

Standard — Functions to create standard matrices

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[M-5] Manual entry	Function	Purpose
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Unit & constant matrices

I()	I()	identity matrix
e()	e()	unit vectors
J()	J()	matrix of constants
designmatrix()	designmatrix()	design matrices

Block-diagonal matrices

blockdiag()	blockdiag()	block-diagonal matrix
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Ranges

range()	range() rangen()	vector over specified range vector of n over specified range
unitcircle()	unitcircle()	unit circle on complex plane

Random

runiform()	<code>runiform()</code> <code>rnormal()</code>	uniform random variates normal (Gaussian) random variates
	<hr/>	
	<code>rbeta()</code>	beta random variates
	<code>rbinomial()</code>	binomial random variates
	<code>rchi2()</code>	χ^2 random variates
	<code>rdiscrete()</code>	discrete random variates
	<code>rexponential()</code>	exponential random variates
	<code>rgamma()</code>	gamma random variates
	<code>rhypergeometric()</code>	hypergeometric random variates
	<code>rlogistic()</code>	logistic random variates
	<code>rnbinomial()</code>	negative binomial random variates
	<code>rpoisson()</code>	Poisson random variates
	<code>rt()</code>	Student's <i>t</i> random variates
	<code>runiformint()</code>	uniform random integer variates
	<code>rweibull()</code>	Weibull random variates
	<code>rweibullph()</code>	Weibull (proportional hazards) random variates

Named matrices

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

vec() & vech() transforms

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

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

[M-4] Matrix	Matrix mathematical functions
[M-4] Scalar	Scalar mathematical functions
[M-4] Mathematical	Important mathematical functions

Also see

[M-4] **Intro** — Categorical guide to Mata functions

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