Keywords in Context for the NAG Fortran 77 Library

Nonlinear convolution Volterra–**Abel** equation, first kind, weakly singular	D05BEF
Nonlinear convolution Volterra–**Abel** equation, second kind, weakly singular	D05BDF
Generate weights for use in solving weakly singular **Abel**-type equations	D05BYF
Calculation of weights and **abscissae** for Gaussian quadrature rules, general choice of rule	D01BCF
Pre-computed weights and **abscissae** for Gaussian quadrature rules, restricted choice of rule	D01BBF
Robust estimation, median, median **absolute** deviation, robust standard deviation	G07DAF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex band matrix	F06UBF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex general matrix	F06UAF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex Hermitian band matrix	F06UEF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex Hermitian matrix	F06UCF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex Hermitian matrix, packed storage	F06UDF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex Hessenberg matrix	F06UMF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex symmetric band matrix	F06UHF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex symmetric matrix	F06UFF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex symmetric matrix, packed storage	F06UGF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex trapezoidal/triangular matrix	F06UJF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex triangular band matrix	F06ULF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, complex triangular matrix, packed storage	F06UKF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real band matrix	F06RBF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real general matrix	F06RAF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real Hessenberg matrix	F06RMF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real symmetric band matrix	F06REF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real symmetric matrix	F06RCF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real symmetric matrix, packed storage	F06RDF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real trapezoidal/triangular matrix	F06RJF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real triangular band matrix	F06RLF
1-norm, ∞-norm, Frobenius norm, largest **absolute** element, real triangular matrix, packed storage	F06RKF
Elements of real vector with largest and smallest **absolute** value	F06FLF
Index, real vector element with largest **absolute** value	F06JLF
Index, complex vector element with largest **absolute** value	F06JMF
Sum **absolute** values of complex vector elements	F06JKF
Sum **absolute** values of real vector elements	F06EKF
Acceleration of convergence of sequence, Shanks' transformation...	C06BAF
Normal scores, **accurate** values	G01DAF
ODEs, IVP, **Adams** method, until function of solution is zero,...	D02CJF
ODEs, IVP, **Adams** method with root-finding (forward communication,...	D02QFF
ODEs, IVP, **Adams** method with root-finding (reverse communication,...	D02QGF
One-dimensional quadrature, non-**adaptive**, finite interval	D01BDF
One-dimensional quadrature, **adaptive**, finite interval, allowing for singularities at...	D01ALF
One-dimensional quadrature, **adaptive**, finite interval, method suitable for oscillating functions	D01AKF
One-dimensional quadrature, **adaptive**, finite interval, method suitable for oscillating functions	D01AKF
One-dimensional quadrature, **adaptive**, finite interval, strategy due to Patterson,...	D01AHF
One-dimensional quadrature, **adaptive**, finite interval, strategy due to Piessens and de Doncker,...	D01AJF
One-dimensional quadrature, **adaptive**, finite interval, strategy due to Piessens and de Doncker,...	D01AJF
One-dimensional quadrature, **adaptive**, finite interval, variant of D01AJF efficient on...	D01ATF
One-dimensional quadrature, **adaptive**, finite interval, variant of D01AKF efficient on...	D01AUF
One-dimensional quadrature, **adaptive**, finite interval, weight function $1/(x-c)$,...	D01AQF
One-dimensional quadrature, **adaptive**, finite interval, weight function...	D01ANF
One-dimensional quadrature, **adaptive**, finite interval, weight function...	D01APF
One-dimensional quadrature, non-**adaptive**, finite interval with provision for indefinite...	D01ARF
One-dimensional quadrature, **adaptive**, infinite or semi-infinite interval	D01AMF
Multi-dimensional **adaptive** quadrature over hyper-rectangle	D01FCF
Multi-dimensional **adaptive** quadrature over hyper-rectangle, multiple...	D01EAF
One-dimensional quadrature, **adaptive**, semi-infinite interval, weight function...	D01ASF
Add a new variable to a general linear regression model	G02DEF
Add scalar times complex sparse vector to complex sparse vector	F06GTF
Add scalar times complex vector to complex vector	F06GCF
Add scalar times real sparse vector to real sparse vector	F06ETF
Add scalar times real vector to real vector	F06ECF
Add/delete an observation to/from a general linear regression model	G02DCF
Real inner product added to initial value, basic/**additional** precision	X03AAF
Complex inner product added to initial value, basic/**additional** precision	X03ABF
Return or set unit number for **advisory** messages	X04ABF
Airy function $\mathrm{Ai}(x)$	S17AGF
Airy function $\mathrm{Ai}'(x)$	S17AJF
Airy functions $\mathrm{Ai}(z)$ and $\mathrm{Ai}'(z)$, complex z	S17DGF
Airy functions $\mathrm{Ai}(z)$ and $\mathrm{Ai}'(z)$, complex z	S17DGF
Airy function $\mathrm{Ai}(x)$	S17AGF
Airy function $\mathrm{Ai}'(x)$	S17AJF
Airy function $\mathrm{Bi}(x)$	S17AHF
Airy function $\mathrm{Bi}'(x)$	S17AKF
Airy functions $\mathrm{Ai}(z)$ and $\mathrm{Ai}'(z)$, complex z	S17DGF
Airy functions $\mathrm{Bi}(z)$ and $\mathrm{Bi}'(z)$, complex z	S17DHF
Interpolated values, **Aitken's** technique, unequally spaced data, one variable	E01AAF
Basic Linear **Algebra** Subprograms	F06
Differential/**algebraic** equations	D02M-N
...problem, shooting and matching technique, subject to extra **algebraic** equations, general parameters to be determined	D02SAF
Implicit/**algebraic** ODEs, stiff IVP, banded Jacobian (comprehensive)	D02NHF
Implicit/**algebraic** ODEs, stiff IVP, full Jacobian (comprehensive)	D02NGF
Implicit/**algebraic** ODEs, stiff IVP (reverse communication, comprehensive)	D02NNF
Implicit/**algebraic** ODEs, stiff IVP, sparse Jacobian (comprehensive)	D02NJF
...finite interval, weight function with end-point singularities of **algebraico-logarithmic** type	D01APF
Allocates observations to groups according to selected rules...	G03DCF
LU factorization of real **almost** block diagonal matrix	F01LHF
Solution of real **almost** block diagonal simultaneous linear equations (coefficient...	F04LHF
Multivariate time series, cross **amplitude** spectrum, squared coherency, bounds, univariate and...	G13CEF
Performs principal component **analysis**	G03AAF
Performs canonical variate **analysis**	G03ACF
Performs canonical correlation **analysis**	G03ADF
...within-group covariance matrices and matrices for discriminant **analysis**	G03DAF
Hierarchical cluster **analysis**	G03ECF
K-means cluster **analysis**	G03EFF
Performs principal co-ordinate **analysis**, classical metric scaling	G03FAF

...maximum likelihood estimates of the parameters of a factor	**analysis** model, factor loadings, communalities and...	G03CAF
Returns parameter estimates for the conditional	**analysis** of stratified data	G11CAF
	Analysis of variance, complete factorial design, treatment...	G04CAF
	Analysis of variance, general row and column design, treatment...	G04BCF
Two-way	**analysis** of variance, hierarchical classification, subgroups...	G04AGF
Friedman two-way	**analysis** of variance on k matched samples	G08AEF
Kruskal–Wallis one-way	**analysis** of variance on k samples of unequal size	G08AFF
	Analysis of variance, randomized block or completely randomized...	G04BBF
Two-way contingency table	**analysis**, with χ^2/Fisher's exact test	G01AFF
Padé-	**approximants**	E02RAF
	Approximation	E02
L_1-	**approximation** by general linear function	E02GAF
L_∞-	**approximation** by general linear function	E02GCF
L_1-	**approximation** by general linear function subject to linear...	E02GBF
	Approximation of special functions	S
	arccos x	S09ABF
	arccosh x	S11ACF
	arcsin x	S09AAF
	arcsinh x	S11ABF
	arctanh x	S11AAF
Univariate time series, preliminary estimation, seasonal	**ARIMA** model	G13ADF
...time series, state set and forecasts, from fully specified seasonal	**ARIMA** model	G13AJF
Multivariate time series, filtering (pre-whitening) by an	**ARIMA** model	G13BAF
Univariate time series, estimation, seasonal	**ARIMA** model (comprehensive)	G13AEF
Univariate time series, estimation, seasonal	**ARIMA** model (easy-to-use)	G13AFF
Set up reference vector for univariate	**ARMA** time series model	G05EGF
Generate next term from reference vector for	**ARMA** time series model	G05EWF
ODEs, IVP, error	**assessment** diagnostics for D02PCF and D02PDF	D02PZF
Univariate time series, sample	**autocorrelation** function	G13ABF
Univariate time series, partial autocorrelations from	**autocorrelations**	G13ACF
Multivariate time series, multiple squared partial	**autocorrelations**	G13DBF
Univariate time series, partial	**autocorrelations** from autocorrelations	G13ACF
Least-squares cubic spline curve fit,	**automatic** knot placement	E02BEF
Least-squares surface fit by bicubic splines with	**automatic** knot placement, data on rectangular grid	E02DCF
Least-squares surface fit by bicubic splines with	**automatic** knot placement, scattered data	E02DDF
Multivariate time series, partial	**autoregression** matrices	G13DPF
Calculates the zeros of a vector	**autoregressive** (or moving average) operator	G13DXF
Moving	**average** See ARMA	
Calculates the zeros of a vector autoregressive (or moving	**average**) operator	G13DXF
	Balance complex general matrix	F08NVF
	Balance real general matrix	F08NHF
Transform eigenvectors of real	**balanced** matrix to those of original matrix supplied to F08NHF	F08NJF
Transform eigenvectors of complex	**balanced** matrix to those of original matrix supplied to F08NVF	F08NWF
$ULDL^TU^T$ factorization of real symmetric positive-definite	**band** matrix	F01BUF
Matrix-vector product, real rectangular	**band** matrix	F06PBF
Matrix-vector product, real symmetric	**band** matrix	F06PDF
Matrix-vector product, real triangular	**band** matrix	F06PGF
System of equations, real triangular	**band** matrix	F06PKF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real	**band** matrix	F06RBF
...Frobenius norm, largest absolute element, real symmetric	**band** matrix	F06REF
...Frobenius norm, largest absolute element, real triangular	**band** matrix	F06RLF
Matrix-vector product, complex rectangular	**band** matrix	F06SBF
Matrix-vector product, complex Hermitian	**band** matrix	F06SDF
Matrix-vector product, complex triangular	**band** matrix	F06SGF
System of equations, complex triangular	**band** matrix	F06SKF
...Frobenius norm, largest absolute element, complex	**band** matrix	F06UBF
...Frobenius norm, largest absolute element, complex Hermitian	**band** matrix	F06UEF
...Frobenius norm, largest absolute element, complex symmetric	**band** matrix	F06UHF
...Frobenius norm, largest absolute element, complex triangular	**band** matrix	F06ULF
LU factorization of real m by n	**band** matrix	F07BDF
LU factorization of complex m by n	**band** matrix	F07BRF
Cholesky factorization of real symmetric positive-definite	**band** matrix	F07HDF
Cholesky factorization of complex Hermitian positive-definite	**band** matrix	F07HRF
...Cholesky factorization of real symmetric positive-definite	**band** matrix A	F08UFF
...Cholesky factorization of complex Hermitian positive-definite	**band** matrix A	F08UTF
Determinant of real symmetric positive-definite	**band** matrix (Black Box)	F03ACF
Estimate condition number of real	**band** matrix, matrix already factorized by F07BDF	F07BGF
Estimate condition number of complex	**band** matrix, matrix already factorized by F07BRF	F07BUF
Estimate condition number of real symmetric positive-definite	**band** matrix, matrix already factorized by F07HDF	F07HGF
Estimate condition number of complex Hermitian positive-definite	**band** matrix, matrix already factorized by F07HRF	F07HUF
Unitary reduction of complex Hermitian	**band** matrix to real symmetric tridiagonal form	F08HSF
Orthogonal reduction of real symmetric	**band** matrix to symmetric tridiagonal form	F08HEF
Reduction of real rectangular	**band** matrix to upper bidiagonal form	F08LEF
Reduction of complex rectangular	**band** matrix to upper bidiagonal form	F08LSF
All eigenvalues and optionally all eigenvectors of real symmetric	**band** matrix, using divide and conquer	F08HCF
...and optionally all eigenvectors of complex Hermitian	**band** matrix, using divide and conquer	F08HQF
Refined solution with error bounds of real	**band** system of linear equations, multiple right-hand sides	F07BHF
Refined solution with error bounds of complex	**band** system of linear equations, multiple right-hand sides	F07BVF
...solution with error bounds of real symmetric positive-definite	**band** system of linear equations, multiple right-hand sides	F07HHF
...solution with error bounds of complex Hermitian positive-definite	**band** system of linear equations, multiple right-hand sides	F07HVF
Solution of real	**band** system of linear equations, multiple right-hand sides,...	F07BEF
Solution of complex	**band** system of linear equations, multiple right-hand sides,...	F07BSF
Solution of real symmetric positive-definite	**band** system of linear equations, multiple right-hand sides,...	F07HEF
Solution of complex Hermitian positive-definite	**band** system of linear equations, multiple right-hand sides,...	F07HSF
Estimate condition number of real	**band** triangular matrix	F07VGF
Estimate condition number of complex	**band** triangular matrix	F07VUF
Solution of real	**band** triangular system of linear equations, multiple right-hand sides	F07VEF
Error bounds for solution of real	**band** triangular system of linear equations, multiple right-hand sides	F07VHF
Solution of complex	**band** triangular system of linear equations, multiple right-hand sides	F07VSF
Error bounds for solution of complex	**band** triangular system of linear equations, multiple right-hand sides	F07VVF
Convert real matrix between packed	**banded** and rectangular storage schemes	F01ZCF
Convert complex matrix between packed	**banded** and rectangular storage schemes	F01ZDF
Reduction to standard form, generalized real symmetric-definite	**banded** eigenproblem	F01BVF
Eigenvector of generalized real	**banded** eigenproblem by inverse iteration	F02SDF
Reduction of real symmetric-definite	**banded** generalized eigenproblem $Ax = \lambda Bx$ to standard form...	F08UEF
Reduction of complex Hermitian-definite	**banded** generalized eigenproblem $Ax = \lambda Bx$ to standard form...	F08USF
Explicit ODEs, stiff IVP,	**banded** Jacobian (comprehensive)	D02NCF
Implicit/algebraic ODEs, stiff IVP,	**banded** Jacobian (comprehensive)	D02NHF
ODEs, IVP, for use with D02M–N routines,	**banded** Jacobian, linear algebra set-up	D02NTF
Print real packed	**banded** matrix (comprehensive)	X04CFF

Print complex packed **banded** matrix (comprehensive) X04DFF
Print real packed **banded** matrix (easy-to-use) X04CEF
Print complex packed **banded** matrix (easy-to-use) X04DEF
All eigenvalues of generalized **banded** real symmetric-definite eigenproblem (Black Box) F02FHF
Solution of real symmetric positive-definite **banded** simultaneous linear equations with multiple right-hand sides... F04ACF

...to standard form $Cy = \lambda y$, such that C has the same **bandwidth** as A F08UEF
...to standard form $Cy = \lambda y$, such that C has the same **bandwidth** as A F08USF
LDL^T factorization of real symmetric positive-definite variable-**bandwidth** matrix F01MCF
Solution of real symmetric positive-definite variable-**bandwidth** simultaneous linear equations (coefficient matrix already... F04MCF

...time series, smoothed sample spectrum using rectangular, **Bartlett**, Tukey or Parzen lag window G13CAF
...time series, smoothed sample cross spectrum using rectangular, **Bartlett**, Tukey or Parzen lag window G13CCF

Real inner product added to initial value, **basic/additional** precision X03AAF
Complex inner product added to initial value, **basic/additional** precision X03ABF

ODEs, IVP, **BDF** method, set-up for D02M–N routines D02NVF
ODEs, stiff IVP, **BDF** method, until function of solution is zero,... D02EJF

Modified **Bessel** function $e^{-|x|}I_0(x)$ S18CEF
Modified **Bessel** function $e^{-|x|}I_1(x)$ S18CFF
Modified **Bessel** function $e^{x}K_0(x)$ S18CCF
Modified **Bessel** function $e^{x}K_1(x)$ S18CDF
Modified **Bessel** function $I_0(x)$ S18AEF
Modified **Bessel** function $I_1(x)$ S18AFF
Bessel function $J_0(x)$ S17AEF
Bessel function $J_1(x)$ S17AFF
Modified **Bessel** function $K_0(x)$ S18ACF
Modified **Bessel** function $K_1(x)$ S18ADF
Bessel function $Y_0(x)$ S17ACF
Bessel function $Y_1(x)$ S17ADF
Modified **Bessel** functions $I_{\nu+a}(z)$, real $a \geq 0$, complex z, $\nu = 0, 1, 2, \ldots$ S18DEF
Bessel functions $J_{\nu+a}(z)$, real $a \geq 0$, complex z, $\nu = 0, 1, 2, \ldots$ S17DEF
Modified **Bessel** functions $K_{\nu+a}(z)$, real $a \geq 0$, complex z, $\nu = 0, 1, 2, \ldots$ S18DCF
Bessel functions $Y_{\nu+a}(z)$, real $a \geq 0$, complex z, $\nu = 0, 1, 2, \ldots$ S17DCF

...lower tail probabilities and probability density function for the **beta** distribution G01EEF
Computes deviates for the **beta** distribution G01FEF
Computes probabilities for the non-central **beta** distribution G01GEF
Generates a vector of pseudo-random numbers from a **beta** distribution G05FEF

Airy function $\mathrm{Bi}(x)$ S17AHF
Airy function $\mathrm{Bi}'(x)$ S17AKF
Airy functions $\mathrm{Bi}(z)$ and $\mathrm{Bi}'(z)$, complex z S17DHF
Airy functions $\mathrm{Bi}(z)$ and $\mathrm{Bi}'(z)$, complex z S17DHF

...nonsymmetric linear systems, preconditioned RGMRES, CGS or **Bi-CGSTAB** F11BBF
...real sparse nonsymmetric linear system, RGMRES, CGS or **Bi-CGSTAB** method, Jacobi or SSOR preconditioner (Black Box) F11DEF
...real sparse nonsymmetric linear system, RGMRES, CGS or **Bi-CGSTAB** method, preconditioner computed by F11DAF... F11DCF
...nonsymmetric linear systems, preconditioned RGMRES, CGS, **Bi-CGSTAB** or TFQMR method F11BEF
...non-Hermitian linear systems, preconditioned RGMRES, CGS, **Bi-CGSTAB** or TFQMR method F11BSF
...complex sparse non-Hermitian linear system, RGMRES, CGS, **Bi-CGSTAB** or TFQMR method, Jacobi or SSOR preconditioner... F11DSF
...complex sparse non-Hermitian linear system, RGMRES, CGS, **Bi-CGSTAB** or TFQMR method, preconditioner computed by... F11DQF

Evaluation of fitted **bicubic** spline at a mesh of points E02DFF
Evaluation of fitted **bicubic** spline at a vector of points E02DEF
Interpolating functions, fitting **bicubic** spline, data on rectangular grid E01DAF
Least-squares surface fit, **bicubic** splines E02DAF
Sort two-dimensional data into panels for fitting **bicubic** splines E02ZAF
Least-squares surface fit by **bicubic** splines with automatic knot placement, data on... E02DCF
Least-squares surface fit by **bicubic** splines with automatic knot placement, scattered data E02DDF

Orthogonal reduction of real general rectangular matrix to **bidiagonal** form F08KEF
Unitary reduction of complex general rectangular matrix to **bidiagonal** form F08KSF
Reduction of real rectangular band matrix to upper **bidiagonal** form F08LEF
Reduction of complex rectangular band matrix to upper **bidiagonal** form F08LSF
Generate orthogonal transformation matrices from reduction to **bidiagonal** form determined by F08KEF F08KFF
Apply orthogonal transformations from reduction to **bidiagonal** form determined by F08KEF F08KGF
Generate unitary transformation matrices from reduction to **bidiagonal** form determined by F08KSF F08KTF
Apply unitary transformations from reduction to **bidiagonal** form determined by F08KSF F08KUF
SVD of real **bidiagonal** matrix reduced from complex general matrix F08MSF
SVD of real **bidiagonal** matrix reduced from real general matrix F08MEF

Performs the Cochran Q test on cross-classified **binary** data G08ALF
Contingency table, latent variable model for **binary** data G11SAF
...function, Bus and Dekker algorithm, from given starting value, **binary** search for interval C05AGF
Binary search for interval containing zero of continuous function... C05AVF

Set up reference vector for generating pseudo-random integers, **binomial** distribution G05EDF
...reference vector for generating pseudo-random integers, negative **binomial** distribution G05EEF
Computes confidence interval for the parameter of a **binomial** distribution G07AAF
Binomial distribution function G01BJF
Fits a generalized linear model with **binomial** errors G02GBF

Selected eigenvalues of real symmetric tridiagonal matrix by **bisection** F08JJF

...amplitude spectrum, squared coherency, bounds, univariate and **bivariate** (cross) spectra G13CEF
Multivariate time series, gain, phase, bounds, univariate and **bivariate** (cross) spectra G13CFF
Computes probability for the **bivariate** Normal distribution G01HAF

BLAS F06

ODEs, IVP, **Blend** method, set-up for D02M–N routines D02NWF

LU factorization of real almost **block** diagonal matrix F01LHF
Solution of real almost **block** diagonal simultaneous linear equations (coefficient matrix... F04LHF
Analysis of variance, randomized **block** or completely randomized design, treatment means and... G04BBF

Pseudo-random logical (**boolean**) value G05DZF

nth-order linear ODEs, **boundary** value problem, collocation and least-squares D02TGF
ODEs, **boundary** value problem, collocation and least-squares,... D02JAF
ODEs, **boundary** value problem, collocation and least-squares,... D02JBF
ODEs, general nonlinear **boundary** value problem, collocation technique D02TKF
ODEs, general nonlinear **boundary** value problem, continuation facility for D02TKF D02TXF
ODEs, general nonlinear **boundary** value problem, diagnostics for D02TKF D02TZF
ODEs, general nonlinear **boundary** value problem, finite difference technique with deferred... D02RAF
ODEs, **boundary** value problem, finite difference technique with deferred... D02GBF
ODEs, **boundary** value problem, finite difference technique with deferred... D02GAF
ODEs, general nonlinear **boundary** value problem, interpolation for D02TKF D02TYF
ODEs, general nonlinear **boundary** value problem, set-up for D02TKF D02TVF
ODEs, **boundary** value problem, shooting and matching, boundary values... D02HAF
ODEs, **boundary** value problem, shooting and matching, general parameters... D02HBF
ODEs, **boundary** value problem, shooting and matching technique,... D02AGF

ODEs, **boundary** value problem, shooting and matching technique,... D02SAF
ODEs, boundary value problem, shooting and matching, **boundary** values to be determined D02HAF

Error **bounds** for solution of complex band triangular system of linear... F07VVF
Error **bounds** for solution of complex triangular system of linear... F07TVF
Error **bounds** for solution of complex triangular system of linear... F07UVF
Error **bounds** for solution of real band triangular system of linear... F07VHF
Error **bounds** for solution of real triangular system of linear... F07THF
Error **bounds** for solution of real triangular system of linear... F07UHF
Computes **bounds** for the significance of a Durbin–Watson statistic G01EPF
Multivariate time series, noise spectrum, **bounds**, impulse response function and its standard error G13CGF
Refined solution with error **bounds** of complex band system of linear equations,... F07BVF
Refined solution with error **bounds** of complex Hermitian indefinite system of linear... F07MVF
Refined solution with error **bounds** of complex Hermitian indefinite system of linear... F07PVF
Refined solution with error **bounds** of complex Hermitian positive-definite band system... F07HVF
Refined solution with error **bounds** of complex Hermitian positive-definite system of linear... F07FVF
Refined solution with error **bounds** of complex Hermitian positive-definite system of linear... F07GVF
Refined solution with error **bounds** of complex symmetric system of linear equations,... F07NVF
Refined solution with error **bounds** of complex symmetric system of linear equations,... F07QVF
Refined solution with error **bounds** of complex system of linear equations,... F07AVF
Refined solution with error **bounds** of real band system of linear equations,... F07BHF
Refined solution with error **bounds** of real symmetric indefinite system of linear... F07MHF
Refined solution with error **bounds** of real symmetric indefinite system of linear... F07PHF
Refined solution with error **bounds** of real symmetric positive-definite band system... F07HHF
Refined solution with error **bounds** of real symmetric positive-definite system of linear... F07FHF
Refined solution with error **bounds** of real symmetric positive-definite system of linear... F07GHF
Refined solution with error **bounds** of real system of linear equations,... F07AHF
...time series, cross amplitude spectrum, squared coherency, **bounds**, univariate and bivariate (cross) spectra G13CEF
Multivariate time series, gain, phase, **bounds**, univariate and bivariate (cross) spectra G13CFF
...function of several variables, modified Newton algorithm, simple **bounds**, using first and second derivatives (comprehensive) E04LBF
...function of several variables, modified Newton algorithm, simple **bounds**, using first and second derivatives (easy-to-use) E04LYF
...function of several variables, modified Newton algorithm, simple **bounds**, using first derivatives (comprehensive) E04KDF
...function of several variables, quasi-Newton algorithm, simple **bounds**, using first derivatives (easy-to-use) E04KYF
...function of several variables, modified Newton algorithm, simple **bounds**, using first derivatives (easy-to-use) E04KZF
...function of several variables, quasi-Newton algorithm, simple **bounds**, using function values only (easy-to-use) E04JYF

Constructs a **box** and whisker plot G01ASF
General system of first-order PDEs, method of lines, Keller **box** discretisation, one space variable D03PEF
...of first-order PDEs, coupled DAEs, method of lines, Keller **box** discretisation, one space variable D03PKF
...of first-order PDEs, coupled DAEs, method of lines, Keller **box** discretisation, remeshing, one space variable D03PRF

...finite interval, allowing for singularities at user-specified **break-points** D01ALF
...finite/infinite range, eigenvalue only, user-specified **break-points** D02KDF
...finite/infinite range, eigenvalue and eigenfunction, user-specified **break-points** D02KEF

