

**standard** — Functions to create standard matrices

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[M-5] Manual entry	Function	Purpose
<b>Unit &amp; constant matrices</b>		
<b>I()</b>	I()	identity matrix
<b>e()</b>	e()	unit vectors
<b>J()</b>	J()	matrix of constants
<b>designmatrix()</b>	designmatrix()	design matrices
<b>Block-diagonal matrices</b>		
<b>blockdiag()</b>	blockdiag()	block-diagonal matrix
<b>Ranges</b>		
<b>range()</b>	range() rangen()	vector over specified range vector of $n$ over specified range
<b>unitcircle()</b>	unitcircle()	unit circle on complex plane

Random

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<b>runiform()</b>	runiform() rnormal()	uniform random variates normal (Gaussian) random variates
	rbeta() rbinomial() rchi2() rdiscrete() rexponential() rgamma() rhypergeometric() rlogistic() rbinomial() rpoisson() rt() runiformint() rweibull() rweibullph()	beta random variates binomial random variates chi-squared random variates discrete random variates exponential random variates gamma random variates hypergeometric random variates logistic random variates negative binomial random variates Poisson random variates Student's <i>t</i> random variates uniform random integer variates Weibull random variates Weibull (proportional hazards) random variates

Named matrices

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<b>Hilbert()</b>	Hilbert() invHilbert()	Hilbert matrices inverse Hilbert matrices
<b>Toeplitz()</b>	Toeplitz()	Toeplitz matrices
<b>Vandermonde()</b>	Vandermonde()	Vandermonde matrices

vec() & vech() transform

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<b>Dmatrix()</b>	Dmatrix()	duplication matrices
<b>Kmatrix()</b>	Kmatrix()	commutation matrices
<b>Lmatrix()</b>	Lmatrix()	elimination matrices

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## Description

The functions above create standard matrices such as the identity matrix, etc.

## Remarks and examples

[stata.com](https://www.stata.com)

For other mathematical functions, see

<a href="#">[M-4] matrix</a>	Matrix mathematical functions
<a href="#">[M-4] scalar</a>	Scalar mathematical functions
<a href="#">[M-4] mathematical</a>	Important mathematical functions

## Also see

[\[M-4\] intro](#) — Categorical guide to Mata functions