

Also see

[M-4] Standard — Functions to create standard matrices