Broadcast scalar into complex vector F06HBF
Broadcast scalar into integer vector F06DBF
Broadcast scalar into real vector F06FBF

B-splines E02

Bunch–Kaufman factorization of complex Hermitian indefinite... F07MRF
Bunch–Kaufman factorization of complex Hermitian indefinite... F07PRF
Bunch–Kaufman factorization of complex symmetric matrix F07NRF
Bunch–Kaufman factorization of complex symmetric matrix,... F07QRF
Bunch–Kaufman factorization of real symmetric indefinite matrix F07MDF
Bunch–Kaufman factorization of real symmetric indefinite matrix,... F07PDF

Zero of continuous function in given interval, **Bus** and Dekker algorithm C05ADF
Zero of continuous function, **Bus** and Dekker algorithm, from given starting value,... C05AGF
Zero in given interval of continuous function by **Bus** and Dekker algorithm (reverse communication) C05AZF

Fresnel integral $C(x)$ S20ADF

Performs **canonical** correlation analysis G03ADF
Performs **canonical** variate analysis G03ACF

Multi-dimensional quadrature over hyper-rectangle, Monte **Carlo** method D01GBF

Elliptic PDE, Helmholtz equation, three-dimensional **Cartesian** co-ordinates D03FAF

Pseudo-random real numbers, **Cauchy** distribution G05DFF
...quadrature, adaptive, finite interval, weight function $1/(x-c)$, **Cauchy** principal value (Hilbert transform) D01AQF

...for parameters of the Normal distribution from grouped and/or **censored** data G07BBF
Regression using ranks, right-**censored** data G08RBF

Computes probabilities for the non-**central** beta distribution G01GEF
Computes probabilities for the non-**central** χ^2 distribution G01GCF
Computes lower tail probability for a linear combination of (**central**) χ^2 variables G01JDF
Computes probabilities for the non-**central** F-distribution G01GDF
Computes probabilities for the non-**central** Student's t-distribution G01GBF

...sparse nonsymmetric linear systems, preconditioned RGMRES, **CGS**, Bi-CGSTAB or TFQMR method F11BEF
...sparse non-Hermitian linear systems, preconditioned RGMRES, **CGS**, Bi-CGSTAB or TFQMR method F11BSF
Solution of complex sparse non-Hermitian linear system, RGMRES, **CGS**, Bi-CGSTAB or TFQMR method, Jacobi or SSOR... F11DSF
Solution of complex sparse non-Hermitian linear system, RGMRES, **CGS**, Bi-CGSTAB or TFQMR method, preconditioner... F11DQF
...sparse nonsymmetric linear systems, preconditioned RGMRES, **CGS** or Bi-CGSTAB F11BBF
Solution of real sparse nonsymmetric linear system, RGMRES, **CGS** or Bi-CGSTAB method, Jacobi or SSOR preconditioner... F11DEF
Solution of real sparse nonsymmetric linear system, RGMRES, **CGS** or Bi-CGSTAB method, preconditioner computed by F11DAF... F11DCF

Sort a vector, **character** data M01CCF
Rank a vector, **character** data M01DCF
Rearrange a vector according to given ranks, **character** data M01ECF
Convert array of integers representing date and time to **character** string X05ABF
Compare two **character** strings representing date and time X05ACF

General system of parabolic PDEs, method of lines, **Chebyshev** C^0 collocation, one space variable D03PDF
General system of parabolic PDEs, coupled DAEs, method of lines, **Chebyshev** C^0 collocation, one space variable D03PJF
Sum of a **Chebyshev** series C06DBF
Derivative of fitted polynomial in **Chebyshev** series form E02AHF
Integral of fitted polynomial in **Chebyshev** series form E02AJF
Evaluation of fitted polynomial in one variable, from **Chebyshev** series form E02AKF
Evaluation of fitted polynomial in one variable from **Chebyshev** series form (simplified parameter list) E02AEF

Check initial grid data in D03RBF D03RYF
Check user's routine for calculating first derivatives C05ZAF
Check user's routine for calculating first derivatives of function E04HCF
Check user's routine for calculating Hessian of a sum of squares E04YBF
Check user's routine for calculating Jacobian of first derivatives E04YAF
Check user's routine for calculating second derivatives of function E04HDF
Check user's routines for calculating first derivatives of function... E04ZCF
Check validity of a permutation M01ZBF

Univariate time series, diagnostic **checking** of residuals, following G13AEF or G13AFF G13ASF
Multivariate time series, diagnostic **checking** of residuals, following G13DCF G13DSF

Real sparse symmetric matrix, incomplete	**Cholesky** factorization	F11JAF
Complex sparse Hermitian matrix, incomplete	**Cholesky** factorization	F11JNF
	Cholesky factorization of complex Hermitian positive-definite band...	F07HRF
Computes a split	**Cholesky** factorization of complex Hermitian positive-definite band...	F08UTF
	Cholesky factorization of complex Hermitian positive-definite...	F07FRF
	Cholesky factorization of complex Hermitian positive-definite...	F07GRF
	Cholesky factorization of real symmetric positive-definite band...	F07HDF
Computes a split	**Cholesky** factorization of real symmetric positive-definite band...	F08UFF
	Cholesky factorization of real symmetric positive-definite matrix	F07FDF
	Cholesky factorization of real symmetric positive-definite matrix,...	F07GDF
	Circular convolution or correlation of two complex vectors	C06PKF
	Circular convolution or correlation of two real vectors, extra...	C06FKF
	Circular convolution or correlation of two real vectors, no extra...	C06EKF
Performs principal co-ordinate analysis,	**classical** metric scaling	G03FAF
Computes multiway table from set of	**classification** factors using given percentile/quantile	G11BBF
Computes multiway table from set of	**classification** factors using selected statistic	G11BAF
Two-way analysis of variance, hierarchical	**classification**, subgroups of unequal size	G04AGF
Computes orthogonal polynomials or dummy variables for factor/	**classification** variable	G04EAF
Performs the Cochran Q test on cross-	**classified** binary data	G08ALF
Interpolating functions, method of Renka and	**Cline**, two variables	E01SAF
	Close file associated with given unit number	X04ADF
Hierarchical	**cluster** analysis	G03ECF
K-means	**cluster** analysis	G03EFF
Computes	**cluster** indicator variable (for use after G03ECF)	G03EJF
Jacobian elliptic functions sn,	**cn** and dn	S21CAF
Performs the	**Cochran** Q test on cross-classified binary data	G08ALF
Kendall's	**coefficient** of concordance	G08DAF
Correlation-like	**coefficients** (about zero), all variables, casewise treatment...	G02BEF
Correlation-like	**coefficients** (about zero), all variables, no missing values	G02BDF
Correlation-like	**coefficients** (about zero), all variables, pairwise treatment...	G02BFF
Correlation-like	**coefficients** (about zero), subset of variables, casewise...	G02BLF
Correlation-like	**coefficients** (about zero), subset of variables, no missing values	G02BKF
Correlation-like	**coefficients** (about zero), subset of variables, pairwise treatment...	G02BMF
Pearson product-moment correlation	**coefficients**, all variables, casewise treatment...	G02BBF
Pearson product-moment correlation	**coefficients**, all variables, no missing values	G02BAF
Pearson product-moment correlation	**coefficients**, all variables, pairwise treatment...	G02BCF
Kendall/Spearman non-parametric rank correlation	**coefficients**, casewise treatment of missing values, overwriting...	G02BPF
Kendall/Spearman non-parametric rank correlation	**coefficients**, casewise treatment of missing values, preserving...	G02BRF
Computes factor score	**coefficients** (for use after G03CAF)	G03CCF
Korobov optimal	**coefficients** for use in D01GCF or D01GDF, when number of...	D01GYF
Korobov optimal	**coefficients** for use in D01GCF or D01GDF, when number of...	D01GZF
Kendall/Spearman non-parametric rank correlation	**coefficients**, no missing values, overwriting input data	G02BNF
Kendall/Spearman non-parametric rank correlation	**coefficients**, no missing values, preserving input data	G02BQF
Kendall/Spearman non-parametric rank correlation	**coefficients**, pairwise treatment of missing values	G02BSF
Pearson product-moment correlation	**coefficients**, subset of variables, casewise treatment of missing values	G02BHF
Pearson product-moment correlation	**coefficients**, subset of variables, no missing values	G02BGF
Pearson product-moment correlation	**coefficients**, subset of variables, pairwise treatment of missing values	G02BJF
Multiple linear regression, from correlation	**coefficients**, with constant term	G02CGF
Multiple linear regression, from correlation-like	**coefficients**, without constant term	G02CHF
Multivariate time series, cross amplitude spectrum, squared	**coherency**, bounds, univariate and bivariate (cross) spectra	G13CEF
nth-order linear ODEs, boundary value problem,	**collocation** and least-squares	D02TGF
ODEs, boundary value problem,	**collocation** and least-squares, single nth-order linear equation	D02JAF
ODEs, boundary value problem,	**collocation** and least-squares, system of first-order linear equations	D02JBF
General system of parabolic PDEs, method of lines, Chebyshev C^0	**collocation**, one space variable	D03PDF
...parabolic PDEs, coupled DAEs, method of lines, Chebyshev C^0	**collocation**, one space variable	D03PJF
ODEs, general nonlinear boundary value problem,	**collocation** technique	D02TKF
Analysis of variance, general row and	**column** design, treatment means and standard errors	G04BCF
QR factorization of real general rectangular matrix with	**column** pivoting	F08BEF
QR factorization of complex general rectangular matrix with	**column** pivoting	F08BSF
Print IP or LP solutions with user specified names for rows and	**columns**	H02BVF
Permute rows or	**columns**, complex rectangular matrix, permutations represented by...	F06VKF
Permute rows or	**columns**, complex rectangular matrix, permutations represented by...	F06VJF
Rank	**columns** of a matrix, integer numbers	M01DKF
Rank	**columns** of a matrix, real numbers	M01DJF
Permute rows or	**columns**, real rectangular matrix, permutations represented by...	F06QKF
Permute rows or	**columns**, real rectangular matrix, permutations represented by...	F06QJF
...of the parameters of a factor analysis model, factor loadings,	**communalities** and residual correlations	G03CAF
	Compare two character strings representing date and time	X05ACF
	Complement of cumulative normal distribution function $Q(x)$	S15ACF
Scaled complex	**complement** of error function, $\exp(-z^2)\mathrm{erfc}(-iz)$	S15DDF
	Complement of error function $\mathrm{erfc}(x)$	S15ADF
Analysis of variance,	**complete** factorial design, treatment means and standard errors	G04CAF
QR factorization of	**complex** general rectangular matrix with column pivoting	F08BSF
Solution of	**complex** linear system involving incomplete Cholesky...	F11JPF
Solution of	**complex** linear system involving incomplete LU...	F11DPF
Kendall's coefficient of	**concordance**	G08DAF
Norm estimation (for use in	**condition** estimation), complex matrix	F04ZCF
Norm estimation (for use in	**condition** estimation), real matrix	F04YCF
Estimate	**condition** number of complex band matrix, matrix already...	F07BUF
Estimate	**condition** number of complex band triangular matrix	F07VUF
Estimate	**condition** number of complex Hermitian indefinite matrix, matrix...	F07MUF
Estimate	**condition** number of complex Hermitian indefinite matrix,...	F07PUF
Estimate	**condition** number of complex Hermitian positive-definite band...	F07HUF
Estimate	**condition** number of complex Hermitian positive-definite matrix,...	F07FUF
Estimate	**condition** number of complex Hermitian positive-definite matrix,...	F07GUF
Estimate	**condition** number of complex matrix, matrix already...	F07AUF
Estimate	**condition** number of complex symmetric matrix, matrix already...	F07NUF
Estimate	**condition** number of complex symmetric matrix, matrix already...	F07QUF
Estimate	**condition** number of complex triangular matrix	F07TUF
Estimate	**condition** number of complex triangular matrix, packed storage	F07UUF
Estimate	**condition** number of real band matrix, matrix already...	F07BGF
Estimate	**condition** number of real band triangular matrix	F07VGF
Estimate	**condition** number of real matrix, matrix already factorized...	F07AGF
Estimate	**condition** number of real symmetric indefinite matrix, matrix...	F07MGF

Estimate	**condition** number of real symmetric indefinite matrix, matrix...	F07PGF
Estimate	**condition** number of real symmetric positive-definite band matrix,...	F07HGF
Estimate	**condition** number of real symmetric positive-definite matrix,...	F07FGF
Estimate	**condition** number of real symmetric positive-definite matrix,...	F07GGF
Estimate	**condition** number of real triangular matrix	F07TGF
Estimate	**condition** number of real triangular matrix, packed storage	F07UGF
Returns parameter estimates for the	**conditional** analysis of stratified data	G11CAF
Unconstrained minimum, pre-	**conditioned** conjugate gradient algorithm, function of several...	E04DGF
...for a difference in means between two Normal populations,	**confidence** interval	G07CAF
Computes	**confidence** interval for the parameter of a binomial distribution	G07AAF
Computes	**confidence** interval for the parameter of a Poisson distribution	G07ABF
Computes	**confidence** intervals for differences between means computed...	G04DBF
Robust	**confidence** intervals, one-sample	G07EAF
Robust	**confidence** intervals, two-sample	G07EBF
Unconstrained minimum, pre-conditioned	**conjugate** gradient algorithm, function of several variables using...	E04DGF
Real sparse symmetric linear systems, pre-conditioned	**conjugate** gradient or Lanczos	F11GBF
Real sparse symmetric linear systems, pre-conditioned	**conjugate** gradient or Lanczos, threadsafe	F11GEF
Solution of real sparse symmetric linear system,	**conjugate** gradient/Lanczos method, Jacobi or SSOR...	F11JEF
Solution of complex sparse Hermitian linear system,	**conjugate** gradient/Lanczos method, Jacobi or SSOR...	F11JSF
Solution of real sparse symmetric linear system,	**conjugate** gradient/Lanczos method, preconditioner computed...	F11JCF
Solution of complex sparse Hermitian linear system,	**conjugate** gradient/Lanczos method, preconditioner computed...	F11JQF
Complex	**conjugate** of complex sequence	C06GCF
Complex	**conjugate** of Hermitian sequence	C06GBF
Complex	**conjugate** of multiple Hermitian sequences	C06GQF
...equation $AX + XB = C$, A and B are upper triangular or	**conjugate-transposes**	F08QVF
Dot product of two complex vectors,	**conjugated**	F06GBF
Dot product of two complex sparse vector,	**conjugated**	F06GSF
Rank-1 update, complex rectangular matrix,	**conjugated** vector	F06SNF
General system of convection-diffusion PDEs with source terms in	**conservative** form, coupled DAEs, method of lines, upwind scheme...	D03PLF
General system of convection-diffusion PDEs with source terms in	**conservative** form, coupled DAEs, method of lines, upwind scheme...	D03PSF
Roe's approximate Riemann solver for Euler equations in	**conservative** form, for use with D03PFF, D03PLF and D03PSF	D03PUF
Osher's approximate Riemann solver for Euler equations in	**conservative** form, for use with D03PFF, D03PLF and D03PSF	D03PVF
Modified HLL Riemann solver for Euler equations in	**conservative** form, for use with D03PFF, D03PLF and D03PSF	D03PWF
Exact Riemann Solver for Euler equations in	**conservative** form, for use with D03PFF, D03PLF and D03PSF	D03PXF
General system of convection-diffusion PDEs with source terms in	**conservative** form, method of lines, upwind scheme using...	D03PFF
Provides the mathematical	**constant** γ (Euler's Constant)	X01ABF
Provides the mathematical	**constant** π	X01AAF
Machine	**Constants**	X02
Mathematical	**Constants**	X01
Least-squares polynomial fit, values and derivatives may be	**constrained**, arbitrary data points	E02AGF
Equality-	**constrained** complex linear least-squares problem	F04KMF
Convex QP problem or linearly-	**constrained** linear least-squares problem (dense)	E04NCF
Equality-	**constrained** real linear least-squares problem	F04JMF
...by general linear function subject to linear inequality	**constraints**	E02GBF
...user's routines for calculating first derivatives of function and	**constraints**	E04ZCF
...of parameters of a general linear regression model for given	**constraints**	G02DKF
...of parameters of a general linear model for given	**constraints**	G02GKF
Minimum of a sum of squares, nonlinear	**constraints**, sequential QP method, using function values and...	E04UNF
...function of several variables, sequential QP method, nonlinear	**constraints**, using function values and optionally first derivatives...	E04UCF
...function of several variables, sequential QP method, nonlinear	**constraints**, using function values and optionally first derivatives...	E04UFF
χ^2 statistics for two-way	**contingency** table	G11AAF
Two-way	**contingency** table analysis, with χ^2/Fisher's exact test	G01AFF
	Contingency table, latent variable model for binary data	G11SAF
ODEs, IVP, set-up for	**continuation** calls to integrator, for use with D02M–N routines	D02NZF
...problem, finite difference technique with deferred correction,	**continuation** facility	D02RAF
ODEs, general nonlinear boundary value problem,	**continuation** facility for D02TKF	D02TXF
Zero of continuous function,	**continuation** method, from a given starting value	C05AJF
Zero of continuous function by	**continuation** method, from given starting value...	C05AXF
Performs the χ^2 goodness of fit test, for standard	**continuous** distributions	G08CGF
Zero of	**continuous** function, Bus and Dekker algorithm, from given...	C05AGF
Zero in given interval of	**continuous** function by Bus and Dekker algorithm (reverse...	C05AZF
Zero of	**continuous** function by continuation method, from given starting value...	C05AXF
Zero of	**continuous** function, continuation method, from a given starting value	C05AJF
Zero of	**continuous** function in given interval, Bus and Dekker algorithm	C05ADF
Binary search for interval containing zero of	**continuous** function (reverse communication)	C05AVF
Computes sum of squares for	**contrast** between means	G04DAF
General system of	**convection-diffusion** PDEs with source terms in conservative form,...	D03PLF
General system of	**convection-diffusion** PDEs with source terms in conservative form,...	D03PSF
General system of	**convection-diffusion** PDEs with source terms in conservative form,...	D03PFF
	Convert array of integers representing date and time to character...	X05ABF
	Convert complex matrix between packed banded and rectangular...	F01ZDF
	Convert complex matrix between packed triangular and square...	F01ZBF
	Convert Hermitian sequences to general complex sequences	C06GSF
	Convert real matrix between packed banded and rectangular...	F01ZCF
	Convert real matrix between packed triangular and square...	F01ZAF
	Convex QP problem or linearly-constrained linear least-squares...	E04NCF
Nonlinear Volterra	**convolution** equation, second kind	D05BAF
Circular	**convolution** or correlation of two complex vectors	C06PKF
Circular	**convolution** or correlation of two real vectors, extra workspace...	C06FKF
Circular	**convolution** or correlation of two real vectors, no extra workspace	C06EKF
Nonlinear	**convolution** Volterra–Abel equation, first kind, weakly singular	D05BEF
Nonlinear	**convolution** Volterra–Abel equation, second kind, weakly singular	D05BDF
Matrix	**copy**, complex rectangular or trapezoidal matrix	F06TFF
	Copy complex vector	F06GFF
	Copy integer vector	F06DFF
Matrix	**copy**, real rectangular or trapezoidal matrix	F06QFF
	Copy real vector	F06EFF
	Copy real vector to complex vector	F06KFF
...value problem, finite difference technique with deferred	**correction**, continuation facility	D02RAF
...value problem, finite difference technique with deferred	**correction**, general linear problem	D02GBF
...value problem, finite difference technique with deferred	**correction**, simple nonlinear problem	D02GAF
Performs canonical	**correlation** analysis	G03ADF
Computes (optionally weighted)	**correlation** and covariance matrices	G02BXF
Pearson product-moment	**correlation** coefficients, all variables, casewise treatment of missing...	G02BBF

Pearson product-moment **correlation** coefficients, all variables, no missing values		G02BAF
Pearson product-moment **correlation** coefficients, all variables, pairwise treatment of missing...		G02BCF
Kendall/Spearman non-parametric rank **correlation** coefficients, casewise treatment of missing values,...		G02BPF
Kendall/Spearman non-parametric rank **correlation** coefficients, casewise treatment of missing values,...		G02BRF
Kendall/Spearman non-parametric rank **correlation** coefficients, no missing values, overwriting input data		G02BNF
Kendall/Spearman non-parametric rank **correlation** coefficients, no missing values, preserving input data		G02BQF
Kendall/Spearman non-parametric rank **correlation** coefficients, pairwise treatment of missing values		G02BSF
Pearson product-moment **correlation** coefficients, subset of variables, casewise treatment of...		G02BHF
Pearson product-moment **correlation** coefficients, subset of variables, no missing values		G02BGF
Pearson product-moment **correlation** coefficients, subset of variables, pairwise treatment of...		G02BJF
Multiple linear regression, from **correlation** coefficients, with constant term		G02CGF
Multivariate time series, sample partial lag **correlation** matrices, χ^2 statistics and significance levels		G13DNF
Computes random **correlation** matrix		G05GBF
Computes a **correlation** matrix from a sum of squares matrix		G02BWF
Calculates a robust estimation of a **correlation** matrix, Huber's weight function		G02HKF
Calculates a robust estimation of a **correlation** matrix, user-supplied weight function		G02HMF
Calculates a robust estimation of a **correlation** matrix, user-supplied weight function plus derivatives		G02HLF
Circular convolution or **correlation** of two complex vectors		C06PKF
Circular convolution or **correlation** of two real vectors, extra workspace for greater speed		C06FKF
Circular convolution or **correlation** of two real vectors, no extra workspace		C06EKF
Multivariate time series, sample cross-**correlation** or cross-covariance matrices		G13DMF
	Correlation-like coefficients (about zero), all variables, casewise...	G02BEF
	Correlation-like coefficients (about zero), all variables, no missing...	G02BDF
	Correlation-like coefficients (about zero), all variables, pairwise...	G02BFF
	Correlation-like coefficients (about zero), subset of variables,...	G02BLF
	Correlation-like coefficients (about zero), subset of variables,...	G02BKF
	Correlation-like coefficients (about zero), subset of variables,...	G02BMF
Multiple linear regression, from **correlation-like** coefficients, without constant term		G02CHF
...analysis model, factor loadings, communalities and residual **correlations**		G03CAF
Multivariate time series, cross-**correlations**		G13BCF
Computes partial correlation/variance-covariance matrix from **correlation/variance-covariance** matrix computed by G02BXF		G02BYF
The largest permissible argument for sin and **cos**		X02AHF
	$\cosh x$	S10ACF
Generate complex plane rotation, storing tangent, real **cosine**		F06CAF
Recover cosine and sine from given complex tangent, real **cosine**		F06CCF
...sequence of plane rotations, complex rectangular matrix, real **cosine** and complex sine		F06TXF
...sequence of plane rotations, complex rectangular matrix, complex **cosine** and real sine		F06TYF
...sequence of plane rotations, complex rectangular matrix, real **cosine** and sine		F06VXF
Recover **cosine** and sine from given complex tangent, real cosine		F06CCF
Recover **cosine** and sine from given complex tangent, real sine		F06CDF
Recover **cosine** and sine from given real tangent		F06BCF
Cosine integral $\mathrm{Ci}(x)$		S13ACF
Compute **cosine** of angle between two real vectors		F06FAF
Discrete **cosine** transform		C06HBF
Discrete quarter-wave **cosine** transform		C06HDF
Discrete **cosine** transform (easy-to-use)		C06RBF
Discrete quarter-wave **cosine** transform (easy-to-use)		C06RDF
General system of parabolic PDEs, **coupled** DAEs, method of lines, Chebyshev C^0 collocation,...		D03PJF
General system of parabolic PDEs, **coupled** DAEs, method of lines, finite differences, one space variable		D03PHF
General system of parabolic PDEs, **coupled** DAEs, method of lines, finite differences, remeshing,...		D03PPF
General system of first-order PDEs, **coupled** DAEs, method of lines, Keller box discretisation,...		D03PKF
General system of first-order PDEs, **coupled** DAEs, method of lines, Keller box discretisation,...		D03PRF
...PDEs with source terms in conservative form, **coupled** DAEs, method of lines, upwind scheme using numerical flux...		D03PLF
...PDEs with source terms in conservative form, **coupled** DAEs, method of lines, upwind scheme using numerical flux...		D03PSF
...one iteration of Kalman filter, time-varying, square root **covariance** filter		G13EAF
...one iteration of Kalman filter, time-invariant, square root **covariance** filter		G13EBF
Computes (optionally weighted) correlation and **covariance** matrices		G02BXF
Multivariate time series, sample cross-correlation or cross-**covariance** matrices		G13DMF
Computes test statistic for equality of within-group **covariance** matrices and matrices for discriminant analysis		G03DAF
...Mahalanobis squared distances for group or pooled variance-**covariance** matrices (for use after G03DAF)		G03DBF
Normal scores, approximate variance-**covariance** matrix		G01DCF
...correlation/variance-covariance matrix from correlation/variance-**covariance** matrix computed by G02BXF		G02BYF
Robust regression, variance-**covariance** matrix following G02HDF		G02HFF
Covariance matrix for linear least-squares problems, m real...		F04YAF
Covariance matrix for nonlinear least-squares problem...		E04YCF
Computes partial correlation/variance-**covariance** matrix from correlation/variance-covariance matrix...		G02BYF
Creates the risk sets associated with the **Cox** proportional hazards model for fixed covariates		G12ZAF
Fits **Cox's** proportional hazard model		G12BAF
Return the **CPU** time		X05BAF
Multivariate time series, **cross** amplitude spectrum, squared coherency, bounds, univariate...		G13CEF
...squared coherency, bounds, univariate and bivariate (**cross**) spectra		G13CEF
...time series, gain, phase, bounds, univariate and bivariate (**cross**) spectra		G13CFF
Multivariate time series, smoothed sample **cross** spectrum using rectangular, Bartlett, Tukey or Parzen lag...		G13CCF
Multivariate time series, smoothed sample **cross** spectrum using spectral smoothing by the trapezium...		G13CDF
Performs the Cochran Q test on **cross-classified** binary data		G08ALF
Multivariate time series, sample **cross-correlation** or cross-covariance matrices		G13DMF
Multivariate time series, **cross-correlations**		G13BCF
Multivariate time series, sample cross-correlation or **cross-covariance** matrices		G13DMF
Inverse Laplace transform, **Crump's** method		C06LAF
Interpolating functions, monotonicity-preserving, piecewise **cubic** Hermite, one variable		E01BEF
Fit **cubic** smoothing spline, smoothing parameter estimated		G10ACF
Fit **cubic** smoothing spline, smoothing parameter given		G10ABF
Least-squares **cubic** spline curve fit, automatic knot placement		E02BEF
Evaluation of fitted **cubic** spline, definite integral		E02BDF
Least-squares curve **cubic** spline fit (including interpolation)		E02BAF
Evaluation of fitted **cubic** spline, function and derivatives		E02BCF
Evaluation of fitted **cubic** spline, function only		E02BBF
Interpolating functions, **cubic** spline interpolant, one variable		E01BAF
	Cumulants and moments of quadratic forms in Normal variables	G01NAF
Set up reference vector from supplied **cumulative** distribution function or probability distribution function		G05EXF
	Cumulative normal distribution function $P(x)$	S15ABF
Complement of **cumulative** normal distribution function $Q(x)$		S15ACF
Least-squares **curve** cubic spline fit (including interpolation)		E02BAF
Least-squares cubic spline **curve** fit, automatic knot placement		E02BEF
Minimax **curve** fit by polynomials		E02ACF
Least-squares **curve** fit, by polynomials, arbitrary data points		E02ADF

General system of parabolic PDEs, coupled **DAEs**, method of lines, Chebyshev C^0 collocation, one space variable D03PJF
General system of parabolic PDEs, coupled **DAEs**, method of lines, finite differences, one space variable D03PHF
General system of parabolic PDEs, coupled **DAEs**, method of lines, finite differences, remeshing, one space variable D03PPF
General system of first-order PDEs, coupled **DAEs**, method of lines, Keller box discretisation, one space variable D03PKF
General system of first-order PDEs, coupled **DAEs**, method of lines, Keller box discretisation, remeshing,... D03PRF
...PDEs with source terms in conservative form, coupled **DAEs**, method of lines, upwind scheme using numerical flux... D03PLF
...PDEs with source terms in conservative form, coupled **DAEs**, method of lines, upwind scheme using numerical flux... D03PSF

...using spectral smoothing by the trapezium frequency (**Daniell**) window G13CBF
...using spectral smoothing by the trapezium frequency (**Daniell**) window G13CDF

ODEs, IVP, **DASSL** method, set-up for D02M–N routines D02MVF

Compare two character strings representing **date** and time X05ACF
Return **date** and time as an array of integers X05AAF
Convert array of integers representing **date** and time to character string X05ABF

Mood's and **David's** tests on two samples of unequal size G08BAF

Dawson's integral S15AFF

The maximum number of **decimal** digits that can be represented X02BEF

Decompose a permutation into cycles M01ZCF

...boundary value problem, finite difference technique with **deferred** correction, continuation facility D02RAF
ODEs, boundary value problem, finite difference technique with **deferred** correction, general linear problem D02GBF
ODEs, boundary value problem, finite difference technique with **deferred** correction, simple nonlinear problem D02GAF

$ULDL^TU^T$ factorization of real symmetric positive-**definite** band matrix F01BUF
Cholesky factorization of real symmetric positive-**definite** band matrix F07HDF
Cholesky factorization of complex Hermitian positive-**definite** band matrix F07HRF
Determinant of real symmetric positive-**definite** band matrix (Black Box) F03ACF
Estimate condition number of real symmetric positive-**definite** band matrix, matrix already factorized by F07HDF F07HGF
Estimate condition number of complex Hermitian positive-**definite** band matrix, matrix already factorized by F07HRF F07HUF
Refined solution with error bounds of real symmetric positive-**definite** band system of linear equations, multiple right-hand sides F07HHF
Refined solution with error bounds of complex Hermitian positive-**definite** band system of linear equations, multiple right-hand sides F07HVF
Solution of real symmetric positive-**definite** band system of linear equations, multiple right-hand sides,... F07HEF
Solution of complex Hermitian positive-**definite** band system of linear equations, multiple right-hand sides,... F07HSF
Reduction to standard form, generalized real symmetric-**definite** banded eigenproblem F01BVF
Solution of real symmetric positive-**definite** banded simultaneous linear equations with multiple... F04ACF
All eigenvalues of generalized banded real symmetric-**definite** eigenproblem (Black Box) F02FHF
Reduction to standard form of complex Hermitian-**definite** generalized eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or... F08SSF
Reduction to standard form of real symmetric-**definite** generalized eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or... F08SEF
Reduction to standard form of complex Hermitian-**definite** generalized eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or... F08TSF
Reduction to standard form of real symmetric-**definite** generalized eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or... F08TEF
All eigenvalues and eigenvectors of real symmetric-**definite** generalized problem (Black Box) F02FDF
All eigenvalues and eigenvectors of complex Hermitian-**definite** generalized problem (Black Box) F02HDF
Evaluation of fitted cubic spline, **definite** integral E02BDF
Interpolated values, interpolant computed by E01BEF, **definite** integral, one variable E01BHF
Inverse of real symmetric positive-**definite** matrix F01ADF
LL^T factorization and determinant of real symmetric positive-**definite** matrix F03AEF
Cholesky factorization of real symmetric positive-**definite** matrix F07FDF
Cholesky factorization of complex Hermitian positive-**definite** matrix F07FRF
...tridiagonal matrix, reduced from real symmetric positive-**definite** matrix F08JGF
...tridiagonal matrix, reduced from complex Hermitian positive-**definite** matrix F08JUF
Determinant of real symmetric positive-**definite** matrix (Black Box) F03ABF
Estimate condition number of real symmetric positive-**definite** matrix, matrix already factorized by F07FDF F07FGF
Inverse of real symmetric positive-**definite** matrix, matrix already factorized by F07FDF F07FJF
Estimate condition number of complex Hermitian positive-**definite** matrix, matrix already factorized by F07FRF F07FUF
Inverse of complex Hermitian positive-**definite** matrix, matrix already factorized by F07FRF F07FWF
Estimate condition number of real symmetric positive-**definite** matrix, matrix already factorized by F07GDF, packed storage F07GGF
Inverse of real symmetric positive-**definite** matrix, matrix already factorized by F07GDF, packed storage F07GJF
Estimate condition number of complex Hermitian positive-**definite** matrix, matrix already factorized by F07GRF, packed storage F07GUF
Inverse of complex Hermitian positive-**definite** matrix, matrix already factorized by F07GRF, packed storage F07GWF
Cholesky factorization of real symmetric positive-**definite** matrix, packed storage F07GDF
Cholesky factorization of complex Hermitian positive-**definite** matrix, packed storage F07GRF
Inverse of real symmetric positive-**definite** matrix using iterative refinement F01ABF
Solution of real symmetric positive-**definite** simultaneous linear equations (coefficient matrix already... F04AGF
Solution of real symmetric positive-**definite** simultaneous linear equations, one right-hand side... F04ASF
Solution of real symmetric positive-**definite** simultaneous linear equations using iterative refinement... F04AFF
Solution of real symmetric positive-**definite** simultaneous linear equations with multiple right-hand... F04ABF
Refined solution with error bounds of real symmetric positive-**definite** system of linear equations, multiple right-hand sides F07FHF
Refined solution with error bounds of complex Hermitian positive-**definite** system of linear equations, multiple right-hand sides F07FVF
Solution of real symmetric positive-**definite** system of linear equations, multiple right-hand sides,... F07FEF
Solution of complex Hermitian positive-**definite** system of linear equations, multiple right-hand sides,... F07FSF
Solution of real symmetric positive-**definite** system of linear equations, multiple right-hand sides,... F07GEF
Solution of complex Hermitian positive-**definite** system of linear equations, multiple right-hand sides,... F07GSF
Refined solution with error bounds of real symmetric positive-**definite** system of linear equations, multiple right-hand sides,... F07GHF
Refined solution with error bounds of complex Hermitian positive-**definite** system of linear equations, multiple right-hand sides,... F07GVF
...solution of the Yule–Walker equations for real symmetric positive-**definite** Toeplitz matrix F04MEF
Solution of the Yule–Walker equations for real symmetric positive-**definite** Toeplitz matrix, one right-hand side F04FEF
Update solution of real symmetric positive-**definite** Toeplitz system F04MFF
Solution of real symmetric positive-**definite** Toeplitz system, one right-hand side F04FFF
All eigenvalues and eigenvectors of real symmetric positive-**definite** tridiagonal matrix, reduced from complex Hermitian... F08JUF
All eigenvalues and eigenvectors of real symmetric positive-**definite** tridiagonal matrix, reduced from real symmetric... F08JGF
Solution of real symmetric positive-**definite** tridiagonal simultaneous linear equations, one right-hand... F04FAF
LDL^T factorization of real symmetric positive-**definite** variable-bandwidth matrix F01MCF
Solution of real symmetric positive-**definite** variable-bandwidth simultaneous linear equations ... F04MCF

Degenerate symmetrised elliptic integral of 1st kind $R_C(x, y)$ S21BAF

Zero of continuous function in given interval, Bus and **Dekker** algorithm C05ADF
Zero of continuous function, Bus and **Dekker** algorithm, from given starting value, binary search for interval C05AGF
Zero in given interval of continuous function by Bus and **Dekker** algorithm (reverse communication) C05AZF

Delete a variable from a general linear regression model G02DFF

Add/**delete** an observation to/from a general linear regression model G02DCF

Constructs **dendrogram** (for use after G03ECF) G03EHF

Kernel **density** estimate using Gaussian kernel G10BAF
Computes upper and lower tail probabilities and probability **density** function for the beta distribution G01EEF

Minimum, function of one variable, using first **derivative** E04BBF
Derivative of fitted polynomial in Chebyshev series form E02AHF
...values, interpolant computed by E01BEF, function and first **derivative**, one variable E01BGF
Interpolating functions, polynomial interpolant, data may include **derivative** values, one variable E01AEF

Check user's routine for calculating first **derivatives** C05ZAF
Evaluation of fitted cubic spline, function and **derivatives** E02BCF
Check user's routine for calculating Jacobian of first **derivatives** E04YAF
...correlation matrix, user-supplied weight function plus **derivatives** G02HLF
Solution of system of nonlinear equations using first **derivatives** (comprehensive) C05PCF
...algorithm, function of several variables using first **derivatives** (comprehensive) E04DGF

...Gauss–Newton and quasi-Newton algorithm using first **derivatives** (comprehensive) E04GBF
...Gauss–Newton and modified Newton algorithm using first **derivatives** (comprehensive) E04GDF
...Gauss–Newton and modified Newton algorithm, using second **derivatives** (comprehensive) E04HEF
...Newton algorithm, simple bounds, using first **derivatives** (comprehensive) E04KDF
...algorithm, simple bounds, using first and second **derivatives** (comprehensive) E04LBF
...method, using function values and optionally first **derivatives** (comprehensive) E04UNF
Solution of system of nonlinear equations using first **derivatives** (easy-to-use) C05PBF
...Gauss–Newton and quasi-Newton algorithm, using first **derivatives** (easy-to-use) E04GYF
...Gauss–Newton and modified Newton algorithm using first **derivatives** (easy-to-use) E04GZF
...Gauss–Newton and modified Newton algorithm, using second **derivatives** (easy-to-use) E04HYF
...quasi-Newton algorithm, simple bounds, using first **derivatives** (easy-to-use) E04KYF
...Newton algorithm, simple bounds, using first **derivatives** (easy-to-use) E04KZF
...algorithm, simple bounds, using first and second **derivatives** (easy-to-use) E04LYF
...constraints, using function values and optionally first **derivatives** (forward communication, comprehensive) E04UCF
Least-squares polynomial fit, values and **derivatives** may be constrained, arbitrary data points E02AGF
Check user's routine for calculating first **derivatives** of function E04HCF
Check user's routine for calculating second **derivatives** of function E04HDF
Check user's routines for calculating first **derivatives** of function and constraints E04ZCF
Scaled **derivatives** of $\psi(x)$ S14ADF
Solution of system of nonlinear equations using first **derivatives** (reverse communication) C05PDF
...constraints, using function values and optionally first **derivatives** (reverse communication, comprehensive) E04UFF
Numerical differentiation, **derivatives** up to order 14, function of one real variable D04AAF

Analysis of variance, general row and column **design**, treatment means and standard errors G04BCF
Analysis of variance, randomized block or completely randomized **design**, treatment means and standard errors G04BBF
Analysis of variance, complete factorial **design**, treatment means and standard errors G04CAF

Determinant of complex matrix (Black Box) F03ADF
LU factorization and **determinant** of real matrix F03AFF
Determinant of real matrix (Black Box) F03AAF
Determinant of real symmetric positive-definite band matrix... F03ACF
LL^T factorization and **determinant** of real symmetric positive-definite matrix F03AEF
Determinant of real symmetric positive-definite matrix... F03ABF

Computes **deviates** for Student's t-distribution G01FBF
Computes **deviates** for the beta distribution G01FEF
Computes **deviates** for the χ^2 distribution G01FCF
Computes **deviates** for the F-distribution G01FDF
Computes **deviates** for the gamma distribution G01FFF
Computes **deviates** for the standard Normal distribution G01FAF
Computes **deviates** for the Studentized range statistic G01FMF

...median, median absolute deviation, robust standard **deviation** G07DAF
Robust estimation, median, median absolute **deviation**, robust standard deviation G07DAF

Computes quantities needed for range-mean or standard **deviation-mean** plot G13AUF

Univariate time series, **diagnostic** checking of residuals, following G13AEF or G13AFF G13ASF
Multivariate time series, **diagnostic** checking of residuals, following G13DCF G13DSF
Real sparse nonsymmetric linear systems, **diagnostic** for F11BBF F11BCF
Real sparse nonsymmetric linear systems, **diagnostic** for F11BEF F11BFF
Complex sparse non-Hermitian linear systems, **diagnostic** for F11BSF F11BTF
Real sparse symmetric linear systems, **diagnostic** for F11GBF F11GCF
Real sparse symmetric linear systems, **diagnostic** for F11GEF F11GFF

Second-order ODEs, IVP, **diagnostics** for D02LAF D02LYF
ODEs, IVP, integration **diagnostics** for D02PCF and D02PDF D02PYF
ODEs, IVP, error assessment **diagnostics** for D02PCF and D02PDF D02PZF
ODEs, IVP, **diagnostics** for D02QFF and D02QGF D02QXF
ODEs, IVP, root-finding **diagnostics** for D02QFF and D02QGF D02QYF
ODEs, general nonlinear boundary value problem, **diagnostics** for D02TKF D02TZF
ODEs, IVP, sparse Jacobian, linear algebra **diagnostics**, for use with D02M–N routines D02NXF
ODEs, IVP, integrator **diagnostics**, for use with D02M–N routines D02NYF

LU factorization of real almost block **diagonal** matrix F01LHF
Multiply real vector by **diagonal** matrix F06FCF
Multiply complex vector by complex **diagonal** matrix F06HCF
Multiply complex vector by real **diagonal** matrix F06KCF
Solution of real almost block **diagonal** simultaneous linear equations (coefficient matrix already... F04LHF

Elliptic PDE, solution of finite **difference** equations by a multigrid technique D03EDF
Elliptic PDE, solution of finite **difference** equations by SIP, five-point two-dimensional molecule,... D03EBF
Elliptic PDE, solution of finite **difference** equations by SIP, five-point two-dimensional molecule,... D03UAF
Elliptic PDE, solution of finite **difference** equations by SIP for seven-point three-dimensional... D03ECF
Elliptic PDE, solution of finite **difference** equations by SIP, seven-point three-dimensional... D03UBF
Computes t-test statistic for a **difference** in means between two Normal populations,... G07CAF
Sum or **difference** of two complex matrices, optional scaling and transposition F01CWF
Sum or **difference** of two real matrices, optional scaling and transposition F01CTF
ODEs, general nonlinear boundary value problem, finite **difference** technique with deferred correction, continuation facility D02RAF
ODEs, boundary value problem, finite **difference** technique with deferred correction, general linear problem D02GBF
ODEs, boundary value problem, finite **difference** technique with deferred correction, simple nonlinear... D02GAF

Multivariate time series, **differences** and/or transforms (for use before G13DCF) G13DLF
Computes confidence intervals for **differences** between means computed by G04BBF or G04BCF G04DBF
General system of parabolic PDEs, method of lines, finite **differences**, one space variable D03PCF
...parabolic PDEs, coupled DAEs, method of lines, finite **differences**, one space variable D03PHF
...parabolic PDEs, coupled DAEs, method of lines, finite **differences**, remeshing, one space variable D03PPF
General system of second-order PDEs, method of lines, finite **differences**, remeshing, two space variables, rectangular region D03RAF
General system of second-order PDEs, method of lines, finite **differences**, remeshing, two space variables, rectilinear region D03RBF

Univariate time series, seasonal and non-seasonal **differencing** G13AAF

Numerical **differentiation**, derivatives up to order 14, function of one real... D04AAF
Estimate (using numerical **differentiation**) gradient and/or Hessian of a function E04XAF

General system of convection-**diffusion** PDEs with source terms in conservative form,... D03PLF
General system of convection-**diffusion** PDEs with source terms in conservative form,... D03PSF
General system of convection-**diffusion** PDEs with source terms in conservative form,... D03PFF

Shortest path problem, **Dijkstra's** algorithm H03ADF

Discrete cosine transform C06HBF
Discrete cosine transform (easy-to-use) C06RBF
Two-dimensional complex **discrete** Fourier transform C06FUF
Three-dimensional complex **discrete** Fourier transform C06FXF
Single one-dimensional complex **discrete** Fourier transform, complex data format C06PCF
Two-dimensional complex **discrete** Fourier transform, complex data format C06PUF
Three-dimensional complex **discrete** Fourier transform, complex data format C06PXF
Single one-dimensional real **discrete** Fourier transform, extra workspace for greater speed C06FAF
Single one-dimensional Hermitian **discrete** Fourier transform, extra workspace for greater speed C06FBF
Single one-dimensional complex **discrete** Fourier transform, extra workspace for greater speed C06FCF
Single one-dimensional real **discrete** Fourier transform, no extra workspace C06EAF
Single one-dimensional Hermitian **discrete** Fourier transform, no extra workspace C06EBF
Single one-dimensional complex **discrete** Fourier transform, no extra workspace C06ECF
One-dimensional complex **discrete** Fourier transform of multi-dimensional data C06FFF
Multi-dimensional complex **discrete** Fourier transform of multi-dimensional data C06FJF

One-dimensional complex	**discrete** Fourier transform of multi-dimensional data...	C06PFF
Multi-dimensional complex	**discrete** Fourier transform of multi-dimensional data...	C06PJF
Single one-dimensional real and Hermitian complex	**discrete** Fourier transform, using complex data format for...	C06PAF
Multiple one-dimensional real	**discrete** Fourier transforms	C06FPF
Multiple one-dimensional Hermitian	**discrete** Fourier transforms	C06FQF
Multiple one-dimensional complex	**discrete** Fourier transforms	C06FRF
Multiple one-dimensional complex	**discrete** Fourier transforms using complex data format	C06PRF
Multiple one-dimensional complex	**discrete** Fourier transforms using complex data format and...	C06PSF
Multiple one-dimensional real and Hermitian complex	**discrete** Fourier transforms, using complex data format...	C06PPF
Multiple one-dimensional real and Hermitian complex	**discrete** Fourier transforms, using complex data format...	C06PQF
	Discrete quarter-wave cosine transform	C06HDF
	Discrete quarter-wave cosine transform (easy-to-use)	C06RDF
	Discrete quarter-wave sine transform	C06HCF
	Discrete quarter-wave sine transform (easy-to-use)	C06RCF
	Discrete sine transform	C06HAF
	Discrete sine transform (easy-to-use)	C06RAF
	Discretize a second-order elliptic PDE on a rectangle	D03EEF
...within-group covariance matrices and matrices for	**discriminant** analysis	G03DAF
	Dispersion tests	G08
Computes	**distance** matrix	G03EAF
Computes Mahalanobis squared	**distances** for group or pooled variance-covariance matrices...	G03DBF
Computes probabilities for the standard Normal	**distribution**	G01EAF
Computes probabilities for Student's t-	**distribution**	G01EBF
Computes probabilities for χ^2	**distribution**	G01ECF
Computes probabilities for F-	**distribution**	G01EDF
...and probability density function for the beta	**distribution**	G01EEF
Computes probabilities for the gamma	**distribution**	G01EFF
Computes probability for von Mises	**distribution**	G01ERF
Computes probabilities for the one-sample Kolmogorov–Smirnov	**distribution**	G01EYF
Computes probabilities for the two-sample Kolmogorov–Smirnov	**distribution**	G01EZF
Computes deviates for the standard Normal	**distribution**	G01FAF
Computes deviates for Student's t-	**distribution**	G01FBF
Computes deviates for the χ^2	**distribution**	G01FCF
Computes deviates for the F-	**distribution**	G01FDF
Computes deviates for the beta	**distribution**	G01FEF
Computes deviates for the gamma	**distribution**	G01FFF
Computes probabilities for the non-central Student's t-	**distribution**	G01GBF
Computes probabilities for the non-central χ^2	**distribution**	G01GCF
Computes probabilities for the non-central F-	**distribution**	G01GDF
Computes probabilities for the non-central beta	**distribution**	G01GEF
Computes probability for the bivariate Normal	**distribution**	G01HAF
Computes probabilities for the multivariate Normal	**distribution**	G01HBF
Pseudo-random real numbers, (negative) exponential	**distribution**	G05DBF
Pseudo-random real numbers, logistic	**distribution**	G05DCF
Pseudo-random real numbers, Normal	**distribution**	G05DDF
Pseudo-random real numbers, log-normal	**distribution**	G05DEF
Pseudo-random real numbers, Cauchy	**distribution**	G05DFF
Pseudo-random real numbers, χ^2	**distribution**	G05DHF
Pseudo-random real numbers, Student's t-	**distribution**	G05DJF
Pseudo-random real numbers, F-	**distribution**	G05DKF
Pseudo-random real numbers, Weibull	**distribution**	G05DPF
Pseudo-random integer, Poisson	**distribution**	G05DRF
Pseudo-random integer from uniform	**distribution**	G05DYF
Set up reference vector for multivariate Normal	**distribution**	G05EAF
...for generating pseudo-random integers, uniform	**distribution**	G05EBF
...for generating pseudo-random integers, Poisson	**distribution**	G05ECF
...for generating pseudo-random integers, binomial	**distribution**	G05EDF
...generating pseudo-random integers, negative binomial	**distribution**	G05EEF
...generating pseudo-random integers, hypergeometric	**distribution**	G05EFF
Generates a vector of random numbers from a uniform	**distribution**	G05FAF
...random numbers from an (negative) exponential	**distribution**	G05FBF
Generates a vector of random numbers from a Normal	**distribution**	G05FDF
Generates a vector of pseudo-random numbers from a beta	**distribution**	G05FEF
Generates a vector of pseudo-random numbers from a gamma	**distribution**	G05FFF
Generates a vector of pseudo-random variates from von Mises	**distribution**	G05FSF
Computes confidence interval for the parameter of a binomial	**distribution**	G07AAF
Computes confidence interval for the parameter of a Poisson	**distribution**	G07ABF
...likelihood estimates for parameters of the Weibull	**distribution**	G07BEF
...Kolmogorov–Smirnov test for a user-supplied	**distribution**	G08CCF
...likelihood estimates for parameters of the Normal	**distribution** from grouped and/or censored data	G07BBF
Binomial	**distribution** function	G01BJF
Poisson	**distribution** function	G01BKF
Hypergeometric	**distribution** function	G01BLF
...cumulative distribution function or probability	**distribution** function	G05EXF
Set up reference vector from supplied cumulative	**distribution** function or probability distribution function	G05EXF
Cumulative normal	**distribution** function $P(x)$	S15ABF
Complement of cumulative normal	**distribution** function $Q(x)$	S15ACF
Pseudo-random real numbers, uniform	**distribution** over $(0,1)$	G05CAF
Pseudo-random real numbers, uniform	**distribution** over (a,b)	G05DAF
Gaussian	**distribution** See Normal distribution	
Performs the one-sample Kolmogorov–Smirnov test for standard	**distributions**	G08CBF
Performs the χ^2 goodness of fit test, for standard continuous	**distributions**	G08CGF
Jacobian elliptic functions sn, cn and	**dn**	S21CAF
...finite interval, strategy due to Piessens and de	**Doncker**, allowing for badly-behaved integrands	D01AJF
	Dot product of two complex sparse vector, conjugated	F06GSF
	Dot product of two complex sparse vector, unconjugated	F06GRF
	Dot product of two complex vectors, conjugated	F06GBF
	Dot product of two complex vectors, unconjugated	F06GAF
	Dot product of two real sparse vectors	F06ERF
	Dot product of two real vectors	F06EAF
Performs the runs up or runs	**down** test for randomness	G08EAF
Computes bounds for the significance of a	**Durbin–Watson** statistic	G01EPF
Computes	**Durbin–Watson** test statistic	G02FCF
...system, finite/infinite range, eigenvalue and	**eigenfunction**, user-specified break-points	D02KEF
...form, generalized real symmetric-definite banded	**eigenproblem**	F01BVF
...form of complex Hermitian-definite generalized	**eigenproblem** $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08SSF
Reduction to standard form of real symmetric-definite generalized	**eigenproblem** $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08SEF
Reduction of real symmetric-definite banded generalized	**eigenproblem** $Ax = \lambda Bx$ to standard form $Cy = \lambda y$,...	F08UEF
Reduction of complex Hermitian-definite banded generalized	**eigenproblem** $Ax = \lambda Bx$ to standard form $Cy = \lambda y$,...	F08USF
...form of complex Hermitian-definite generalized	**eigenproblem** $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08TSF
Reduction to standard form of real symmetric-definite generalized	**eigenproblem** $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08TEF

All eigenvalues of generalized banded real symmetric-definite **eigenproblem** (Black Box) F02FHF
Selected eigenvalues and eigenvectors of sparse symmetric **eigenproblem** (Black Box) F02FJF
Eigenvector of generalized real banded **eigenproblem** by inverse iteration F02SDF
All eigenvalues and optionally eigenvectors of generalized complex **eigenproblem** by QZ algorithm (Black Box) F02GJF
All eigenvalues and optionally eigenvectors of generalized **eigenproblem** by QZ algorithm, real matrices (Black Box) F02BJF

...regular/singular system, finite/infinite range, **eigenvalue** and eigenfunction, user-specified break-points D02KEF
Compute **eigenvalue** of 2 by 2 real symmetric matrix F06BPF
...Sturm–Liouville problem, regular system, finite range, **eigenvalue** only D02KAF
...regular/singular system, finite/infinite range, **eigenvalue** only, user-specified break-points D02KDF

All **eigenvalues** and eigenvectors of complex general matrix... F02GBF
All **eigenvalues** and eigenvectors of complex Hermitian matrix... F02HAF
Selected **eigenvalues** and eigenvectors of complex Hermitian matrix... F02HCF
All **eigenvalues** and eigenvectors of complex Hermitian-definite... F02HDF
Selected **eigenvalues** and eigenvectors of complex nonsymmetric matrix... F02GCF
Estimates of sensitivities of selected **eigenvalues** and eigenvectors of complex upper triangular matrix F08QYF
All **eigenvalues** and eigenvectors of real general matrix (Black Box) F02EBF
Selected **eigenvalues** and eigenvectors of real nonsymmetric matrix (Black Box) F02ECF
All **eigenvalues** and eigenvectors of real symmetric matrix (Black Box) F02FAF
Selected **eigenvalues** and eigenvectors of real symmetric matrix (Black Box) F02FCF
All **eigenvalues** and eigenvectors of real symmetric positive-definite... F08JUF
All **eigenvalues** and eigenvectors of real symmetric positive-definite... F08JGF
All **eigenvalues** and eigenvectors of real symmetric tridiagonal matrix,... F08JSF
All **eigenvalues** and eigenvectors of real symmetric tridiagonal matrix,... F08JEF
All **eigenvalues** and eigenvectors of real symmetric-definite generalized... F02FDF
Estimates of sensitivities of selected **eigenvalues** and eigenvectors of real upper quasi-triangular matrix F08QLF
Selected **eigenvalues** and eigenvectors of sparse symmetric eigenproblem... F02FJF
All **eigenvalues** and optionally all eigenvectors of complex Hermitian... F08HQF
All **eigenvalues** and optionally all eigenvectors of complex Hermitian... F08GQF
All **eigenvalues** and optionally all eigenvectors of complex Hermitian... F08FQF
All **eigenvalues** and optionally all eigenvectors of real symmetric... F08HCF
All **eigenvalues** and optionally all eigenvectors of real symmetric... F08GCF
All **eigenvalues** and optionally all eigenvectors of real symmetric... F08FCF
All **eigenvalues** and optionally all eigenvectors of real symmetric... F08JCF
All **eigenvalues** and optionally eigenvectors of generalized complex... F02GJF
All **eigenvalues** and optionally eigenvectors of generalized... F02BJF
All **eigenvalues** and Schur factorization of complex general... F02GAF
Eigenvalues and Schur factorization of complex upper Hessenberg... F08PSF
All **eigenvalues** and Schur factorization of real general matrix... F02EAF
Eigenvalues and Schur factorization of real upper Hessenberg... F08PEF
All **eigenvalues** of generalized banded real symmetric-definite... F02FHF
Selected **eigenvalues** of real symmetric tridiagonal matrix by bisection F08JJF
All **eigenvalues** of real symmetric tridiagonal matrix, root-free... F08JFF
...basis of right invariant subspace for selected **eigenvalues**, with estimates of sensitivities F08QGF
...basis of right invariant subspace for selected **eigenvalues**, with estimates of sensitivities F08QUF

Eigenvector of generalized real banded eigenproblem by inverse... F02SDF

...tridiagonal matrix by inverse iteration, storing **eigenvectors** in complex array F08JXF
...tridiagonal matrix by inverse iteration, storing **eigenvectors** in real array F08JKF
Transform **eigenvectors** of complex balanced matrix to those of original... F08NWF
All eigenvalues and **eigenvectors** of complex general matrix (Black Box) F02GBF
All eigenvalues and optionally all **eigenvectors** of complex Hermitian band matrix,... F08HQF
All eigenvalues and **eigenvectors** of complex Hermitian matrix (Black Box) F02HAF
Selected eigenvalues and **eigenvectors** of complex Hermitian matrix (Black Box) F02HCF
All eigenvalues and optionally all **eigenvectors** of complex Hermitian matrix, packed storage,... F08GQF
All eigenvalues and optionally all **eigenvectors** of complex Hermitian matrix, using divide and conquer F08FQF
All eigenvalues and **eigenvectors** of complex Hermitian-definite generalized problem... F02HDF
Selected eigenvalues and **eigenvectors** of complex nonsymmetric matrix (Black Box) F02GCF
Selected right and/or left **eigenvectors** of complex upper Hessenberg matrix by inverse iteration F08PXF
Left and right **eigenvectors** of complex upper triangular matrix F08QXF
Estimates of sensitivities of selected eigenvalues and **eigenvectors** of complex upper triangular matrix F08QYF
All eigenvalues and optionally **eigenvectors** of generalized complex eigenproblem by QZ... F02GJF
All eigenvalues and optionally **eigenvectors** of generalized eigenproblem by QZ algorithm,... F02BJF
Transform **eigenvectors** of real balanced matrix to those of original... F08NJF
All eigenvalues and **eigenvectors** of real general matrix (Black Box) F02EBF
Selected eigenvalues and **eigenvectors** of real nonsymmetric matrix (Black Box) F02ECF
All eigenvalues and optionally all **eigenvectors** of real symmetric band matrix,... F08HCF
All eigenvalues and **eigenvectors** of real symmetric matrix (Black Box) F02FAF
Selected eigenvalues and **eigenvectors** of real symmetric matrix (Black Box) F02FCF
All eigenvalues and optionally all **eigenvectors** of real symmetric matrix, packed storage,... F08GCF
All eigenvalues and optionally all **eigenvectors** of real symmetric matrix,... F08FCF
All eigenvalues and **eigenvectors** of real symmetric positive-definite tridiagonal... F08JUF
All eigenvalues and **eigenvectors** of real symmetric positive-definite tridiagonal... F08JGF
Selected **eigenvectors** of real symmetric tridiagonal matrix by inverse... F08JXF
Selected **eigenvectors** of real symmetric tridiagonal matrix by inverse... F08JKF
All eigenvalues and **eigenvectors** of real symmetric tridiagonal matrix, reduced... F08JSF
All eigenvalues and **eigenvectors** of real symmetric tridiagonal matrix, reduced... F08JEF
All eigenvalues and optionally all **eigenvectors** of real symmetric tridiagonal matrix,... F08JCF
All eigenvalues and **eigenvectors** of real symmetric-definite generalized problem... F02FDF
Selected right and/or left **eigenvectors** of real upper Hessenberg matrix by inverse... F08PKF
Left and right **eigenvectors** of real upper quasi-triangular matrix F08QKF
Estimates of sensitivities of selected eigenvalues and **eigenvectors** of real upper quasi-triangular matrix F08QLF
Selected eigenvalues and **eigenvectors** of sparse symmetric eigenproblem (Black Box) F02FJF

Generate complex **elementary** reflection F06HRF
Apply complex **elementary** reflection F06HTF
Generate real **elementary** reflection, LINPACK style F06FSF
Apply real **elementary** reflection, LINPACK style F06FUF
Generate real **elementary** reflection, NAG style F06FRF
Apply real **elementary** reflection, NAG style F06FTF

Gaussian **elimination** See LU factorization

Jacobian **elliptic** functions sn, cn and dn S21CAF
Degenerate symmetrised **elliptic** integral of 1st kind $R_C(x, y)$ S21BAF
Symmetrised **elliptic** integral of 1st kind $R_F(x, y, z)$ S21BBF
Symmetrised **elliptic** integral of 2nd kind $R_D(x, y, z)$ S21BCF
Symmetrised **elliptic** integral of 3rd kind $R_J(x, y, z, r)$ S21BDF
Elliptic PDE, Helmholtz equation, three-dimensional... D03FAF
Elliptic PDE, Laplace's equation, two-dimensional arbitrary domain D03EAF
Discretize a second-order **elliptic** PDE on a rectangle D03EEF
Elliptic PDE, solution of finite difference equations by a... D03EDF
Elliptic PDE, solution of finite difference equations by SIP,... D03EBF
Elliptic PDE, solution of finite difference equations by SIP,... D03UAF
Elliptic PDE, solution of finite difference equations by SIP... D03ECF
Elliptic PDE, solution of finite difference equations by SIP,... D03UBF

ODEs, IVP, resets **end** of range for D02PDF D02PWF

...adaptive, finite interval, weight function with **end-point** singularities of algebraico-logarithmic type D01APF

...convergence of sequence, Shanks' transformation and **epsilon** algorithm C06BAF

...general linear regression model and its standard **error** G02DNF
...of a generalized linear model and its standard **error** G02GNF

...bounds, impulse response function and its standard	**error**	G13CGF
ODEs, IVP,	**error** assessment diagnostics for D02PCF and D02PDF	D02PZF
	Error bounds for solution of complex band triangular system...	F07VVF
	Error bounds for solution of complex triangular system...	F07TVF
	Error bounds for solution of complex triangular system...	F07UVF
	Error bounds for solution of real band triangular system...	F07VHF
	Error bounds for solution of real triangular system...	F07THF
	Error bounds for solution of real triangular system...	F07UHF
Refined solution with	**error** bounds of complex band system of linear equations,...	F07BVF
Refined solution with	**error** bounds of complex Hermitian indefinite system...	F07MVF
Refined solution with	**error** bounds of complex Hermitian indefinite system...	F07PVF
Refined solution with	**error** bounds of complex Hermitian positive-definite band system...	F07HVF
Refined solution with	**error** bounds of complex Hermitian positive-definite system...	F07FVF
Refined solution with	**error** bounds of complex Hermitian positive-definite system...	F07GVF
Refined solution with	**error** bounds of complex symmetric system of linear equations,...	F07NVF
Refined solution with	**error** bounds of complex symmetric system of linear equations,...	F07QVF
Refined solution with	**error** bounds of complex system of linear equations,...	F07AVF
Refined solution with	**error** bounds of real band system of linear equations,...	F07BHF
Refined solution with	**error** bounds of real symmetric indefinite system of linear equations,...	F07MHF
Refined solution with	**error** bounds of real symmetric indefinite system of linear equations,...	F07PHF
Refined solution with	**error** bounds of real symmetric positive-definite band system...	F07HHF
Refined solution with	**error** bounds of real symmetric positive-definite system...	F07FHF
Refined solution with	**error** bounds of real symmetric positive-definite system...	F07GHF
Refined solution with	**error** bounds of real system of linear equations,...	F07AHF
ODEs, IVP, weighted norm of local	**error** estimate for D02M–N routines	D02ZAF
Scaled complex complement of	**error** function, $\exp(-z^2)\mathrm{erfc}(-iz)$	S15DDF
Complement of	**error** function $\mathrm{erfc}(x)$	S15ADF
	Error function $\mathrm{erf}(x)$	S15AEF
Return value of	**error** indicator/terminate with error message	P01ABF
Return value of error indicator/terminate with	**error** message	P01ABF
Return or set unit number for	**error** messages	X04AAF
Fits a generalized linear model with Normal	**errors**	G02GAF
Fits a generalized linear model with binomial	**errors**	G02GBF
Fits a generalized linear model with Poisson	**errors**	G02GCF
Fits a generalized linear model with gamma	**errors**	G02GDF
...randomized design, treatment means and standard	**errors**	G04BBF
...and column design, treatment means and standard	**errors**	G04BCF
...factorial design, treatment means and standard	**errors**	G04CAF
Multivariate time series, forecasts and their standard	**errors**	G13DJF
Multivariate time series, updates forecasts and their standard	**errors**	G13DKF
Estimates and standard	**errors** of parameters of a general linear model...	G02GKF
Estimates and standard	**errors** of parameters of a general linear regression model...	G02DKF
Computes	**estimable** function of a general linear regression model...	G02DNF
Computes	**estimable** function of a generalized linear model...	G02GNF
	Estimate condition number of complex band matrix,...	F07BUF
	Estimate condition number of complex band triangular matrix	F07VUF
	Estimate condition number of complex Hermitian indefinite matrix,...	F07MUF
	Estimate condition number of complex Hermitian indefinite matrix,...	F07PUF
	Estimate condition number of complex Hermitian positive-definite...	F07HUF
	Estimate condition number of complex Hermitian positive-definite...	F07FUF
	Estimate condition number of complex Hermitian positive-definite...	F07GUF
	Estimate condition number of complex matrix,...	F07AUF
	Estimate condition number of complex symmetric matrix,...	F07NUF
	Estimate condition number of complex symmetric matrix,...	F07QUF
	Estimate condition number of complex triangular matrix	F07TUF
	Estimate condition number of complex triangular matrix,...	F07UUF
	Estimate condition number of real band matrix,...	F07BGF
	Estimate condition number of real band triangular matrix	F07VGF
	Estimate condition number of real matrix,...	F07AGF
	Estimate condition number of real symmetric indefinite matrix,...	F07MGF
	Estimate condition number of real symmetric indefinite matrix,...	F07PGF
	Estimate condition number of real symmetric positive-definite...	F07HGF
	Estimate condition number of real symmetric positive-definite...	F07FGF
	Estimate condition number of real symmetric positive-definite...	F07GGF
	Estimate condition number of real triangular matrix	F07TGF
	Estimate condition number of real triangular matrix, packed storage	F07UGF
ODEs, IVP, weighted norm of local error	**estimate** for D02M–N routines	D02ZAF
Kernel density	**estimate** using Gaussian kernel	G10BAF
	Estimate (using numerical differentiation) gradient and/or...	E04XAF
Robust regression, standard M-	**estimates**	G02HAF
	Estimates and standard errors of parameters of a general linear...	G02GKF
	Estimates and standard errors of parameters of a general linear...	G02DKF
Robust estimation, M-	**estimates** for location and scale parameters, standard weight functions	G07DBF
Robust estimation, M-	**estimates** for location and scale parameters, user-defined weight...	G07DCF
Computes maximum likelihood	**estimates** for parameters of the Normal distribution from grouped...	G07BBF
Computes maximum likelihood	**estimates** for parameters of the Weibull distribution	G07BEF
	Estimates of linear parameters and general linear regression model...	G02DDF
...invariant subspace for selected eigenvalues, with	**estimates** of sensitivities	F08QGF
...invariant subspace for selected eigenvalues, with	**estimates** of sensitivities	F08QUF
	Estimates of sensitivities of selected eigenvalues and eigenvectors...	F08QYF
	Estimates of sensitivities of selected eigenvalues and eigenvectors...	F08QLF
Computes Kaplan–Meier (product-limit)	**estimates** of survival probabilities	G12AAF
Computes maximum likelihood	**estimates** of the parameters of a factor analysis model,...	G03CAF
Computes a trimmed and winsorized mean of a single sample with	**estimates** of their variance	G07DDF
Huber	**estimates** See Robust	
Norm estimation (for use in condition	**estimation**), complex matrix	F04ZCF
Norm	**estimation** (for use in condition estimation), complex matrix	F04ZCF
Norm	**estimation** (for use in condition estimation), real matrix	F04YCF
Robust	**estimation**, median, median absolute deviation,...	G07DAF
Robust	**estimation**, M-estimates for location and scale parameters,...	G07DBF
Robust	**estimation**, M-estimates for location and scale parameters,...	G07DCF
Calculates a robust	**estimation** of a correlation matrix, Huber's weight function	G02HKF
Calculates a robust	**estimation** of a correlation matrix, user-supplied weight function	G02HMF
Calculates a robust	**estimation** of a correlation matrix, user-supplied weight function...	G02HLF
Multivariate time series,	**estimation** of multi-input model	G13BEF
Multivariate time series, preliminary	**estimation** of transfer function model	G13BDF
Multivariate time series,	**estimation** of VARMA model	G13DCF
Norm estimation (for use in condition	**estimation**), real matrix	F04YCF
Univariate time series, preliminary	**estimation**, seasonal ARIMA model	G13ADF
Univariate time series,	**estimation**, seasonal ARIMA model (comprehensive)	G13AEF
Univariate time series,	**estimation**, seasonal ARIMA model (easy-to-use)	G13AFF
Compute	**Euclidean** norm from scaled form	F06BMF
Compute	**Euclidean** norm of complex vector	F06JJF
Update	**Euclidean** norm of complex vector in scaled form	F06KJF
Compute	**Euclidean** norm of real vector	F06EJF
Compute weighted	**Euclidean** norm of real vector	F06FKF
Update	**Euclidean** norm of real vector in scaled form	F06FJF
Roe's approximate Riemann solver for	**Euler** equations in conservative form,...	D03PUF
Osher's approximate Riemann solver for	**Euler** equations in conservative form,...	D03PVF

Modified HLL Riemann solver for **Euler** equations in conservative form,... D03PWF
Exact Riemann Solver for **Euler** equations in conservative form,... D03PXF
Provides the mathematical constant γ (**Euler's** Constant) X01ABF

Interpolated values, **evaluate** interpolant computed by E01SAF, two variables E01SBF
Interpolated values, **evaluate** interpolant computed by E01SEF, two variables E01SFF
Evaluate inverse Laplace transform as computed by C06LBF C06LCF
Interpolated values, **evaluate** rational interpolant computed by E01RAF, one variable E01RBF

Evaluation of fitted bicubic spline at a mesh of points E02DFF
Evaluation of fitted bicubic spline at a vector of points E02DEF
Evaluation of fitted cubic spline, definite integral E02BDF
Evaluation of fitted cubic spline, function and derivatives E02BCF
Evaluation of fitted cubic spline, function only E02BBF
Evaluation of fitted polynomial in one variable from... E02AKF
Evaluation of fitted polynomial in one variable from... E02AEF
Evaluation of fitted polynomial in two variables E02CBF
Evaluation of fitted rational function as computed by E02RAF E02RBF

Interpolated values, **Everett's** formula, equally spaced data, one variable E01ABF

Computes the **exact** probabilities for the Mann–Whitney U statistic, no ties... G08AJF
Computes the **exact** probabilities for the Mann–Whitney U statistic, ties... G08AKF
Two-way contingency table analysis, with χ^2/Fisher's **exact** test G01AFF

Explicit ODEs, stiff IVP, banded Jacobian (comprehensive) D02NCF
Explicit ODEs, stiff IVP, full Jacobian (comprehensive) D02NBF
Explicit ODEs, stiff IVP (reverse communication, comprehensive) D02NMF
Explicit ODEs, stiff IVP, sparse Jacobian (comprehensive) D02NDF

Pseudo-random real numbers, (negative) **exponential** distribution G05DBF
Generates a vector of random numbers from an (negative) **exponential** distribution G05FBF
Complex **exponential**, e^z S01EAF
Exponential integral $E_1(x)$ S13AAF
Ranks, Normal scores, approximate Normal scores or **exponential** (Savage) scores G01DHF

Extract grid data from D03RBF D03RZF

Computes a five-point summary (median, hinges and **extremes**) G01ALF

Computes probabilities for F**-distribution** G01EDF
Computes deviates for the F**-distribution** G01FDF
Computes probabilities for the non-central F**-distribution** G01GDF
Pseudo-random real numbers, F**-distribution** G05DKF

Computes maximum likelihood estimates of the parameters of a **factor** analysis model, factor loadings, communalities... G03CAF
...of the parameters of a factor analysis model, **factor** loadings, communalities and residual correlations G03CAF
Computes **factor** score coefficients (for use after G03CAF) G03CCF

Computes orthogonal polynomials or dummy variables for **factor/classification** variable G04EAF

Analysis of variance, complete **factorial** design, treatment means and standard errors G04CAF

Real sparse nonsymmetric linear systems, incomplete LU **factorization** F11DAF
Complex sparse non-Hermitian linear systems, incomplete LU **factorization** F11DNF
Real sparse symmetric matrix, incomplete Cholesky **factorization** F11JAF
Complex sparse Hermitian matrix, incomplete Cholesky **factorization** F11JNF
LU **factorization** and determinant of real matrix F03AFF
LL^T **factorization** and determinant of real symmetric positive-definite... F03AEF
Operations with orthogonal matrices, form rows of Q, after RQ **factorization** by F01QJF F01QKF
Operations with unitary matrices, form rows of Q, after RQ **factorization** by F01RJF F01RKF
QR or RQ **factorization** by sequence of plane rotations, complex upper... F06TRF
QR or RQ **factorization** by sequence of plane rotations, complex upper... F06TSF
$QRxk$ **factorization** by sequence of plane rotations, complex upper... F06TQF
QR **factorization** by sequence of plane rotations, rank-1 update of... F06TPF
QR **factorization** by sequence of plane rotations, rank-1 update of... F06QPF
QR or RQ **factorization** by sequence of plane rotations, real upper... F06QRF
QR or RQ **factorization** by sequence of plane rotations, real upper... F06QSF
QR **factorization** by sequence of plane rotations, real upper... F06QQF
Form all or part of orthogonal Q from QR **factorization** determined by F08AEF or F08BEF F08AFF
Form all or part of orthogonal Q from LQ **factorization** determined by F08AHF F08AJF
Form all or part of unitary Q from QR **factorization** determined by F08ASF or F08BSF F08ATF
Form all or part of unitary Q from LQ **factorization** determined by F08AVF F08AWF
All eigenvalues and Schur **factorization** of complex general matrix (Black Box) F02GAF
QR **factorization** of complex general rectangular matrix F08ASF
LQ **factorization** of complex general rectangular matrix F08AVF
QR **factorization** of complex general rectangular matrix... F08BSF
Bunch–Kaufman **factorization** of complex Hermitian indefinite matrix F07MRF
Bunch–Kaufman **factorization** of complex Hermitian indefinite matrix, packed storage F07PRF
Cholesky **factorization** of complex Hermitian positive-definite band matrix F07HRF
Computes a split Cholesky **factorization** of complex Hermitian positive-definite band matrix A F08UTF
Cholesky **factorization** of complex Hermitian positive-definite matrix F07FRF
Cholesky **factorization** of complex Hermitian positive-definite matrix,... F07GRF
LU **factorization** of complex m by n band matrix F07BRF
LU **factorization** of complex m by n matrix F07ARF
RQ **factorization** of complex m by n matrix ($m \leq n$) F01RJF
RQ **factorization** of complex m by n upper trapezoidal matrix ($m \leq n$) F01RGF
Reorder Schur **factorization** of complex matrix, form orthonormal basis of right... F08QUF
Reorder Schur **factorization** of complex matrix using unitary similarity... F08QTF
Bunch–Kaufman **factorization** of complex symmetric matrix F07NRF
Bunch–Kaufman **factorization** of complex symmetric matrix, packed storage F07QRF
Eigenvalues and Schur **factorization** of complex upper Hessenberg matrix reduced... F08PSF
LU **factorization** of real almost block diagonal matrix F01LHF
All eigenvalues and Schur **factorization** of real general matrix (Black Box) F02EAF
QR **factorization** of real general rectangular matrix F08AEF
LQ **factorization** of real general rectangular matrix F08AHF
QR **factorization** of real general rectangular matrix with column pivoting F08BEF
LU **factorization** of real m by n band matrix F07BDF
LU **factorization** of real m by n matrix F07ADF
RQ **factorization** of real m by n matrix ($m \leq n$) F01QJF
RQ **factorization** of real m by n upper trapezoidal matrix ($m \leq n$) F01QGF
Reorder Schur **factorization** of real matrix, form orthonormal basis of right... F08QGF
Reorder Schur **factorization** of real matrix using orthogonal similarity transformation F08QFF
LU **factorization** of real sparse matrix F01BRF
LU **factorization** of real sparse matrix with known sparsity pattern F01BSF
Bunch–Kaufman **factorization** of real symmetric indefinite matrix F07MDF
Bunch–Kaufman **factorization** of real symmetric indefinite matrix, packed storage F07PDF
Cholesky **factorization** of real symmetric positive-definite band matrix F07HDF
Computes a split Cholesky **factorization** of real symmetric positive-definite band matrix A F08UFF
Cholesky **factorization** of real symmetric positive-definite matrix F07FDF
Cholesky **factorization** of real symmetric positive-definite matrix,... F07GDF
LDL^T **factorization** of real symmetric positive-definite... F01MCF
LU **factorization** of real tridiagonal matrix F01LEF
Eigenvalues and Schur **factorization** of real upper Hessenberg matrix reduced... F08PEF
QR **factorization** of UZ or RQ factorization of ZU, U complex upper... F06TTF
QR **factorization** of UZ or RQ factorization of ZU, U real upper... F06QTF

QR factorization of UZ or RQ	**factorization** of ZU, U complex upper triangular,...	F06TTF
QR factorization of UZ or RQ	**factorization** of ZU, U real upper triangular,...	F06QTF
QR	**factorization**, possibly followed by SVD	F02WDF
Hard	**fail**	P01
Soft	**fail**	P01
	Failures	P01
...filter, time-varying, square root covariance	**filter**	G13EAF
...filter, time-invariant, square root covariance	**filter**	G13EBF
Combined measurement and time update, one iteration of Kalman	**filter**, time-invariant, square root covariance filter	G13EBF
Combined measurement and time update, one iteration of Kalman	**filter**, time-varying, square root covariance filter	G13EAF
Multivariate time series,	**filtering** by a transfer function model	G13BBF
Multivariate time series,	**filtering** (pre-whitening) by an ARIMA model	G13BAF
ODEs, IVP, root-	**finding** diagnostics for D02QFF and D02QGF	D02QYF
ODEs, IVP, Adams method with root-	**finding** (forward communication, comprehensive)	D02QFF
ODEs, IVP, Adams method with root-	**finding** (reverse communication, comprehensive)	D02QGF
Elliptic PDE, solution of	**finite** difference equations by a multigrid technique	D03EDF
Elliptic PDE, solution of	**finite** difference equations by SIP, five-point two-dimensional...	D03EBF
Elliptic PDE, solution of	**finite** difference equations by SIP, five-point two-dimensional...	D03UAF
Elliptic PDE, solution of	**finite** difference equations by SIP for seven-point three-dimensional...	D03ECF
Elliptic PDE, solution of	**finite** difference equations by SIP, seven-point three-dimensional...	D03UBF
ODEs, general nonlinear boundary value problem,	**finite** difference technique with deferred correction,...	D02RAF
ODEs, boundary value problem,	**finite** difference technique with deferred correction,...	D02GBF
ODEs, boundary value problem,	**finite** difference technique with deferred correction,...	D02GAF
General system of parabolic PDEs, method of lines,	**finite** differences, one space variable	D03PCF
General system of parabolic PDEs, coupled DAEs, method of lines,	**finite** differences, one space variable	D03PHF
General system of parabolic PDEs, coupled DAEs, method of lines,	**finite** differences, remeshing, one space variable	D03PPF
General system of second-order PDEs, method of lines,	**finite** differences, remeshing, two space variables, rectangular region	D03RAF
General system of second-order PDEs, method of lines,	**finite** differences, remeshing, two space variables, rectilinear region	D03RBF
...non-adaptive, finite interval with provision for inde	**finite** integrals	D01ARF
One-dimensional quadrature, non-adaptive,	**finite** interval	D01BDF
One-dimensional quadrature, adaptive,	**finite** interval, allowing for singularities at user-specified break-points	D01ALF
One-dimensional quadrature, adaptive,	**finite** interval, method suitable for oscillating functions	D01AKF
One-dimensional quadrature, adaptive,	**finite** interval, method suitable for oscillating functions	D01AKF
One-dimensional quadrature, adaptive,	**finite** interval, strategy due to Patterson,...	D01AHF
One-dimensional quadrature, adaptive,	**finite** interval, strategy due to Piessens and de Doncker,...	D01AJF
One-dimensional quadrature, adaptive,	**finite** interval, strategy due to Piessens and de Doncker,...	D01AJF
One-dimensional quadrature, adaptive,	**finite** interval, variant of D01AJF efficient on vector machines	D01ATF
One-dimensional quadrature, adaptive,	**finite** interval, variant of D01AKF efficient on vector machines	D01AUF
One-dimensional quadrature, adaptive,	**finite** interval, weight function $1/(x-c)$,...	D01AQF
One-dimensional quadrature, adaptive,	**finite** interval, weight function $\cos(\omega x)$ or $\sin(\omega x)$	D01ANF
One-dimensional quadrature, adaptive,	**finite** interval, weight function with end-point singularities...	D01APF
One-dimensional quadrature, non-adaptive,	**finite** interval with provision for indefinite integrals	D01ARF
Second-order Sturm–Liouville problem, regular system,	**finite** range, eigenvalue only	D02KAF
Two-dimensional quadrature,	**finite** region	D01DAF
Second-order Sturm–Liouville problem, regular/singular system,	**finite/infinite** range, eigenvalue and eigenfunction,...	D02KEF
Second-order Sturm–Liouville problem, regular/singular system,	**finite/infinite** range, eigenvalue only, user-specified break-points	D02KDF
Two-way contingency table analysis, with χ^2/	**Fisher's** exact test	G01AFF
Least-squares cubic spline curve	**fit**, automatic knot placement	E02BEF
Least-squares surface	**fit**, bicubic splines	E02DAF
Least-squares surface	**fit** by bicubic splines with automatic knot placement,...	E02DCF
Least-squares surface	**fit** by bicubic splines with automatic knot placement, scattered data	E02DDF
Minimax curve	**fit** by polynomials	E02ACF
Least-squares curve	**fit**, by polynomials, arbitrary data points	E02ADF
Least-squares surface	**fit** by polynomials, data on lines	E02CAF
	Fit cubic smoothing spline, smoothing parameter estimated	G10ACF
	Fit cubic smoothing spline, smoothing parameter given	G10ABF
Least-squares curve cubic spline	**fit** (including interpolation)	E02BAF
Least-squares polynomial	**fit**, special data points (including interpolation)	E02AFF
Performs the χ^2 goodness of	**fit** test, for standard continuous distributions	G08CGF
Goodness of	**fit** tests	G08
Least-squares polynomial	**fit**, values and derivatives may be constrained, arbitrary data points	E02AGF
	Fits a general linear regression model for new dependent variable	G02DGF
	Fits a general (multiple) linear regression model	G02DAF
	Fits a generalized linear model with binomial errors	G02GBF
	Fits a generalized linear model with gamma errors	G02GDF
	Fits a generalized linear model with Normal errors	G02GAF
	Fits a generalized linear model with Poisson errors	G02GCF
	Fits a linear regression model by forward selection	G02EEF
	Fits Cox's proportional hazard model	G12BAF
Evaluation of	**fitted** bicubic spline at a mesh of points	E02DFF
Evaluation of	**fitted** bicubic spline at a vector of points	E02DEF
Evaluation of	**fitted** cubic spline, definite integral	E02BDF
Evaluation of	**fitted** cubic spline, function and derivatives	E02BCF
Evaluation of	**fitted** cubic spline, function only	E02BBF
Derivative of	**fitted** polynomial in Chebyshev series form	E02AHF
Integral of	**fitted** polynomial in Chebyshev series form	E02AJF
Evaluation of	**fitted** polynomial in one variable, from Chebyshev series form	E02AKF
Evaluation of	**fitted** polynomial in one variable from Chebyshev series form...	E02AEF
Evaluation of	**fitted** polynomial in two variables	E02CBF
Evaluation of	**fitted** rational function as computed by E02RAF	E02RBF
Interpolating functions,	**fitting** bicubic spline, data on rectangular grid	E01DAF
Sort two-dimensional data into panels for	**fitting** bicubic splines	E02ZAF
Computes a	**five-point** summary (median, hinges and extremes)	G01ALF
Elliptic PDE, solution of finite difference equations by SIP,	**five-point** two-dimensional molecule, iterate to convergence	D03EBF
Elliptic PDE, solution of finite difference equations by SIP,	**five-point** two-dimensional molecule, one iteration	D03UAF
...method of lines, upwind scheme using numerical	**flux** function based on Riemann solver, one space variable	D03PFF
...method of lines, upwind scheme using numerical	**flux** function based on Riemann solver, one space variable	D03PLF
...method of lines, upwind scheme using numerical	**flux** function based on Riemann solver, remeshing, one space variable	D03PSF
Univariate time series, update state set for	**forecasting**	G13AGF
Multivariate time series, update state set for	**forecasting** from multi-input model	G13BGF
Univariate time series,	**forecasting** from state set	G13AHF
Multivariate time series,	**forecasting** from state set of multi-input model	G13BHF
Multivariate time series,	**forecasts** and their standard errors	G13DJF
Multivariate time series, updates	**forecasts** and their standard errors	G13DKF
Multivariate time series, state set and	**forecasts** from fully specified multi-input model	G13BJF
Univariate time series, state set and	**forecasts**, from fully specified seasonal ARIMA model	G13AJF
ODEs, IVP, Adams method with root-finding (	**forward** communication, comprehensive)	D02QFF
Fits a linear regression model by	**forward** selection	G02EEF

Two-dimensional complex discrete	**Fourier** transform	C06FUF
Three-dimensional complex discrete	**Fourier** transform	C06FXF
Single one-dimensional complex discrete	**Fourier** transform, complex data format	C06PCF
Two-dimensional complex discrete	**Fourier** transform, complex data format	C06PUF
Three-dimensional complex discrete	**Fourier** transform, complex data format	C06PXF
Single one-dimensional real discrete	**Fourier** transform, extra workspace for greater speed	C06FAF
Single one-dimensional Hermitian discrete	**Fourier** transform, extra workspace for greater speed	C06FBF
Single one-dimensional complex discrete	**Fourier** transform, extra workspace for greater speed	C06FCF
Single one-dimensional real discrete	**Fourier** transform, no extra workspace	C06EAF
Single one-dimensional Hermitian discrete	**Fourier** transform, no extra workspace	C06EBF
Single one-dimensional complex discrete	**Fourier** transform, no extra workspace	C06ECF
One-dimensional complex discrete	**Fourier** transform of multi-dimensional data	C06FFF
Multi-dimensional complex discrete	**Fourier** transform of multi-dimensional data	C06FJF
One-dimensional complex discrete	**Fourier** transform of multi-dimensional data (using complex data type)	C06PFF
Multi-dimensional complex discrete	**Fourier** transform of multi-dimensional data (using complex data type)	C06PJF
...one-dimensional real and Hermitian complex discrete	**Fourier** transform, using complex data format for Hermitian sequences	C06PAF
Multiple one-dimensional real discrete	**Fourier** transforms	C06FPF
Multiple one-dimensional Hermitian discrete	**Fourier** transforms	C06FQF
Multiple one-dimensional complex discrete	**Fourier** transforms	C06FRF
Multiple one-dimensional complex discrete	**Fourier** transforms using complex data format	C06PRF
Multiple one-dimensional complex discrete	**Fourier** transforms using complex data format and sequences...	C06PSF
Multiple one-dimensional real and Hermitian complex discrete	**Fourier** transforms, using complex data format for Hermitian...	C06PPF
Multiple one-dimensional real and Hermitian complex discrete	**Fourier** transforms, using complex data format for Hermitian...	C06PQF
Linear non-singular	**Fredholm** integral equation, second kind, smooth kernel	D05ABF
Linear non-singular	**Fredholm** integral equation, second kind, split kernel	D05AAF
	Frequency count for G11SAF	G11SBF
...spectrum using spectral smoothing by the trapezium	**frequency** (Daniell) window	G13CBF
...spectrum using spectral smoothing by the trapezium	**frequency** (Daniell) window	G13CDF
Mean, variance, skewness, kurtosis, etc, one variable, from	**frequency** table	G01ADF
	Frequency table from raw data	G01AEF
	Fresnel integral $C(x)$	S20ADF
	Fresnel integral $S(x)$	S20ACF
	Friedman two-way analysis of variance on k matched samples	G08AEF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex band matrix	F06UBF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex general matrix	F06UAF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex Hermitian...	F06UEF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex Hermitian...	F06UCF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex Hermitian...	F06UDF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex Hessenberg matrix	F06UMF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex symmetric...	F06UHF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex symmetric...	F06UFF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex symmetric...	F06UGF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex...	F06UJF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex triangular...	F06ULF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, complex triangular...	F06UKF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real band matrix	F06RBF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real general matrix	F06RAF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real Hessenberg matrix	F06RMF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real symmetric band matrix	F06REF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real symmetric matrix	F06RCF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real symmetric matrix,...	F06RDF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real...	F06RJF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real triangular...	F06RLF
1-norm, ∞-norm,	**Frobenius** norm, largest absolute element, real triangular...	F06RKF
Multivariate time series,	**gain**, phase, bounds, univariate and bivariate (cross) spectra	G13CFF
Computes probabilities for the	**gamma** distribution	G01EFF
Computes deviates for the	**gamma** distribution	G01FFF
Generates a vector of pseudo-random numbers from a	**gamma** distribution	G05FFF
Fits a generalized linear model with	**gamma** errors	G02GDF
	Gamma function	S14AAF
Log	**Gamma** function	S14ABF
Incomplete	**Gamma** functions $P(a,x)$ and $Q(a,x)$	S14BAF
Provides the mathematical constant γ (Euler's Constant)		X01ABF
Performs the	**gaps** test for randomness	G08EDF
	Gather and set to zero complex sparse vector	F06GVF
	Gather and set to zero real sparse vector	F06EVF
	Gather complex sparse vector	F06GUF
	Gather real sparse vector	F06EUF
Kernel density estimate using	**Gaussian** kernel	G10BAF
One-dimensional	**Gaussian** quadrature	D01BAF
Multi-dimensional	**Gaussian** quadrature over hyper-rectangle	D01FBF
Calculation of weights and abscissae for	**Gaussian** quadrature rules, general choice of rule	D01BCF
Pre-computed weights and abscissae for	**Gaussian** quadrature rules, restricted choice of rule	D01BBF
Real general	**Gauss–Markov** linear model (including weighted least-squares)	F04JLF
Complex general	**Gauss–Markov** linear model (including weighted least-squares)	F04KLF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm...	E04GDF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm...	E04GZF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm...	E04FCF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm...	E04FYF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm,...	E04HEF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and modified Newton algorithm,...	E04HYF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and quasi-Newton algorithm...	E04GBF
Unconstrained minimum of a sum of squares, combined	**Gauss–Newton** and quasi-Newton algorithm,...	E04GYF
All eigenvalues of	**generalized** banded real symmetric-definite eigenproblem (Black Box)	F02FHF
All eigenvalues and optionally eigenvectors of	**generalized** complex eigenproblem by QZ algorithm (Black Box)	F02GJF
Reduction to standard form of complex Hermitian-definite	**generalized** eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08SSF
Reduction to standard form of real symmetric-definite	**generalized** eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08SEF
Reduction of real symmetric-definite banded	**generalized** eigenproblem $Ax = \lambda Bx$ to standard form $Cy = \lambda y$,...	F08UEF
Reduction of complex Hermitian-definite banded	**generalized** eigenproblem $Ax = \lambda Bx$ to standard form $Cy = \lambda y$,...	F08USF
Reduction to standard form of complex Hermitian-definite	**generalized** eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08TSF
Reduction to standard form of real symmetric-definite	**generalized** eigenproblem $Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$,...	F08TEF
All eigenvalues and optionally eigenvectors of	**generalized** eigenproblem by QZ algorithm, real matrices (Black Box)	F02BJF
Computes estimable function of a	**generalized** linear model and its standard error	G02GNF
Fits a	**generalized** linear model with binomial errors	G02GBF
Fits a	**generalized** linear model with gamma errors	G02GDF
Fits a	**generalized** linear model with Normal errors	G02GAF
Fits a	**generalized** linear model with Poisson errors	G02GCF
Computes orthogonal rotations for loading matrix,	**generalized** orthomax criterion	G03BAF
All eigenvalues and eigenvectors of real symmetric-definite	**generalized** problem (Black Box)	F02FDF
All eigenvalues and eigenvectors of complex Hermitian-definite	**generalized** problem (Black Box)	F02HDF
Eigenvector of	**generalized** real banded eigenproblem by inverse iteration	F02SDF
Reduction to standard form,	**generalized** real symmetric-definite banded eigenproblem	F01BVF

	Generate complex elementary reflection	F06HRF
	Generate complex plane rotation, storing tangent, real cosine	F06CAF
	Generate complex plane rotation, storing tangent, real sine	F06CBF
	Generate next term from reference vector for ARMA time...	G05EWF
	Generate orthogonal transformation matrices from reduction...	F08KFF
	Generate orthogonal transformation matrix from reduction...	F08NFF
	Generate orthogonal transformation matrix from reduction...	F08FFF
	Generate orthogonal transformation matrix from reduction...	F08GFF
	Generate real elementary reflection, LINPACK style	F06FSF
	Generate real elementary reflection, NAG style	F06FRF
	Generate real Jacobi plane rotation	F06BEF
	Generate real plane rotation	F06AAF
	Generate real plane rotation, storing tangent	F06BAF
	Generate sequence of complex plane rotations	F06HQF
	Generate sequence of real plane rotations	F06FQF
	Generate unitary transformation matrices from reduction...	F08KTF
	Generate unitary transformation matrix from reduction...	F08NTF
	Generate unitary transformation matrix from reduction...	F08FTF
	Generate unitary transformation matrix from reduction...	F08GTF
	Generate weights for use in solving Volterra equations	D05BWF
	Generate weights for use in solving weakly singular Abel-type...	D05BYF
	Generates a realisation of a multivariate time series from...	G05HDF
	Generates a vector of pseudo-random numbers from...	G05FEF
	Generates a vector of pseudo-random numbers from...	G05FFF
	Generates a vector of pseudo-random variates from...	G05FSF
	Generates a vector of random numbers from a Normal distribution	G05FDF
	Generates a vector of random numbers from a uniform distribution	G05FAF
	Generates a vector of random numbers from...	G05FBF
Set up reference vector for	**generating** pseudo-random integers, binomial distribution	G05EDF
Set up reference vector for	**generating** pseudo-random integers, hypergeometric distribution	G05EFF
Set up reference vector for	**generating** pseudo-random integers, negative binomial distribution	G05EEF
Set up reference vector for	**generating** pseudo-random integers, Poisson distribution	G05ECF
Set up reference vector for	**generating** pseudo-random integers, uniform distribution	G05EBF
Save state of random number	**generating** routines	G05CFF
Restore state of random number	**generating** routines	G05CGF
Initialise random number	**generating** routines to give non-repeatable sequence	G05CCF
Initialise random number	**generating** routines to give repeatable sequence	G05CBF
Selection of basic algorithm random number	**generator** or Wichmann–Hill algorithm generators for subsequent...	G05ZAF
...integration of function defined by data values,	**Gill–Miller** method	D01GAF
Performs the χ^2	**goodness** of fit test, for standard continuous distributions	G08CGF
	Goodness of fit tests	G08
Unconstrained minimum, pre-conditioned conjugate	**gradient** algorithm, function of several variables using...	E04DGF
Estimate (using numerical differentiation)	**gradient** and/or Hessian of a function	E04XAF
Real sparse symmetric linear systems, pre-conditioned conjugate	**gradient** or Lanczos	F11GBF
Real sparse symmetric linear systems, pre-conditioned conjugate	**gradient** or Lanczos, threadsafe	F11GEF
Solution of real sparse symmetric linear system, conjugate	**gradient/Lanczos** method, Jacobi or SSOR preconditioner (Black Box)	F11JEF
Solution of complex sparse Hermitian linear system, conjugate	**gradient/Lanczos** method, Jacobi or SSOR preconditioner (Black Box)	F11JSF
Solution of real sparse symmetric linear system, conjugate	**gradient/Lanczos** method, preconditioner computed by F11JAF...	F11JCF
Solution of complex sparse Hermitian linear system, conjugate	**gradient/Lanczos** method, preconditioner computed by F11JNF...	F11JQF
	Gram–Schmidt orthogonalisation of n vectors of order m	F05AAF
Extract	**grid** data from D03RBF	D03RZF
Check initial	**grid** data in D03RBF	D03RYF
Computes test statistic for equality of within-	**group** covariance matrices and matrices for discriminant analysis	G03DAF
Computes Mahalanobis squared distances for	**group** or pooled variance-covariance matrices (for use after G03DAF)	G03DBF
...for parameters of the Normal distribution from	**grouped** and/or censored data	G07BBF
Allocates observations to	**groups** according to selected rules (for use after G03DAF)	G03DCF
	Hankel functions $H^{(j)}_{\nu+a}(z)$, $j = 1, 2$, real $a \geq 0$,...	S17DLF
	Hard fail	P01
Fits Cox's proportional	**hazard** model	G12BAF
Creates the risk sets associated with the Cox proportional	**hazards** model for fixed covariates	G12ZAF
Elliptic PDE,	**Helmholtz** equation, three-dimensional Cartesian co-ordinates	D03FAF
Interpolating functions, monotonicity-preserving, piecewise cubic	**Hermite**, one variable	E01BEF
Matrix-vector product, complex	**Hermitian** band matrix	F06SDF
...Frobenius norm, largest absolute element, complex	**Hermitian** band matrix	F06UEF
Unitary reduction of complex	**Hermitian** band matrix to real symmetric tridiagonal form	F08HSF
All eigenvalues and optionally all eigenvectors of complex	**Hermitian** band matrix, using divide and conquer	F08HQF
Single one-dimensional real and	**Hermitian** complex discrete Fourier transform, using...	C06PAF
Multiple one-dimensional real and	**Hermitian** complex discrete Fourier transforms, using...	C06PPF
Multiple one-dimensional real and	**Hermitian** complex discrete Fourier transforms, using...	C06PQF
Single one-dimensional	**Hermitian** discrete Fourier transform, extra workspace...	C06FBF
Single one-dimensional	**Hermitian** discrete Fourier transform, no extra workspace	C06EBF
Multiple one-dimensional	**Hermitian** discrete Fourier transforms	C06FQF
Bunch–Kaufman factorization of complex	**Hermitian** indefinite matrix	F07MRF
Estimate condition number of complex	**Hermitian** indefinite matrix, matrix already factorized by F07MRF	F07MUF
Inverse of complex	**Hermitian** indefinite matrix, matrix already factorized by F07MRF	F07MWF
Estimate condition number of complex	**Hermitian** indefinite matrix, matrix already factorized by F07PRF,...	F07PUF
Inverse of complex	**Hermitian** indefinite matrix, matrix already factorized by F07PRF,...	F07PWF
Bunch–Kaufman factorization of complex	**Hermitian** indefinite matrix, packed storage	F07PRF
Refined solution with error bounds of complex	**Hermitian** indefinite system of linear equations,...	F07MVF
Solution of complex	**Hermitian** indefinite system of linear equations,...	F07MSF
Solution of complex	**Hermitian** indefinite system of linear equations,...	F07PSF
Refined solution with error bounds of complex	**Hermitian** indefinite system of linear equations,...	F07PVF
Solution of complex sparse	**Hermitian** linear system, conjugate gradient/Lanczos method,...	F11JSF
Solution of complex sparse	**Hermitian** linear system, conjugate gradient/Lanczos method,...	F11JQF
Apply complex similarity rotation to 2 by 2	**Hermitian** matrix	F06CHF
Matrix-vector product, complex	**Hermitian** matrix	F06SCF
Rank-1 update, complex	**Hermitian** matrix	F06SPF
Rank-2 update, complex	**Hermitian** matrix	F06SRF
...Frobenius norm, largest absolute element, complex	**Hermitian** matrix	F06UCF
Rank-k update of complex	**Hermitian** matrix	F06ZPF
Rank-2k update of complex	**Hermitian** matrix	F06ZRF
...generated by applying SSOR to complex sparse	**Hermitian** matrix	F11JRF
Unitary similarity transformation of	**Hermitian** matrix as a sequence of plane rotations	F06TMF
All eigenvalues and eigenvectors of complex	**Hermitian** matrix (Black Box)	F02HAF
Selected eigenvalues and eigenvectors of complex	**Hermitian** matrix (Black Box)	F02HCF
Complex sparse	**Hermitian** matrix, incomplete Cholesky factorization	F11JNF
Matrix-matrix product, one complex	**Hermitian** matrix, one complex rectangular matrix	F06ZCF

...Frobenius norm, largest absolute element, complex	**Hermitian** matrix, packed storage	F06UDF
All eigenvalues and optionally all eigenvectors of complex	**Hermitian** matrix, packed storage, using divide and conquer	F08GQF
Complex sparse	**Hermitian** matrix reorder routine	F11ZPF
Unitary reduction of complex	**Hermitian** matrix to real symmetric tridiagonal form	F08FSF
Unitary reduction of complex	**Hermitian** matrix to real symmetric tridiagonal form, packed storage	F08GSF
All eigenvalues and optionally all eigenvectors of complex	**Hermitian** matrix, using divide and conquer	F08FQF
...symmetric tridiagonal matrix, reduced from complex	**Hermitian** matrix, using implicit QL or QR	F08JSF
Complex sparse	**Hermitian** matrix vector multiply	F11XSF
Matrix-vector product, complex	**Hermitian** packed matrix	F06SEF
Rank-1 update, complex	**Hermitian** packed matrix	F06SQF
Rank-2 update, complex	**Hermitian** packed matrix	F06SSF
Cholesky factorization of complex	**Hermitian** positive-definite band matrix	F07HRF
Computes a split Cholesky factorization of complex	**Hermitian** positive-definite band matrix A	F08UTF
Estimate condition number of complex	**Hermitian** positive-definite band matrix,...	F07HUF
Refined solution with error bounds of complex	**Hermitian** positive-definite band system of linear equations,...	F07HVF
Solution of complex	**Hermitian** positive-definite band system of linear equations,...	F07HSF
Cholesky factorization of complex	**Hermitian** positive-definite matrix	F07FRF
...positive-definite tridiagonal matrix, reduced from complex	**Hermitian** positive-definite matrix	F08JUF
Estimate condition number of complex	**Hermitian** positive-definite matrix,...	F07FUF
Inverse of complex	**Hermitian** positive-definite matrix,...	F07FWF
Estimate condition number of complex	**Hermitian** positive-definite matrix,...	F07GUF
Inverse of complex	**Hermitian** positive-definite matrix,...	F07GWF
Cholesky factorization of complex	**Hermitian** positive-definite matrix, packed storage	F07GRF
Refined solution with error bounds of complex	**Hermitian** positive-definite system of linear equations,...	F07FVF
Solution of complex	**Hermitian** positive-definite system of linear equations,...	F07FSF
Solution of complex	**Hermitian** positive-definite system of linear equations,...	F07GSF
Refined solution with error bounds of complex	**Hermitian** positive-definite system of linear equations,...	F07GVF
Complex conjugate of	**Hermitian** sequence	C06GBF
Complex conjugate of multiple	**Hermitian** sequences	C06GQF
...Fourier transform, using complex data format for	**Hermitian** sequences	C06PAF
Convert	**Hermitian** sequences to general complex sequences	C06GSF
Reduction of complex	**Hermitian-definite** banded generalized eigenproblem $Ax = \lambda Bx$...	F08USF
Reduction to standard form of complex	**Hermitian-definite** generalized eigenproblem $Ax = \lambda Bx$,...	F08SSF
Reduction to standard form of complex	**Hermitian-definite** generalized eigenproblem $Ax = \lambda Bx$,...	F08TSF
All eigenvalues and eigenvectors of complex	**Hermitian-definite** generalized problem (Black Box)	F02HDF
Orthogonal reduction of real general matrix to upper	**Hessenberg** form	F08NEF
Unitary reduction of complex general matrix to upper	**Hessenberg** form	F08NSF
Generate orthogonal transformation matrix from reduction to	**Hessenberg** form determined by F08NEF	F08NFF
Apply orthogonal transformation matrix from reduction to	**Hessenberg** form determined by F08NEF	F08NGF
Generate unitary transformation matrix from reduction to	**Hessenberg** form determined by F08NSF	F08NTF
Apply unitary transformation matrix from reduction to	**Hessenberg** form determined by F08NSF	F08NUF
QR or RQ factorization by sequence of plane rotations, real upper	**Hessenberg** matrix	F06QRF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real	**Hessenberg** matrix	F06RMF
...by sequence of plane rotations, complex upper	**Hessenberg** matrix	F06TRF
...Frobenius norm, largest absolute element, complex	**Hessenberg** matrix	F06UMF
Selected right and/or left eigenvectors of real upper	**Hessenberg** matrix by inverse iteration	F08PKF
Selected right and/or left eigenvectors of complex upper	**Hessenberg** matrix by inverse iteration	F08PXF
Compute upper	**Hessenberg** matrix by sequence of plane rotations,...	F06TVF
Compute upper	**Hessenberg** matrix by sequence of plane rotations,...	F06QVF
Eigenvalues and Schur factorization of complex upper	**Hessenberg** matrix reduced from complex general matrix	F08PSF
Eigenvalues and Schur factorization of real upper	**Hessenberg** matrix reduced from real general matrix	F08PEF
Estimate (using numerical differentiation) gradient and/or	**Hessian** of a function	E04XAF
Check user's routine for calculating	**Hessian** of a sum of squares	E04YBF
Two-way analysis of variance,	**hierarchical** classification, subgroups of unequal size	G04AGF
	Hierarchical cluster analysis	G03ECF
...weight function $1/(x - c)$, Cauchy principal value (	**Hilbert** transform)	D01AQF
...basic algorithm random number generator or Wichmann–	**Hill** algorithm generators for subsequent calls to G05 routines	G05ZAF
Computes a five-point summary (median,	**hinges** and extremes)	G01ALF
Lineprinter	**histogram** of one variable	G01AJF
Modified	**HLL** Riemann solver for Euler equations in conservative form,...	D03PWF
Calculates a robust estimation of a correlation matrix,	**Huber's** weight function	G02HKF
Set up reference vector for generating pseudo-random integers,	**hypergeometric** distribution	G05EFF
	Hypergeometric distribution function	G01BLF
Multi-dimensional Gaussian quadrature over	**hyper-rectangle**	D01FBF
Multi-dimensional adaptive quadrature over	**hyper-rectangle**	D01FCF
Multi-dimensional quadrature over	**hyper-rectangle**, Monte Carlo method	D01GBF
Multi-dimensional adaptive quadrature over	**hyper-rectangle**, multiple integrands	D01EAF
...matrix, reduced from real symmetric matrix using	**implicit** QL or QR	F08JEF
...reduced from complex Hermitian matrix, using	**implicit** QL or QR	F08JSF
	Implicit/algebraic ODEs, stiff IVP, banded Jacobian...	D02NHF
	Implicit/algebraic ODEs, stiff IVP, full Jacobian (comprehensive)	D02NGF
	Implicit/algebraic ODEs, stiff IVP (reverse communication,...	D02NNF
	Implicit/algebraic ODEs, stiff IVP, sparse Jacobian (comprehensive)	D02NJF
Multivariate time series, noise spectrum, bounds,	**impulse** response function and its standard error	G13CGF
Real sparse symmetric matrix,	**incomplete** Cholesky factorization	F11JAF
Complex sparse Hermitian matrix,	**incomplete** Cholesky factorization	F11JNF
Solution of linear system involving	**incomplete** Cholesky preconditioning matrix generated by F11JAF	F11JBF
Solution of complex linear system involving	**incomplete** Cholesky preconditioning matrix generated by F11JNF	F11JPF
	Incomplete Gamma functions $P(a, x)$ and $Q(a, x)$	S14BAF
Real sparse nonsymmetric linear systems,	**incomplete** LU factorization	F11DAF
Complex sparse non-Hermitian linear systems,	**incomplete** LU factorization	F11DNF
Solution of linear system involving	**incomplete** LU preconditioning matrix generated by F11DAF	F11DBF
Solution of complex linear system involving	**incomplete** LU preconditioning matrix generated by F11DNF	F11DPF
Bunch–Kaufman factorization of real symmetric	**indefinite** matrix	F07MDF
Bunch–Kaufman factorization of complex Hermitian	**indefinite** matrix	F07MRF
Estimate condition number of real symmetric	**indefinite** matrix, matrix already factorized by F07MDF	F07MGF
Inverse of real symmetric	**indefinite** matrix, matrix already factorized by F07MDF	F07MJF
Estimate condition number of complex Hermitian	**indefinite** matrix, matrix already factorized by F07MRF	F07MUF
Inverse of complex Hermitian	**indefinite** matrix, matrix already factorized by F07MRF	F07MWF
Estimate condition number of real symmetric	**indefinite** matrix, matrix already factorized by F07PDF,...	F07PGF
Inverse of real symmetric	**indefinite** matrix, matrix already factorized by F07PDF,...	F07PJF
Estimate condition number of complex Hermitian	**indefinite** matrix, matrix already factorized by F07PRF,...	F07PUF
Inverse of complex Hermitian	**indefinite** matrix, matrix already factorized by F07PRF,...	F07PWF
Bunch–Kaufman factorization of real symmetric	**indefinite** matrix, packed storage	F07PDF
Bunch–Kaufman factorization of complex Hermitian	**indefinite** matrix, packed storage	F07PRF
Refined solution with error bounds of real symmetric	**indefinite** system of linear equations, multiple right-hand sides	F07MHF
Refined solution with error bounds of complex Hermitian	**indefinite** system of linear equations, multiple right-hand sides	F07MVF
Solution of real symmetric	**indefinite** system of linear equations, multiple right-hand sides,...	F07MEF
Solution of complex Hermitian	**indefinite** system of linear equations, multiple right-hand sides,...	F07MSF
Solution of real symmetric	**indefinite** system of linear equations, multiple right-hand sides,...	F07PEF

Solution of complex Hermitian	**indefinite** system of linear equations, multiple right-hand sides,...	F07PSF
Refined solution with error bounds of real symmetric	**indefinite** system of linear equations, multiple right-hand sides,...	F07PHF
Refined solution with error bounds of complex Hermitian	**indefinite** system of linear equations, multiple right-hand sides,...	F07PVF
	Index, complex vector element with largest absolute value	F06JMF
	Index, real vector element with largest absolute value	F06JLF
Computes cluster	**indicator** variable (for use after G03ECF)	G03EJF
Return value of error	**indicator/terminate** with error message	P01ABF
L_1-approximation by general linear function subject to linear	**inequality** constraints	E02GBF
One-dimensional quadrature, adaptive, infinite or semi-	**infinite** interval	D01AMF
One-dimensional quadrature, adaptive, infinite or semi-	**infinite** interval	D01AMF
One-dimensional quadrature, adaptive, semi-	**infinite** interval, weight function $\cos(\omega x)$ or $\sin(\omega x)$	D01ASF
One-dimensional quadrature, adaptive,	**infinite** or semi-infinite interval	D01AMF
One-dimensional quadrature, adaptive,	**infinite** or semi-infinite interval	D01AMF
...Sturm–Liouville problem, regular/singular system, finite/	**infinite** range, eigenvalue and eigenfunction, user-specified break-points	D02KEF
...Sturm–Liouville problem, regular/singular system, finite/	**infinite** range, eigenvalue only, user-specified break-points	D02KDF
Bounded	**Influence** See Robust	
Calculates standardized residuals and	**influence** statistics	G02FAF
Real inner product added to	**initial** value, basic/additional precision	X03AAF
Complex inner product added to	**initial** value, basic/additional precision	X03ABF
Matrix	**initialisation**, complex rectangular matrix	F06THF
Matrix	**initialisation**, real rectangular matrix	F06QHF
	Initialise random number generating routines to give non-repeatable...	G05CCF
	Initialise random number generating routines to give repeatable...	G05CBF
Real	**inner** product added to initial value, basic/additional precision	X03AAF
Complex	**inner** product added to initial value, basic/additional precision	X03ABF
Multivariate time series, estimation of multi-	**input** model	G13BEF
...series, update state set for forecasting from multi-	**input** model	G13BGF
Multivariate time series, forecasting from state set of multi-	**input** model	G13BHF
...set and forecasts from fully specified multi-	**input** model	G13BJF
	Input output utilities	X04
The largest representable	**integer**	X02BBF
...rectangular matrix, permutations represented by an	**integer** array	F06QJF
...rectangular matrix, permutations represented by an	**integer** array	F06VJF
	Integer LP problem (dense)	H02BBF
Pseudo-random	**integer**, Poisson distribution	G05DRF
	Integer programming solution, supplies further information on...	H02BZF
Evaluation of fitted cubic spline, definite	**integral**	E02BDF
Dawson's	**integral**	S15AFF
Fresnel	**integral** $C(x)$	S20ADF
Exponential	**integral** $E_1(x)$	S13AAF
Linear non-singular Fredholm	**integral** equation, second kind, smooth kernel	D05ABF
Linear non-singular Fredholm	**integral** equation, second kind, split kernel	D05AAF
Degenerate symmetrised elliptic	**integral** of 1st kind $R_C(x, y)$	S21BAF
Symmetrised elliptic	**integral** of 1st kind $R_F(x, y, z)$	S21BBF
Symmetrised elliptic	**integral** of 2nd kind $R_D(x, y, z)$	S21BCF
Symmetrised elliptic	**integral** of 3rd kind $R_J(x, y, z, r)$	S21BDF
	Integral of fitted polynomial in Chebyshev series form	E02AJF
Interpolated values, interpolant computed by E01BEF, definite	**integral**, one variable	E01BHF
Cosine	**integral** $\mathrm{Ci}(x)$	S13ACF
Sine	**integral** $\mathrm{Si}(x)$	S13ADF
Fresnel	**integral** $S(x)$	S20ACF
...finite interval with provision for indefinite	**integrals**	D01ARF
Numerical	**integration**	D01
ODEs, IVP,	**integration** diagnostics for D02PCF and D02PDF	D02PYF
One-dimensional quadrature,	**integration** of function defined by data values, Gill–Miller method	D01GAF
ODEs, IVP, Runge–Kutta method,	**integration** over one step	D02PDF
...Runge–Kutta method, until function of solution is zero,	**integration** over range with intermediate output (simple driver)	D02BJF
ODEs, IVP, Runge–Kutta method,	**integration** over range with output	D02PCF
ODEs, IVP,	**integrator** diagnostics, for use with D02M–N routines	D02NYF
ODEs, IVP, set-up for continuation calls to	**integrator**, for use with D02M–N routines	D02NZF
...problem, shooting and matching technique, allowing	**interior** matching point, general parameters to be determined	D02AGF
ODEs, IVP, interpolation for D02M–N routines, natural	**interpolant**	D02MZF
ODEs, IVP, interpolation for D02M–N routines, natural	**interpolant**	D02XJF
ODEs, IVP, interpolation for D02M–N routines, C_1	**interpolant**	D02XKF
Interpolated values,	**interpolant** computed by E01BEF, definite integral, one variable	E01BHF
Interpolated values,	**interpolant** computed by E01BEF, function and first derivative,...	E01BGF
Interpolated values,	**interpolant** computed by E01BEF, function only, one variable	E01BFF
Interpolated values, evaluate rational	**interpolant** computed by E01RAF, one variable	E01RBF
Interpolated values, evaluate	**interpolant** computed by E01SAF, two variables	E01SBF
Interpolated values, evaluate	**interpolant** computed by E01SEF, two variables	E01SFF
Interpolating functions, polynomial	**interpolant**, data may include derivative values, one variable	E01AEF
Interpolating functions, cubic spline	**interpolant**, one variable	E01BAF
Interpolating functions, rational	**interpolant**, one variable	E01RAF
	Interpolated values, Aitken's technique, unequally spaced data,...	E01AAF
	Interpolated values, evaluate interpolant computed by E01SAF,...	E01SBF
	Interpolated values, evaluate interpolant computed by E01SEF,...	E01SFF
	Interpolated values, evaluate rational interpolant computed by...	E01RBF
	Interpolated values, Everett's formula, equally spaced data,...	E01ABF
	Interpolated values, interpolant computed by E01BEF,...	E01BHF
	Interpolated values, interpolant computed by E01BEF,...	E01BGF
	Interpolated values, interpolant computed by E01BEF,...	E01BFF
	Interpolating functions, cubic spline interpolant, one variable	E01BAF
	Interpolating functions, fitting bicubic spline, data on rectangular...	E01DAF
	Interpolating functions, method of Renka and Cline, two variables	E01SAF
	Interpolating functions, modified Shepard's method, two variables	E01SEF
	Interpolating functions, modified Shepard's method, two variables	E01SGF
	Interpolating functions, monotonicity-preserving, piecewise cubic...	E01BEF
	Interpolating functions, polynomial interpolant, data...	E01AEF
	Interpolating functions, rational interpolant, one variable	E01RAF
Least-squares polynomial fit, special data points (including	**interpolation**)	E02AFF
Least-squares curve cubic spline fit (including	**interpolation**)	E02BAF
Second-order ODEs, IVP,	**interpolation** for D02LAF	D02LZF
ODEs, IVP,	**interpolation** for D02M–N routines, C_1 interpolant	D02XKF
ODEs, IVP,	**interpolation** for D02M–N routines, natural interpolant	D02MZF
ODEs, IVP,	**interpolation** for D02M–N routines, natural interpolant	D02XJF
ODEs, IVP,	**interpolation** for D02PDF	D02PXF

ODEs, IVP,	**interpolation** for D02QFF or D02QGF	D02QZF
ODEs, general nonlinear boundary value problem,	**interpolation** for D02TKF	D02TYF
PDEs, spatial	**interpolation** with D03PCF, D03PEF, D03PFF, D03PHF,...	D03PZF
PDEs, spatial	**interpolation** with D03PDF or D03PJF	D03PYF
...update, one iteration of Kalman filter, time-	**invariant**, square root covariance filter	G13EBF
...real matrix, form orthonormal basis of right	**invariant** subspace for selected eigenvalues,...	F08QGF
...complex matrix, form orthonormal basis of right	**invariant** subspace for selected eigenvalues,...	F08QUF
Pseudo-	**inverse** and rank of real m by n matrix ($m \geq n$)	F01BLF
	Inverse distributions	G01F
Eigenvector of generalized real banded eigenproblem by	**inverse** iteration	F02SDF
...eigenvectors of real upper Hessenberg matrix by	**inverse** iteration	F08PKF
...eigenvectors of complex upper Hessenberg matrix by	**inverse** iteration	F08PXF
Selected eigenvectors of real symmetric tridiagonal matrix by	**inverse** iteration, storing eigenvectors in complex array	F08JXF
Selected eigenvectors of real symmetric tridiagonal matrix by	**inverse** iteration, storing eigenvectors in real array	F08JKF
Evaluate	**inverse** Laplace transform as computed by C06LBF	C06LCF
	Inverse Laplace transform, Crump's method	C06LAF
	Inverse Laplace transform, modified Weeks' method	C06LBF
	Inverse of complex Hermitian indefinite matrix,...	F07MWF
	Inverse of complex Hermitian indefinite matrix,...	F07PWF
	Inverse of complex Hermitian positive-definite matrix,...	F07FWF
	Inverse of complex Hermitian positive-definite matrix,...	F07GWF
	Inverse of complex matrix, matrix already factorized by F07ARF	F07AWF
	Inverse of complex symmetric matrix, matrix already factorized...	F07NWF
	Inverse of complex symmetric matrix, matrix already factorized...	F07QWF
	Inverse of complex triangular matrix	F07TWF
	Inverse of complex triangular matrix, packed storage	F07UWF
	Inverse of real matrix, matrix already factorized by F07ADF	F07AJF
	Inverse of real symmetric indefinite matrix,...	F07MJF
	Inverse of real symmetric indefinite matrix,...	F07PJF
	Inverse of real symmetric positive-definite matrix	F01ADF
	Inverse of real symmetric positive-definite matrix,...	F07FJF
	Inverse of real symmetric positive-definite matrix,...	F07GJF
	Inverse of real symmetric positive-definite matrix...	F01ABF
	Inverse of real triangular matrix	F07TJF
	Inverse of real triangular matrix, packed storage	F07UJF
	Invert a permutation	M01ZAF
Interpret MPSX data file defining	**IP** or LP problem, optimize and print solution	H02BFF
Convert MPSX data file defining	**IP** or LP problem to format required by H02BBF or E04MFF	H02BUF
Print	**IP** or LP solutions with user specified names for rows and columns	H02BVF
...by SIP, five-point two-dimensional molecule,	**iterate** to convergence	D03EBF
...SIP for seven-point three-dimensional molecule,	**iterate** to convergence	D03ECF
...SIP, five-point two-dimensional molecule, one	**iteration**	D03UAF
...SIP, seven-point three-dimensional molecule, one	**iteration**	D03UBF
Eigenvector of generalized real banded eigenproblem by inverse	**iteration**	F02SDF
...eigenvectors of real upper Hessenberg matrix by inverse	**iteration**	F08PKF
...of complex upper Hessenberg matrix by inverse	**iteration**	F08PXF
Combined measurement and time update, one	**iteration** of Kalman filter, time-invariant, square root covariance filter	G13EBF
Combined measurement and time update, one	**iteration** of Kalman filter, time-varying, square root covariance filter	G13EAF
...real symmetric tridiagonal matrix by inverse	**iteration**, storing eigenvectors in complex array	F08JXF
...real symmetric tridiagonal matrix by inverse	**iteration**, storing eigenvectors in real array	F08JKF
Inverse of real symmetric positive-definite matrix using	**iterative** refinement	F01ABF
...equations with multiple right-hand sides using	**iterative** refinement (Black Box)	F04ABF
...equations with multiple right-hand sides using	**iterative** refinement (Black Box)	F04AEF
...in n unknowns, rank $= n$, $m \geq n$ using	**iterative** refinement (Black Box)	F04AMF
...simultaneous linear equations, one right-hand side using	**iterative** refinement (Black Box)	F04ASF
...simultaneous linear equations, one right-hand side using	**iterative** refinement (Black Box)	F04ATF
...positive-definite simultaneous linear equations using	**iterative** refinement (coefficient matrix already factorized by F03AEF)	F04AFF
Solution of real simultaneous linear equations using	**iterative** refinement (coefficient matrix already factorized by F03AFF)	F04AHF
ODEs,	**IVP**, Adams method, until function of solution is zero,...	D02CJF
ODEs,	**IVP**, Adams method with root-finding (forward communication,...	D02QFF
ODEs,	**IVP**, Adams method with root-finding (reverse communication,...	D02QGF
Explicit ODEs, stiff	**IVP**, banded Jacobian (comprehensive)	D02NCF
Implicit/algebraic ODEs, stiff	**IVP**, banded Jacobian (comprehensive)	D02NHF
ODEs,	**IVP**, BDF method, set-up for D02M–N routines	D02NVF
ODEs, stiff	**IVP**, BDF method, until function of solution is zero,...	D02EJF
ODEs,	**IVP**, Blend method, set-up for D02M–N routines	D02NWF
ODEs,	**IVP**, DASSL method, set-up for D02M–N routines	D02MVF
Second-order ODEs,	**IVP**, diagnostics for D02LAF	D02LYF
ODEs,	**IVP**, diagnostics for D02QFF and D02QGF	D02QXF
ODEs,	**IVP**, error assessment diagnostics for D02PCF and D02PDF	D02PZF
ODEs,	**IVP**, for use with D02M–N routines, banded Jacobian,...	D02NTF
ODEs,	**IVP**, for use with D02M–N routines, full Jacobian,...	D02NSF
ODEs,	**IVP**, for use with D02M–N routines, sparse Jacobian, enquiry routine	D02NRF
ODEs,	**IVP**, for use with D02M–N routines, sparse Jacobian,...	D02NUF
Explicit ODEs, stiff	**IVP**, full Jacobian (comprehensive)	D02NBF
Implicit/algebraic ODEs, stiff	**IVP**, full Jacobian (comprehensive)	D02NGF
ODEs,	**IVP**, integration diagnostics for D02PCF and D02PDF	D02PYF
ODEs,	**IVP**, integrator diagnostics, for use with D02M–N routines	D02NYF
Second-order ODEs,	**IVP**, interpolation for D02LAF	D02LZF
ODEs,	**IVP**, interpolation for D02M–N routines, C_1 interpolant	D02XKF
ODEs,	**IVP**, interpolation for D02M–N routines, natural interpolant	D02MZF
ODEs,	**IVP**, interpolation for D02M–N routines, natural interpolant	D02XJF
ODEs,	**IVP**, interpolation for D02PDF	D02PXF
ODEs,	**IVP**, interpolation for D02QFF or D02QGF	D02QZF
ODEs,	**IVP**, resets end of range for D02PDF	D02PWF
Explicit ODEs, stiff	**IVP** (reverse communication, comprehensive)	D02NMF
Implicit/algebraic ODEs, stiff	**IVP** (reverse communication, comprehensive)	D02NNF
ODEs,	**IVP**, root-finding diagnostics for D02QFF and D02QGF	D02QYF
ODEs,	**IVP**, Runge–Kutta method, integration over one step	D02PDF
ODEs,	**IVP**, Runge–Kutta method, integration over range with output	D02PCF
ODEs,	**IVP**, Runge–Kutta method, until function of solution is zero,...	D02BJF
ODEs,	**IVP**, Runge–Kutta–Merson method, until...	D02BGF
ODEs,	**IVP**, Runge–Kutta–Merson method, until...	D02BHF
Second-order ODEs,	**IVP**, Runge–Kutta–Nystrom method	D02LAF
ODEs,	**IVP**, set-up for continuation calls to integrator,...	D02NZF
Second-order ODEs,	**IVP**, set-up for D02LAF	D02LXF
ODEs,	**IVP**, set-up for D02PCF and D02PDF	D02PVF
ODEs,	**IVP**, set-up for D02QFF and D02QGF	D02QWF
Explicit ODEs, stiff	**IVP**, sparse Jacobian (comprehensive)	D02NDF
Implicit/algebraic ODEs, stiff	**IVP**, sparse Jacobian (comprehensive)	D02NJF
ODEs,	**IVP**, sparse Jacobian, linear algebra diagnostics,...	D02NXF
ODEs,	**IVP**, weighted norm of local error estimate for D02M–N routines	D02ZAF
...linear system, RGMRES, CGS or Bi-CGSTAB method,	**Jacobi** or SSOR preconditioner (Black Box)	F11DEF
...system, RGMRES, CGS, Bi-CGSTAB or TFQMR method,	**Jacobi** or SSOR preconditioner (Black Box)	F11DSF
...linear system, conjugate gradient/Lanczos method,	**Jacobi** or SSOR preconditioner (Black Box)	F11JEF
...linear system, conjugate gradient/Lanczos method,	**Jacobi** or SSOR preconditioner (Black Box)	F11JSF
Generate real	**Jacobi** plane rotation	F06BEF

Real sparse nonsymmetric linear systems, line	**Jacobi** preconditioner	F11DKF
Explicit ODEs, stiff IVP, full	**Jacobian** (comprehensive)	D02NBF
Explicit ODEs, stiff IVP, banded	**Jacobian** (comprehensive)	D02NCF
Explicit ODEs, stiff IVP, sparse	**Jacobian** (comprehensive)	D02NDF
Implicit/algebraic ODEs, stiff IVP, full	**Jacobian** (comprehensive)	D02NGF
Implicit/algebraic ODEs, stiff IVP, banded	**Jacobian** (comprehensive)	D02NHF
Implicit/algebraic ODEs, stiff IVP, sparse	**Jacobian** (comprehensive)	D02NJF
	Jacobian elliptic functions sn, cn and dn	S21CAF
ODEs, IVP, for use with D02M–N routines, sparse	**Jacobian**, enquiry routine	D02NRF
ODEs, IVP, sparse	**Jacobian**, linear algebra diagnostics, for use with D02M–N routines	D02NXF
ODEs, IVP, for use with D02M–N routines, full	**Jacobian**, linear algebra set-up	D02NSF
ODEs, IVP, for use with D02M–N routines, banded	**Jacobian**, linear algebra set-up	D02NTF
ODEs, IVP, for use with D02M–N routines, sparse	**Jacobian**, linear algebra set-up	D02NUF
Check user's routine for calculating	**Jacobian** of first derivatives	E04YAF
	K**-means** cluster analysis	G03EFF
Combined measurement and time update, one iteration of	**Kalman** filter, time-invariant, square root covariance filter	G13EBF
Combined measurement and time update, one iteration of	**Kalman** filter, time-varying, square root covariance filter	G13EAF
Computes	**Kaplan–Meier** (product-limit) estimates of survival probabilities	G12AAF
Bunch–	**Kaufman** factorization of complex Hermitian indefinite matrix	F07MRF
Bunch–	**Kaufman** factorization of complex Hermitian indefinite matrix,...	F07PRF
Bunch–	**Kaufman** factorization of complex symmetric matrix	F07NRF
Bunch–	**Kaufman** factorization of complex symmetric matrix,...	F07QRF
Bunch–	**Kaufman** factorization of real symmetric indefinite matrix	F07MDF
Bunch–	**Kaufman** factorization of real symmetric indefinite matrix,...	F07PDF
General system of first-order PDEs, method of lines,	**Keller** box discretisation, one space variable	D03PEF
General system of first-order PDEs, coupled DAEs, method of lines,	**Keller** box discretisation, one space variable	D03PKF
General system of first-order PDEs, coupled DAEs, method of lines,	**Keller** box discretisation, remeshing, one space variable	D03PRF
	Kelvin function bei x	S19ABF
	Kelvin function ber x	S19AAF
	Kelvin function kei x	S19ADF
	Kelvin function ker x	S19ACF
	Kendall's coefficient of concordance	G08DAF
	Kendall/Spearman non-parametric rank correlation coefficients,...	G02BPF
	Kendall/Spearman non-parametric rank correlation coefficients,...	G02BRF
	Kendall/Spearman non-parametric rank correlation coefficients,...	G02BNF
	Kendall/Spearman non-parametric rank correlation coefficients,...	G02BQF
	Kendall/Spearman non-parametric rank correlation coefficients,...	G02BSF
Linear non-singular Fredholm integral equation, second kind, split	**kernel**	D05AAF
...Fredholm integral equation, second kind, smooth	**kernel**	D05ABF
Kernel density estimate using Gaussian	**kernel**	G10BAF
	Kernel density estimate using Gaussian kernel	G10BAF
Least-squares cubic spline curve fit, automatic	**knot** placement	E02BEF
Least-squares surface fit by bicubic splines with automatic	**knot** placement, data on rectangular grid	E02DCF
Least-squares surface fit by bicubic splines with automatic	**knot** placement, scattered data	E02DDF
Computes probabilities for the one-sample	**Kolmogorov–Smirnov** distribution	G01EYF
Computes probabilities for the two-sample	**Kolmogorov–Smirnov** distribution	G01EZF
Performs the two-sample	**Kolmogorov–Smirnov** test	G08CDF
Performs the one-sample	**Kolmogorov–Smirnov** test for a user-supplied distribution	G08CCF
Performs the one-sample	**Kolmogorov–Smirnov** test for standard distributions	G08CBF
	Korobov optimal coefficients for use in D01GCF or D01GDF,...	D01GYF
	Korobov optimal coefficients for use in D01GCF or D01GDF,...	D01GZF
	Kruskal–Wallis one-way analysis of variance on k samples...	G08AFF
Mean, variance, skewness,	**kurtosis**, etc, one variable, from frequency table	G01ADF
Mean, variance, skewness,	**kurtosis**, etc, one variable, from raw data	G01AAF
Mean, variance, skewness,	**kurtosis**, etc, two variables, from raw data	G01ABF
ODEs, IVP, Runge–	**Kutta** method, integration over one step	D02PDF
ODEs, IVP, Runge–	**Kutta** method, integration over range with output	D02PCF
ODEs, IVP, Runge–	**Kutta** method, until function of solution is zero,...	D02BJF
ODEs, IVP, Runge–	**Kutta–Merson** method, until a component attains given value...	D02BGF
ODEs, IVP, Runge–	**Kutta–Merson** method, until function of solution is zero...	D02BHF
Second-order ODEs, IVP, Runge–	**Kutta–Nystrom** method	D02LAF
Multivariate time series, sample partial	**lag** correlation matrices, χ^2 statistics and significance levels	G13DNF
...using rectangular, Bartlett, Tukey or Parzen	**lag** window	G13CAF
...using rectangular, Bartlett, Tukey or Parzen	**lag** window	G13CCF
All zeros of complex polynomial, modified	**Laguerre** method	C02AFF
All zeros of real polynomial, modified	**Laguerre** method	C02AGF
...linear systems, pre-conditioned conjugate gradient or	**Lanczos**	F11GBF
...linear systems, pre-conditioned conjugate gradient or	**Lanczos**, threadsafe	F11GEF
...sparse symmetric linear system, conjugate gradient/	**Lanczos** method, Jacobi or SSOR preconditioner (Black Box)	F11JEF
...sparse Hermitian linear system, conjugate gradient/	**Lanczos** method, Jacobi or SSOR preconditioner (Black Box)	F11JSF
...sparse symmetric linear system, conjugate gradient/	**Lanczos** method, preconditioner computed by F11JAF (Black Box)	F11JCF
...sparse Hermitian linear system, conjugate gradient/	**Lanczos** method, preconditioner computed by F11JNF (Black Box)	F11JQF
	LAPACK	F07/F08
Evaluate inverse	**Laplace** transform as computed by C06LBF	C06LCF
Inverse	**Laplace** transform, Crump's method	C06LAF
Inverse	**Laplace** transform, modified Weeks' method	C06LBF
Elliptic PDE,	**Laplace's** equation, two-dimensional arbitrary domain	D03EAF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex band matrix	F06UBF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex general matrix	F06UAF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex Hermitian band matrix	F06UEF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex Hermitian matrix	F06UCF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex Hermitian matrix, packed storage	F06UDF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex Hessenberg matrix	F06UMF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex symmetric band matrix	F06UHF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex symmetric matrix	F06UFF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex symmetric matrix, packed storage	F06UGF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex trapezoidal/triangular matrix	F06UJF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex triangular band matrix	F06ULF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, complex triangular matrix, packed storage	F06UKF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real band matrix	F06RBF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real general matrix	F06RAF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real Hessenberg matrix	F06RMF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real symmetric band matrix	F06REF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real symmetric matrix	F06RCF
1-norm, ∞-norm, Frobenius norm,	**largest** absolute element, real symmetric matrix, packed storage	F06RDF

1-norm, ∞-norm, Frobenius norm, **largest** absolute element, real trapezoidal/triangular matrix F06RJF
1-norm, ∞-norm, Frobenius norm, **largest** absolute element, real triangular band matrix F06RLF
1-norm, ∞-norm, Frobenius norm, **largest** absolute element, real triangular matrix, packed storage F06RKF
Index, real vector element with **largest** absolute value F06JLF
Index, complex vector element with **largest** absolute value F06JMF
Elements of real vector with **largest** and smallest absolute value F06FLF
The **largest** permissible argument for sin and cos X02AHF
The **largest** positive model number X02ALF
The **largest** representable integer X02BBF

Contingency table, **latent** variable model for binary data G11SAF

LDL^T factorization of real symmetric positive-definite... F01MCF

Constructs a stem and **leaf** plot G01ARF

nth-order linear ODEs, boundary value problem, collocation and **least-squares** D02TGF
Real general Gauss–Markov linear model (including weighted **least-squares**) F04JLF
Complex general Gauss–Markov linear model (including weighted **least-squares**) F04KLF
Least-squares cubic spline curve fit, automatic knot placement E02BEF
Least-squares curve cubic spline fit (including interpolation) E02BAF
Least-squares curve fit, by polynomials, arbitrary data points E02ADF
Least-squares (if rank = n) or minimal least-squares... F04JGF
Least-squares (if rank = n) or minimal **least-squares** (if rank < n) solution of m real equations... F04JGF
Least-squares polynomial fit, special data points... E02AFF
Least-squares polynomial fit, values and derivatives may be... E02AGF
Equality-constrained real linear **least-squares** problem F04JMF
Equality-constrained complex linear **least-squares** problem F04KMF
Convex QP problem or linearly-constrained linear **least-squares** problem (dense) E04NCF
Sparse linear **least-squares** problem, m real equations in n unknowns F04QAF
Covariance matrix for nonlinear **least-squares** problem (unconstrained) E04YCF
Covariance matrix for linear **least-squares** problems, m real equations in n unknowns F04YAF
ODEs, boundary value problem, collocation and **least-squares**, single nth-order linear equation D02JAF
Least-squares solution of m real equations in n unknowns,... F04AMF
Minimal **least-squares** solution of m real equations in n unknowns,... F04JAF
Minimal **least-squares** solution of m real equations in n unknowns,... F04JDF
Least-squares surface fit, bicubic splines E02DAF
Least-squares surface fit by bicubic splines with automatic... E02DCF
Least-squares surface fit by bicubic splines with automatic... E02DDF
Least-squares surface fit by polynomials, data on lines E02CAF
ODEs, boundary value problem, collocation and **least-squares**, system of first-order linear equations D02JBF

...matrices, χ^2 statistics and significance **levels** G13DNF

Computes maximum **likelihood** estimates for parameters of the Normal distribution... G07BBF
Computes maximum **likelihood** estimates for parameters of the Weibull distribution G07BEF
Computes maximum **likelihood** estimates of the parameters of a factor analysis model,... G03CAF

Computes Kaplan–Meier (product-**limit**) estimates of survival probabilities G12AAF

ODEs, IVP, sparse Jacobian, **linear** algebra diagnostics, for use with D02M–N routines D02NXF
ODEs, IVP, for use with D02M–N routines, full Jacobian, **linear** algebra set-up D02NSF
ODEs, IVP, for use with D02M–N routines, banded Jacobian, **linear** algebra set-up D02NTF
ODEs, IVP, for use with D02M–N routines, sparse Jacobian, **linear** algebra set-up D02NUF
Basic **Linear** Algebra Subprograms F06
Computes lower tail probability for a **linear** combination of (central) χ^2 variables G01JDF
Computes probability for a positive **linear** combination of χ^2 variables G01JCF
...collocation and least-squares, single nth-order **linear** equation D02JAF
...collocation and least-squares, system of first-order **linear** equations D02JBF
Solution of real sparse simultaneous **linear** equations (coefficient matrix already factorized) F04AXF
Solution of real tridiagonal simultaneous **linear** equations (coefficient matrix already factorized by F01LEF) F04LEF
Solution of real almost block diagonal simultaneous **linear** equations (coefficient matrix already factorized by F01LHF) F04LHF
...positive-definite variable-bandwidth simultaneous **linear** equations (coefficient matrix already factorized by F01MCF) F04MCF
Solution of real symmetric positive-definite simultaneous **linear** equations (coefficient matrix already factorized by F03AEF) F04AGF
Solution of real simultaneous **linear** equations (coefficient matrix already factorized by F03AFF) F04AJF
Refined solution with error bounds of real system of **linear** equations, multiple right-hand sides F07AHF
Refined solution with error bounds of complex system of **linear** equations, multiple right-hand sides F07AVF
Refined solution with error bounds of real band system of **linear** equations, multiple right-hand sides F07BHF
Refined solution with error bounds of complex band system of **linear** equations, multiple right-hand sides F07BVF
...of real symmetric positive-definite system of **linear** equations, multiple right-hand sides F07FHF
...complex Hermitian positive-definite system of **linear** equations, multiple right-hand sides F07FVF
...real symmetric positive-definite band system of **linear** equations, multiple right-hand sides F07HHF
...complex Hermitian positive-definite band system of **linear** equations, multiple right-hand sides F07HVF
...bounds of real symmetric indefinite system of **linear** equations, multiple right-hand sides F07MHF
...bounds of complex Hermitian indefinite system of **linear** equations, multiple right-hand sides F07MVF
Refined solution with error bounds of complex symmetric system of **linear** equations, multiple right-hand sides F07NVF
Solution of real triangular system of **linear** equations, multiple right-hand sides F07TEF
Error bounds for solution of real triangular system of **linear** equations, multiple right-hand sides F07THF
Solution of complex triangular system of **linear** equations, multiple right-hand sides F07TSF
Error bounds for solution of complex triangular system of **linear** equations, multiple right-hand sides F07TVF
Solution of real band triangular system of **linear** equations, multiple right-hand sides F07VEF
Error bounds for solution of real band triangular system of **linear** equations, multiple right-hand sides F07VHF
Solution of complex band triangular system of **linear** equations, multiple right-hand sides F07VSF
Error bounds for solution of complex band triangular system of **linear** equations, multiple right-hand sides F07VVF
Solution of real system of **linear** equations, multiple right-hand sides,... F07AEF
Solution of complex system of **linear** equations, multiple right-hand sides,... F07ASF
Solution of real band system of **linear** equations, multiple right-hand sides,... F07BEF
Solution of complex band system of **linear** equations, multiple right-hand sides,... F07BSF
Solution of real symmetric positive-definite system of **linear** equations, multiple right-hand sides,... F07FEF
Solution of complex Hermitian positive-definite system of **linear** equations, multiple right-hand sides,... F07FSF
Solution of real symmetric positive-definite system of **linear** equations, multiple right-hand sides,... F07GEF
Solution of complex Hermitian positive-definite system of **linear** equations, multiple right-hand sides,... F07GSF
Solution of real symmetric positive-definite band system of **linear** equations, multiple right-hand sides,... F07HEF
Solution of complex Hermitian positive-definite band system of **linear** equations, multiple right-hand sides,... F07HSF
Solution of real symmetric indefinite system of **linear** equations, multiple right-hand sides,... F07MEF
Solution of complex Hermitian indefinite system of **linear** equations, multiple right-hand sides,... F07MSF
Solution of complex symmetric system of **linear** equations, multiple right-hand sides,... F07NSF
Solution of real symmetric indefinite system of **linear** equations, multiple right-hand sides,... F07PEF
Solution of complex Hermitian indefinite system of **linear** equations, multiple right-hand sides,... F07PSF
Solution of complex symmetric system of **linear** equations, multiple right-hand sides,... F07QSF
...of real symmetric positive-definite system of **linear** equations, multiple right-hand sides, packed storage F07GHF
...complex Hermitian positive-definite system of **linear** equations, multiple right-hand sides, packed storage F07GVF
...bounds of real symmetric indefinite system of **linear** equations, multiple right-hand sides, packed storage F07PHF
...bounds of complex Hermitian indefinite system of **linear** equations, multiple right-hand sides, packed storage F07PVF
Refined solution with error bounds of complex symmetric system of **linear** equations, multiple right-hand sides, packed storage F07QVF
Solution of real triangular system of **linear** equations, multiple right-hand sides, packed storage F07UEF
Error bounds for solution of real triangular system of **linear** equations, multiple right-hand sides, packed storage F07UHF
Solution of complex triangular system of **linear** equations, multiple right-hand sides, packed storage F07USF
Error bounds for solution of complex triangular system of **linear** equations, multiple right-hand sides, packed storage F07UVF
Solution of real simultaneous **linear** equations, one right-hand side (Black Box) F04ARF
Solution of real tridiagonal simultaneous **linear** equations, one right-hand side (Black Box) F04EAF
...symmetric positive-definite tridiagonal simultaneous **linear** equations, one right-hand side (Black Box) F04FAF
Solution of real symmetric positive-definite simultaneous **linear** equations, one right-hand side using iterative... F04ASF
Solution of real simultaneous **linear** equations, one right-hand side using iterative... F04ATF
Solution of real symmetric positive-definite simultaneous **linear** equations using iterative refinement (coefficient matrix... F04AFF

Solution of real simultaneous **linear** equations using iterative refinement (coefficient matrix... F04AHF
Solution of real simultaneous **linear** equations with multiple right-hand sides (Black Box) F04AAF
Solution of real symmetric positive-definite banded simultaneous **linear** equations with multiple right-hand sides (Black Box) F04ACF
Solution of complex simultaneous **linear** equations with multiple right-hand sides (Black Box) F04ADF
Solution of real symmetric positive-definite simultaneous **linear** equations with multiple right-hand sides using... F04ABF
Solution of real simultaneous **linear** equations with multiple right-hand sides using... F04AEF
L_1-approximation by general **linear** function E02GAF
L_∞-approximation by general **linear** function E02GCF
L_1-approximation by general **linear** function subject to linear inequality constraints E02GBF
L_1-approximation by general linear function subject to **linear** inequality constraints E02GBF
Equality-constrained real **linear** least-squares problem F04JMF
Equality-constrained complex **linear** least-squares problem F04KMF
Convex QP problem or linearly-constrained **linear** least-squares problem (dense) E04NCF
Sparse **linear** least-squares problem, m real equations in n unknowns F04QAF
Covariance matrix for **linear** least-squares problems, m real equations in n unknowns F04YAF
Computes estimable function of a generalized **linear** model and its standard error G02GNF
Estimates and standard errors of parameters of a general **linear** model for given constraints G02GKF
Real general Gauss–Markov **linear** model (including weighted least-squares) F04JLF
Complex general Gauss–Markov **linear** model (including weighted least-squares) F04KLF
Fits a generalized **linear** model with binomial errors G02GBF
Fits a generalized **linear** model with gamma errors G02GDF
Fits a generalized **linear** model with Normal errors G02GAF
Fits a generalized **linear** model with Poisson errors G02GCF
Linear non-singular Fredholm integral equation, second kind,... D05ABF
Linear non-singular Fredholm integral equation, second kind,... D05AAF
nth-order **linear** ODEs, boundary value problem, collocation and least-squares D02TGF
Estimates of **linear** parameters and general linear regression model... G02DDF
...difference technique with deferred correction, general **linear** problem D02GBF
Multiple **linear** regression, from correlation coefficients, with constant term G02CGF
Multiple **linear** regression, from correlation-like coefficients, without constant... G02CHF
Fits a general (multiple) **linear** regression model G02DAF
Add/delete an observation to/from a general **linear** regression model G02DCF
Add a new variable to a general **linear** regression model G02DEF
Delete a variable from a general **linear** regression model G02DFF
Computes estimable function of a general **linear** regression model and its standard error G02DNF
Fits a **linear** regression model by forward selection G02EEF
Estimates and standard errors of parameters of a general **linear** regression model for given constraints G02DKF
Fits a general **linear** regression model for new dependent variable G02DGF
Estimates of linear parameters and general **linear** regression model from updated model G02DDF
Service routines for multiple **linear** regression, re-order elements of vectors and matrices G02CFF
Service routines for multiple **linear** regression, select elements from vectors and matrices G02CEF
Simple **linear** regression with constant term, missing values G02CCF
Simple **linear** regression with constant term, no missing values G02CAF
Simple **linear** regression without constant term, missing values G02CDF
Simple **linear** regression without constant term, no missing values G02CBF
Computes residual sums of squares for all possible **linear** regressions for a set of independent variables G02EAF
Solution of complex sparse non-Hermitian **linear** system, RGMRES, CGS, Bi-CGSTAB or TFQMR method,... F11DSF
Solution of real sparse nonsymmetric **linear** system, RGMRES, CGS or Bi-CGSTAB method,... F11DEF
Solution of real sparse symmetric **linear** system, conjugate gradient/Lanczos method,... F11JEF
Solution of complex sparse Hermitian **linear** system, conjugate gradient/Lanczos method,... F11JSF
Solution of real sparse symmetric **linear** system, conjugate gradient/Lanczos method,... F11JCF
Solution of complex sparse Hermitian **linear** system, conjugate gradient/Lanczos method,... F11JQF
Solution of **linear** system involving incomplete Cholesky preconditioning... F11JBF
Solution of complex **linear** system involving incomplete Cholesky preconditioning... F11JPF
Solution of **linear** system involving incomplete LU preconditioning... F11DBF
Solution of complex **linear** system involving incomplete LU preconditioning... F11DPF
Solution of **linear** system involving preconditioning matrix generated by... F11JRF
Solution of **linear** system involving preconditioning matrix generated by... F11DRF
Solution of **linear** system involving pre-conditioning matrix generated by... F11DDF
Solution of **linear** system involving preconditioning matrix generated by... F11JDF
Solution of complex sparse non-Hermitian **linear** system, RGMRES, CGS, Bi-CGSTAB or TFQMR method,... F11DQF
Solution of real sparse nonsymmetric **linear** system, RGMRES, CGS or Bi-CGSTAB method,... F11DCF
Real sparse nonsymmetric **linear** systems, diagnostic for F11BBF F11BCF
Real sparse nonsymmetric **linear** systems, diagnostic for F11BEF F11BFF
Complex sparse non-Hermitian **linear** systems, diagnostic for F11BSF F11BTF
Real sparse symmetric **linear** systems, diagnostic for F11GBF F11GCF
Real sparse symmetric **linear** systems, diagnostic for F11GEF F11GFF
Real sparse nonsymmetric **linear** systems, incomplete LU factorization F11DAF
Complex sparse non-Hermitian **linear** systems, incomplete LU factorization F11DNF
Real sparse nonsymmetric **linear** systems, line Jacobi preconditioner F11DKF
Real sparse symmetric **linear** systems, pre-conditioned conjugate gradient or Lanczos F11GBF
Real sparse symmetric **linear** systems, pre-conditioned conjugate gradient or Lanczos,... F11GEF
Real sparse nonsymmetric **linear** systems, preconditioned RGMRES, CGS, Bi-CGSTAB... F11BEF
Complex sparse non-Hermitian **linear** systems, preconditioned RGMRES, CGS, Bi-CGSTAB... F11BSF
Real sparse nonsymmetric **linear** systems, preconditioned RGMRES, CGS or Bi-CGSTAB F11BBF
Real sparse nonsymmetric **linear** systems, set-up for F11BBF F11BAF
Real sparse nonsymmetric **linear** systems, set-up for F11BEF F11BDF
Complex sparse non-Hermitian **linear** systems, set-up for F11BSF F11BRF
Real sparse symmetric **linear** systems, set-up for F11GBF F11GAF
Real sparse symmetric **linear** systems, set-up for F11GEF F11GDF

Convex QP problem or **linearly-constrained** linear least-squares problem (dense) E04NCF

Lineprinter histogram of one variable G01AJF
Lineprinter scatterplot of one variable against Normal scores G01AHF
Lineprinter scatterplot of two variables G01AGF

Least-squares surface fit by polynomials, data on **lines** E02CAF
General system of parabolic PDEs, method of **lines**, Chebyshev C^0 collocation, one space variable D03PDF
General system of parabolic PDEs, coupled DAEs, method of **lines**, Chebyshev C^0 collocation, one space variable D03PJF
General system of parabolic PDEs, method of **lines**, finite differences, one space variable D03PCF
General system of parabolic PDEs, coupled DAEs, method of **lines**, finite differences, one space variable D03PHF
General system of parabolic PDEs, coupled DAEs, method of **lines**, finite differences, remeshing, one space variable D03PPF
General system of second-order PDEs, method of **lines**, finite differences, remeshing, two space variables,... D03RAF
General system of second-order PDEs, method of **lines**, finite differences, remeshing, two space variables,... D03RBF
General system of first-order PDEs, method of **lines**, Keller box discretisation, one space variable D03PEF
General system of first-order PDEs, coupled DAEs, method of **lines**, Keller box discretisation, one space variable D03PKF
General system of first-order PDEs, coupled DAEs, method of **lines**, Keller box discretisation, remeshing, one space variable D03PRF
...source terms in conservative form, method of **lines**, upwind scheme using numerical flux function based on... D03PFF
...in conservative form, coupled DAEs, method of **lines**, upwind scheme using numerical flux function based on... D03PLF
...in conservative form, coupled DAEs, method of **lines**, upwind scheme using numerical flux function based on... D03PSF

Generate real elementary reflection, **LINPACK** style F06FSF
Apply real elementary reflection, **LINPACK** style F06FUF

Second-order Sturm–**Liouville** problem, regular system, finite range, eigenvalue only D02KAF
Second-order Sturm–**Liouville** problem, regular/singular system, finite/infinite range,... D02KEF
Second-order Sturm–**Liouville** problem, regular/singular system, finite/infinite range,... D02KDF

Computes orthogonal rotations for **loading** matrix, generalized orthomax criterion G03BAF

...parameters of a factor analysis model, factor **loadings**, communalities and residual correlations G03CAF

ODEs, IVP, weighted norm of **local** error estimate for D02M–N routines D02ZAF

Robust estimation, M-estimates for **location** and scale parameters, standard weight functions G07DBF

Robust estimation, M-estimates for	**location** and scale parameters, user-defined weight functions	G07DCF
	Location tests	G08
	Log Gamma function	S14ABF
...function with end-point singularities of algebraico-	**logarithmic** type	D01APF
Pseudo-random real numbers,	**logistic** distribution	G05DCF
Pseudo-random real numbers,	**log-normal** distribution	G05DEF
Computes upper and	**lower** tail probabilities and probability density function for...	G01EEF
Computes	**lower** tail probability for a linear combination of (central) χ^2 variables	G01JDF
	LP or QP problem (sparse)	E04NKF
Integer	**LP** or QP problem (sparse)	H02CEF
Converts MPSX data file defining	**LP** or QP problem to format required by E04NKF	E04MZF
	LP problem (dense)	E04MFF
Integer	**LP** problem (dense)	H02BBF
Interpret MPSX data file defining IP or	**LP** problem, optimize and print solution	H02BFF
Convert MPSX data file defining IP or	**LP** problem to format required by H02BBF or E04MFF	H02BUF
Print IP or	**LP** solutions with user specified names for rows and columns	H02BVF
Form all or part of orthogonal Q from	LQ factorization determined by F08AHF	F08AJF
Form all or part of unitary Q from	LQ factorization determined by F08AVF	F08AWF
	LQ factorization of complex general rectangular matrix	F08AVF
	LQ factorization of real general rectangular matrix	F08AHF
Real sparse nonsymmetric linear systems, incomplete	LU factorization	F11DAF
Complex sparse non-Hermitian linear systems, incomplete	LU factorization	F11DNF
	LU factorization and determinant of real matrix	F03AFF
	LU factorization of complex m by n band matrix	F07BRF
	LU factorization of complex m by n matrix	F07ARF
	LU factorization of real almost block diagonal matrix	F01LHF
	LU factorization of real m by n band matrix	F07BDF
	LU factorization of real m by n matrix	F07ADF
	LU factorization of real sparse matrix	F01BRF
	LU factorization of real sparse matrix with known sparsity pattern	F01BSF
	LU factorization of real tridiagonal matrix	F01LEF
Solution of linear system involving incomplete	LU preconditioning matrix generated by F11DAF	F11DBF
Solution of complex linear system involving incomplete	LU preconditioning matrix generated by F11DNF	F11DPF
	Machine Constants	X02
The	**machine** precision	X02AJF
Computes	**Mahalanobis** squared distances for group or pooled...	G03DBF
Computes the exact probabilities for the	**Mann–Whitney** U statistic, no ties in pooled sample	G08AJF
Computes the exact probabilities for the	**Mann–Whitney** U statistic, ties in pooled sample	G08AKF
Performs the	**Mann–Whitney** U test on two independent samples	G08AHF
Computes	**marginal** tables for multiway table computed by G11BAF or G11BBF	G11BCF
Real general Gauss–	**Markov** linear model (including weighted least-squares)	F04JLF
Complex general Gauss–	**Markov** linear model (including weighted least-squares)	F04KLF
Performs the Wilcoxon one-sample (	**matched** pairs) signed rank test	G08AGF
Friedman two-way analysis of variance on k	**matched** samples	G08AEF
ODEs, boundary value problem, shooting and	**matching**, boundary values to be determined	D02HAF
ODEs, boundary value problem, shooting and	**matching**, general parameters to be determined	D02HBF
...shooting and matching technique, allowing interior	**matching** point, general parameters to be determined	D02AGF
ODEs, boundary value problem, shooting and	**matching** technique, allowing interior matching point,...	D02AGF
ODEs, boundary value problem, shooting and	**matching** technique, subject to extra algebraic equations,...	D02SAF
	Mathematical Constants	X01
	Maximization	E04/H02
Computes	**maximum** likelihood estimates for parameters of the Normal...	G07BBF
Computes	**maximum** likelihood estimates for parameters of the Weibull...	G07BEF
Computes	**maximum** likelihood estimates of the parameters of a factor...	G03CAF
The	**maximum** number of decimal digits that can be represented	X02BEF
Computes a trimmed and winsorized	**mean** of a single sample with estimates of their variance	G07DDF
Computes quantities needed for range-	**mean** or standard deviation-mean plot	G13AUF
Computes quantities needed for range-mean or standard deviation-	**mean** plot	G13AUF
	Mean, variance, skewness, kurtosis, etc, one variable,...	G01ADF
	Mean, variance, skewness, kurtosis, etc, one variable, from raw data	G01AAF
	Mean, variance, skewness, kurtosis, etc, two variables, from raw data	G01ABF
Computes sum of squares for contrast between	**means**	G04DAF
Analysis of variance, general row and column design, treatment	**means** and standard errors	G04BCF
...block or completely randomized design, treatment	**means** and standard errors	G04BBF
Analysis of variance, complete factorial design, treatment	**means** and standard errors	G04CAF
Computes t-test statistic for a difference in	**means** between two Normal populations, confidence interval	G07CAF
K-	**means** cluster analysis	G03EFF
Computes confidence intervals for differences between	**means** computed by G04BBF or G04BCF	G04DBF
Combined	**measurement** and time update, one iteration of Kalman filter,...	G13EBF
Combined	**measurement** and time update, one iteration of Kalman filter,...	G13EAF
Robust estimation, median,	**median** absolute deviation, robust standard deviation	G07DAF
Computes a five-point summary (	**median**, hinges and extremes)	G01ALF
Robust estimation,	**median**, median absolute deviation, robust standard deviation	G07DAF
Compute smoothed data sequence using running	**median** smoothers	G10CAF
	Median test on two samples of unequal size	G08ACF
Computes Kaplan–	**Meier** (product-limit) estimates of survival probabilities	G12AAF
ODEs, IVP, Runge–Kutta–	**Merson** method, until a component attains given value (simple driver)	D02BGF
ODEs, IVP, Runge–Kutta–	**Merson** method, until function of solution is zero (simple driver)	D02BHF
Evaluation of fitted bicubic spline at a	**mesh** of points	E02DFF
Performs non-	**metric** (ordinal) multidimensional scaling	G03FCF
Performs principal co-ordinate analysis, classical	**metric** scaling	G03FAF
...integration of function defined by data values, Gill–	**Miller** method	D01GAF
Computes reciprocal of	**Mills'** Ratio	G01MBF
Least-squares (if rank = n) or	**minimal** least-squares (if rank < n) solution of m real equations...	F04JGF
	Minimal least-squares solution of m real equations in n unknowns,...	F04JAF
	Minimal least-squares solution of m real equations in n unknowns,...	F04JDF

	Minimax curve fit by polynomials	E02ACF
	Minimization	E04/H02
	Minimum, function of one variable, using first derivative	E04BBF
	Minimum, function of one variable using function values only	E04ABF
	Minimum, function of several variables, modified Newton algorithm,...	E04LBF
	Minimum, function of several variables, modified Newton algorithm,...	E04LYF
	Minimum, function of several variables, modified Newton algorithm,...	E04KDF
	Minimum, function of several variables, modified Newton algorithm,...	E04KZF
	Minimum, function of several variables, quasi-Newton algorithm,...	E04KYF
	Minimum, function of several variables, quasi-Newton algorithm,...	E04JYF
	Minimum, function of several variables, sequential QP method,...	E04UCF
	Minimum, function of several variables, sequential QP method,...	E04UFF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04GDF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04GZF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04FCF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04FYF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04HEF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04HYF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04GBF
Unconstrained	**minimum** of a sum of squares, combined Gauss–Newton and...	E04GYF
	Minimum of a sum of squares, nonlinear constraints,...	E04UNF
Unconstrained	**minimum**, pre-conditioned conjugate gradient algorithm,...	E04DGF
Unconstrained	**minimum**, simplex algorithm, function of several variables using...	E04CCF
Computes probability for von	**Mises** distribution	G01ERF
Generates a vector of pseudo-random variates from von	**Mises** distribution	G05FSF
Pearson product-moment correlation coefficients, all variables, no	**missing** values	G02BAF
...coefficients, all variables, casewise treatment of	**missing** values	G02BBF
...coefficients, all variables, pairwise treatment of	**missing** values	G02BCF
Correlation-like coefficients (about zero), all variables, no	**missing** values	G02BDF
...(about zero), all variables, casewise treatment of	**missing** values	G02BEF
...(about zero), all variables, pairwise treatment of	**missing** values	G02BFF
...correlation coefficients, subset of variables, no	**missing** values	G02BGF
...coefficients, subset of variables, casewise treatment of	**missing** values	G02BHF
...coefficients, subset of variables, pairwise treatment of	**missing** values	G02BJF
Correlation-like coefficients (about zero), subset of variables, no	**missing** values	G02BKF
...zero), subset of variables, casewise treatment of	**missing** values	G02BLF
...zero), subset of variables, pairwise treatment of	**missing** values	G02BMF
...correlation coefficients, pairwise treatment of	**missing** values	G02BSF
Simple linear regression with constant term, no	**missing** values	G02CAF
Simple linear regression without constant term, no	**missing** values	G02CBF
Simple linear regression with constant term,	**missing** values	G02CCF
Simple linear regression without constant term,	**missing** values	G02CDF
Kendall/Spearman non-parametric rank correlation coefficients, no	**missing** values, overwriting input data	G02BNF
...correlation coefficients, casewise treatment of	**missing** values, overwriting input data	G02BPF
Kendall/Spearman non-parametric rank correlation coefficients, no	**missing** values, preserving input data	G02BQF
...correlation coefficients, casewise treatment of	**missing** values, preserving input data	G02BRF
Fits a general (multiple) linear regression	**model**	G02DAF
Add/delete an observation to/from a general linear regression	**model**	G02DCF
...general linear regression model from updated	**model**	G02DDF
Add a new variable to a general linear regression	**model**	G02DEF
Delete a variable from a general linear regression	**model**	G02DFF
Set up reference vector for univariate ARMA time series	**model**	G05EGF
Generate next term from reference vector for ARMA time series	**model**	G05EWF
Generates a realisation of a multivariate time series from a VARMA	**model**	G05HDF
Fits Cox's proportional hazard	**model**	G12BAF
Univariate time series, preliminary estimation, seasonal ARIMA	**model**	G13ADF
...forecasts, from fully specified seasonal ARIMA	**model**	G13AJF
Multivariate time series, filtering (pre-whitening) by an ARIMA	**model**	G13BAF
Multivariate time series, filtering by a transfer function	**model**	G13BBF
Multivariate time series, preliminary estimation of transfer function	**model**	G13BDF
Multivariate time series, estimation of multi-input	**model**	G13BEF
...update state set for forecasting from multi-input	**model**	G13BGF
Multivariate time series, forecasting from state set of multi-input	**model**	G13BHF
...and forecasts from fully specified multi-input	**model**	G13BJF
Multivariate time series, estimation of VARMA	**model**	G13DCF
Computes estimable function of a general linear regression	**model** and its standard error	G02DNF
Computes estimable function of a generalized linear	**model** and its standard error	G02GNF
Fits a linear regression	**model** by forward selection	G02EEF
Univariate time series, estimation, seasonal ARIMA	**model** (comprehensive)	G13AEF
Univariate time series, estimation, seasonal ARIMA	**model** (easy-to-use)	G13AFF
...estimates of the parameters of a factor analysis	**model**, factor loadings, communalities and residual correlations	G03CAF
Contingency table, latent variable	**model** for binary data	G11SAF
Creates the risk sets associated with the Cox proportional hazards	**model** for fixed covariates	G12ZAF
...of parameters of a general linear regression	**model** for given constraints	G02DKF
Estimates and standard errors of parameters of a general linear	**model** for given constraints	G02GKF
Fits a general linear regression	**model** for new dependent variable	G02DGF
Estimates of linear parameters and general linear regression	**model** from updated model	G02DDF
Real general Gauss–Markov linear	**model** (including weighted least-squares)	F04JLF
Complex general Gauss–Markov linear	**model** (including weighted least-squares)	F04KLF
The smallest positive	**model** number	X02AKF
The largest positive	**model** number	X02ALF
The floating-point	**model** parameter, b	X02BHF
The floating-point	**model** parameter $e_{\max}$	X02BLF
The floating-point	**model** parameter $e_{\min}$	X02BKF
The floating-point	**model** parameter, p	X02BJF
The floating-point	**model** parameter ROUNDS	X02DJF
Fits a generalized linear	**model** with binomial errors	G02GBF
Fits a generalized linear	**model** with gamma errors	G02GDF
Fits a generalized linear	**model** with Normal errors	G02GAF
Fits a generalized linear	**model** with Poisson errors	G02GCF
	Modified Bessel function $e^{-\lvert x\rvert}I_0(x)$	S18CEF
	Modified Bessel function $e^{-\lvert x\rvert}I_1(x)$	S18CFF
	Modified Bessel function $e^{x}K_0(x)$	S18CCF
	Modified Bessel function $e^{x}K_1(x)$	S18CDF
	Modified Bessel function $I_0(x)$	S18AEF
	Modified Bessel function $I_1(x)$	S18AFF
	Modified Bessel function $K_0(x)$	S18ACF
	Modified Bessel function $K_1(x)$	S18ADF
	Modified Bessel functions $I_{\nu+a}(z)$, real $a \geq 0$,...	S18DEF
	Modified Bessel functions $K_{\nu+a}(z)$, real $a \geq 0$,...	S18DCF
All zeros of complex polynomial,	**modified** Laguerre method	C02AFF
All zeros of real polynomial,	**modified** Laguerre method	C02AGF
Minimum, function of several variables,	**modified** Newton algorithm, simple bounds, using first and...	E04LBF
Minimum, function of several variables,	**modified** Newton algorithm, simple bounds, using first and...	E04LYF
Minimum, function of several variables,	**modified** Newton algorithm, simple bounds, using first derivatives...	E04KDF
Minimum, function of several variables,	**modified** Newton algorithm, simple bounds, using first derivatives...	E04KZF
...a sum of squares, combined Gauss–Newton and	**modified** Newton algorithm using first derivatives (comprehensive)	E04GDF
...a sum of squares, combined Gauss–Newton and	**modified** Newton algorithm using first derivatives (easy-to-use)	E04GZF
...a sum of squares, combined Gauss–Newton and	**modified** Newton algorithm using function values only (comprehensive)	E04FCF

...a sum of squares, combined Gauss–Newton and **modified** Newton algorithm using function values only (easy-to-use) E04FYF
...a sum of squares, combined Gauss–Newton and **modified** Newton algorithm, using second derivatives (comprehensive) E04HEF
...a sum of squares, combined Gauss–Newton and **modified** Newton algorithm, using second derivatives (easy-to-use) E04HYF
Interpolating functions, **modified** Shepard's method, two variables E01SEF
Interpolating functions, **modified** Shepard's method, two variables E01SGF
Inverse Laplace transform, **modified** Weeks' method C06LBF

Modulus of complex number A02ABF

...equations by SIP, five-point two-dimensional **molecule**, iterate to convergence D03EBF
...equations by SIP for seven-point three-dimensional **molecule**, iterate to convergence D03ECF
...equations by SIP, five-point two-dimensional **molecule**, one iteration D03UAF
...equations by SIP, seven-point three-dimensional **molecule**, one iteration D03UBF

Pearson product-**moment** correlation coefficients, all variables, casewise... G02BBF
Pearson product-**moment** correlation coefficients, all variables, no missing values G02BAF
Pearson product-**moment** correlation coefficients, all variables, pairwise... G02BCF
Pearson product-**moment** correlation coefficients, subset of variables, casewise... G02BHF
Pearson product-**moment** correlation coefficients, subset of variables, no missing values G02BGF
Pearson product-**moment** correlation coefficients, subset of variables, pairwise... G02BJF

Cumulants and **moments** of quadratic forms in Normal variables G01NAF
Moments of ratios of quadratic forms in Normal variables,... G01NBF

Interpolating functions, **monotonicity-preserving**, piecewise cubic Hermite, one variable E01BEF

Multi-dimensional quadrature over hyper-rectangle, **Monte** Carlo method D01GBF

Mood's and David's tests on two samples of unequal size G08BAF

Calculates the zeros of a vector autoregressive (or **moving** average) operator G13DXF

Interpret **MPSX** data file defining IP or LP problem, optimize and print... H02BFF
Convert **MPSX** data file defining IP or LP problem to format required by... H02BUF
Converts **MPSX** data file defining LP or QP problem to format required... E04MZF

Multi-dimensional adaptive quadrature over hyper-rectangle D01FCF
Multi-dimensional adaptive quadrature over hyper-rectangle,... D01EAF
Multi-dimensional complex discrete Fourier transform of... C06FJF
Multi-dimensional complex discrete Fourier transform of... C06PJF
One-dimensional complex discrete Fourier transform of **multi-dimensional** data C06FFF
Multi-dimensional complex discrete Fourier transform of **multi-dimensional** data C06FJF
One-dimensional complex discrete Fourier transform of **multi-dimensional** data (using complex data type) C06PFF
Multi-dimensional complex discrete Fourier transform of **multi-dimensional** data (using complex data type) C06PJF
Multi-dimensional Gaussian quadrature over hyper-rectangle D01FBF
Multi-dimensional quadrature, general product region,... D01GCF
Multi-dimensional quadrature, general product region,... D01GDF
Multi-dimensional quadrature over an n-simplex D01PAF
Multi-dimensional quadrature over an n-sphere, allowing for... D01JAF
Multi-dimensional quadrature over hyper-rectangle, Monte Carlo... D01GBF
Multi-dimensional quadrature, Sag–Szekeres method,... D01FDF

Elliptic PDE, solution of finite difference equations by a **multigrid** technique D03EDF

Multivariate time series, estimation of **multi-input** model G13BEF
Multivariate time series, update state set for forecasting from **multi-input** model G13BGF
Multivariate time series, forecasting from state set of **multi-input** model G13BHF
Multivariate time series, state set and forecasts from fully specified **multi-input** model G13BJF

Complex conjugate of **multiple** Hermitian sequences C06GQF
Multi-dimensional adaptive quadrature over hyper-rectangle, **multiple** integrands D01EAF
Multiple linear regression, from correlation coefficients,... G02CGF
Multiple linear regression, from correlation-like coefficients,... G02CHF
Fits a general (**multiple**) linear regression model G02DAF
Service routines for **multiple** linear regression, re-order elements of vectors and matrices G02CFF
Service routines for **multiple** linear regression, select elements from vectors and matrices G02CEF
Multiple one-dimensional complex discrete Fourier transforms C06FRF
Multiple one-dimensional complex discrete Fourier transforms... C06PRF
Multiple one-dimensional complex discrete Fourier transforms... C06PSF
Multiple one-dimensional Hermitian discrete Fourier transforms C06FQF
Multiple one-dimensional real and Hermitian complex... C06PPF
Multiple one-dimensional real and Hermitian complex... C06PQF
Multiple one-dimensional real discrete Fourier transforms C06FPF
...error bounds of real system of linear equations, **multiple** right-hand sides F07AHF
...bounds of complex system of linear equations, **multiple** right-hand sides F07AVF
...bounds of real band system of linear equations, **multiple** right-hand sides F07BHF
...bounds of complex band system of linear equations, **multiple** right-hand sides F07BVF
...positive-definite system of linear equations, **multiple** right-hand sides F07FHF
...positive-definite system of linear equations, **multiple** right-hand sides F07FVF
...positive-definite band system of linear equations, **multiple** right-hand sides F07HHF
...positive-definite band system of linear equations, **multiple** right-hand sides F07HVF
...symmetric indefinite system of linear equations, **multiple** right-hand sides F07MHF
...Hermitian indefinite system of linear equations, **multiple** right-hand sides F07MVF
...complex symmetric system of linear equations, **multiple** right-hand sides F07NVF
Solution of real triangular system of linear equations, **multiple** right-hand sides F07TEF
...of real triangular system of linear equations, **multiple** right-hand sides F07THF
Solution of complex triangular system of linear equations, **multiple** right-hand sides F07TSF
...complex triangular system of linear equations, **multiple** right-hand sides F07TVF
Solution of real band triangular system of linear equations, **multiple** right-hand sides F07VEF
...real band triangular system of linear equations, **multiple** right-hand sides F07VHF
Solution of complex band triangular system of linear equations, **multiple** right-hand sides F07VSF
...complex band triangular system of linear equations, **multiple** right-hand sides F07VVF
Solution of real simultaneous linear equations with **multiple** right-hand sides (Black Box) F04AAF
...positive-definite banded simultaneous linear equations with **multiple** right-hand sides (Black Box) F04ACF
Solution of complex simultaneous linear equations with **multiple** right-hand sides (Black Box) F04ADF
Solves system of equations with **multiple** right-hand sides, complex triangular coefficient matrix F06ZJF
Solution of real system of linear equations, **multiple** right-hand sides, matrix already factorized by F07ADF F07AEF
Solution of complex system of linear equations, **multiple** right-hand sides, matrix already factorized by F07ARF F07ASF
Solution of real band system of linear equations, **multiple** right-hand sides, matrix already factorized by F07BDF F07BEF
Solution of complex band system of linear equations, **multiple** right-hand sides, matrix already factorized by F07BRF F07BSF
...positive-definite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07FDF F07FEF
...positive-definite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07FRF F07FSF
...positive-definite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07GDF,... F07GEF
...positive-definite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07GRF,... F07GSF
...positive-definite band system of linear equations, **multiple** right-hand sides, matrix already factorized by F07HDF F07HEF
...positive-definite band system of linear equations, **multiple** right-hand sides, matrix already factorized by F07HRF F07HSF
Solution of real symmetric indefinite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07MDF F07MEF
...Hermitian indefinite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07MRF F07MSF
Solution of complex symmetric system of linear equations, **multiple** right-hand sides, matrix already factorized by F07NRF F07NSF
Solution of real symmetric indefinite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07PDF,... F07PEF
...Hermitian indefinite system of linear equations, **multiple** right-hand sides, matrix already factorized by F07PRF,... F07PSF
Solution of complex symmetric system of linear equations, **multiple** right-hand sides, matrix already factorized by F07QRF,... F07QSF
...positive-definite system of linear equations, **multiple** right-hand sides, packed storage F07GHF
...positive-definite system of linear equations, **multiple** right-hand sides, packed storage F07GVF
...symmetric indefinite system of linear equations, **multiple** right-hand sides, packed storage F07PHF
...Hermitian indefinite system of linear equations, **multiple** right-hand sides, packed storage F07PVF
...complex symmetric system of linear equations, **multiple** right-hand sides, packed storage F07QVF

Solution of real triangular system of linear equations,	**multiple** right-hand sides, packed storage	F07UEF
...of real triangular system of linear equations,	**multiple** right-hand sides, packed storage	F07UHF
Solution of complex triangular system of linear equations,	**multiple** right-hand sides, packed storage	F07USF
...complex triangular system of linear equations,	**multiple** right-hand sides, packed storage	F07UVF
Solves system of equations with	**multiple** right-hand sides, real triangular coefficient matrix	F06YJF
...positive-definite simultaneous linear equations with	**multiple** right-hand sides using iterative refinement (Black Box)	F04ABF
Solution of real simultaneous linear equations with	**multiple** right-hand sides using iterative refinement (Black Box)	F04AEF
Multivariate time series,	**multiple** squared partial autocorrelations	G13DBF
Matrix	**multiplication**	F01CKF
Real sparse nonsymmetric matrix vector	**multiply**	F11XAF
Real sparse symmetric matrix vector	**multiply**	F11XEF
Complex sparse non-Hermitian matrix vector	**multiply**	F11XNF
Complex sparse Hermitian matrix vector	**multiply**	F11XSF
	Multiply complex vector by complex diagonal matrix	F06HCF
	Multiply complex vector by complex scalar	F06GDF
	Multiply complex vector by complex scalar, preserving input vector	F06HDF
	Multiply complex vector by real diagonal matrix	F06KCF
	Multiply complex vector by real scalar	F06JDF
	Multiply complex vector by real scalar, preserving input vector	F06KDF
	Multiply real vector by diagonal matrix	F06FCF
	Multiply real vector by scalar	F06EDF
	Multiply real vector by scalar, preserving input vector	F06FDF
Computes probabilities for the	**multivariate** Normal distribution	G01HBF
Set up reference vector for	**multivariate** Normal distribution	G05EAF
Pseudo-random	**multivariate** Normal vector from reference vector	G05EZF
	Multivariate time series, cross amplitude spectrum,...	G13CEF
	Multivariate time series, cross-correlations	G13BCF
	Multivariate time series, diagnostic checking of residuals,...	G13DSF
	Multivariate time series, differences and/or transforms...	G13DLF
	Multivariate time series, estimation of multi-input model	G13BEF
	Multivariate time series, estimation of VARMA model	G13DCF
	Multivariate time series, filtering by a transfer function model	G13BBF
	Multivariate time series, filtering (pre-whitening) by an ARIMA...	G13BAF
	Multivariate time series, forecasting from state set of multi-input...	G13BHF
	Multivariate time series, forecasts and their standard errors	G13DJF
Generates a realisation of a	**multivariate** time series from a VARMA model	G05HDF
	Multivariate time series, gain, phase, bounds, univariate and...	G13CFF
	Multivariate time series, multiple squared partial autocorrelations	G13DBF
	Multivariate time series, noise spectrum, bounds,...	G13CGF
	Multivariate time series, partial autoregression matrices	G13DPF
	Multivariate time series, preliminary estimation of...	G13BDF
	Multivariate time series, sample cross-correlation or...	G13DMF
	Multivariate time series, sample partial lag correlation matrices,...	G13DNF
	Multivariate time series, smoothed sample cross spectrum using...	G13CCF
	Multivariate time series, smoothed sample cross spectrum using...	G13CDF
	Multivariate time series, state set and forecasts from...	G13BJF
	Multivariate time series, update state set for forecasting from...	G13BGF
	Multivariate time series, updates forecasts and their standard errors	G13DKF
ODEs, IVP, interpolation for D02M–N routines,	**natural** interpolant	D02MZF
ODEs, IVP, interpolation for D02M–N routines,	**natural** interpolant	D02XJF
	Negate complex vector	F06HGF
	Negate real vector	F06FGF
Set up reference vector for generating pseudo-random integers,	**negative** binomial distribution	G05EEF
Pseudo-random real numbers, (**negative**) exponential distribution		G05DBF
Generates a vector of random numbers from an (**negative**) exponential distribution		G05FBF
Last non-**negligible** element of real vector		F06KLF
Minimum, function of several variables, modified	**Newton** algorithm, simple bounds, using first and...	E04LBF
Minimum, function of several variables, modified	**Newton** algorithm, simple bounds, using first and...	E04LYF
Minimum, function of several variables, modified	**Newton** algorithm, simple bounds, using first derivatives...	E04KDF
Minimum, function of several variables, quasi-	**Newton** algorithm, simple bounds, using first derivatives (easy-to-use)	E04KYF
Minimum, function of several variables, modified	**Newton** algorithm, simple bounds, using first derivatives (easy-to-use)	E04KZF
Minimum, function of several variables, quasi-	**Newton** algorithm, simple bounds, using function values only...	E04JYF
...of squares, combined Gauss–Newton and quasi-	**Newton** algorithm using first derivatives (comprehensive)	E04GBF
...squares, combined Gauss–Newton and modified	**Newton** algorithm using first derivatives (comprehensive)	E04GDF
...of squares, combined Gauss–Newton and quasi-	**Newton** algorithm, using first derivatives (easy-to-use)	E04GYF
...squares, combined Gauss–Newton and modified	**Newton** algorithm using first derivatives (easy-to-use)	E04GZF
...squares, combined Gauss–Newton and modified	**Newton** algorithm using function values only (comprehensive)	E04FCF
...squares, combined Gauss–Newton and modified	**Newton** algorithm using function values only (easy-to-use)	E04FYF
...squares, combined Gauss–Newton and modified	**Newton** algorithm, using second derivatives (comprehensive)	E04HEF
...squares, combined Gauss–Newton and modified	**Newton** algorithm, using second derivatives (easy-to-use)	E04HYF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm using...	E04GDF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm using...	E04GZF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm using function values only...	E04FCF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm using function values only...	E04FYF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm, using second derivatives...	E04HEF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and modified Newton algorithm, using second derivatives...	E04HYF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and quasi-Newton algorithm using first derivatives...	E04GBF
Unconstrained minimum of a sum of squares, combined Gauss–	**Newton** and quasi-Newton algorithm, using first derivatives...	E04GYF
	NLP problem (sparse)	E04UGF
Multivariate time series,	**noise** spectrum, bounds, impulse response function and...	G13CGF
One-dimensional quadrature,	**non-adaptive**, finite interval	D01BDF
One-dimensional quadrature,	**non-adaptive**, finite interval with provision for indefinite integrals	D01ARF
Computes probabilities for the	**non-central** beta distribution	G01GEF
Computes probabilities for the	**non-central** χ^2 distribution	G01GCF
Computes probabilities for the	**non-central** F-distribution	G01GDF
Computes probabilities for the	**non-central** Student's t-distribution	G01GBF
Solution of complex sparse	**non-Hermitian** linear system, RGMRES, CGS, Bi-CGSTAB or...	F11DSF
Solution of complex sparse	**non-Hermitian** linear system, RGMRES, CGS, Bi-CGSTAB or...	F11DQF
Complex sparse	**non-Hermitian** linear systems, diagnostic for F11BSF	F11BTF
Complex sparse	**non-Hermitian** linear systems, incomplete LU factorization	F11DNF
Complex sparse	**non-Hermitian** linear systems, preconditioned RGMRES, CGS,...	F11BSF
Complex sparse	**non-Hermitian** linear systems, set-up for F11BSF	F11BRF
...generated by applying SSOR to complex sparse	**non-Hermitian** matrix	F11DRF
Complex sparse	**non-Hermitian** matrix reorder routine	F11ZNF
Complex sparse	**non-Hermitian** matrix vector multiply	F11XNF
ODEs, general	**nonlinear** boundary value problem, collocation technique	D02TKF
ODEs, general	**nonlinear** boundary value problem, continuation facility for D02TKF	D02TXF
ODEs, general	**nonlinear** boundary value problem, diagnostics for D02TKF	D02TZF
ODEs, general	**nonlinear** boundary value problem, finite difference technique...	D02RAF
ODEs, general	**nonlinear** boundary value problem, interpolation for D02TKF	D02TYF
ODEs, general	**nonlinear** boundary value problem, set-up for D02TKF	D02TVF
Minimum of a sum of squares,	**nonlinear** constraints, sequential QP method, using function values...	E04UNF

Minimum, function of several variables, sequential QP method, **nonlinear** constraints, using function values and... E04UCF
Minimum, function of several variables, sequential QP method, **nonlinear** constraints, using function values and... E04UFF
Nonlinear convolution Volterra–Abel equation, first kind,... D05BEF
Nonlinear convolution Volterra–Abel equation, second... D05BDF
Solution of system of **nonlinear** equations using first derivatives (comprehensive) C05PCF
Solution of system of **nonlinear** equations using first derivatives (easy-to-use) C05PBF
Solution of system of **nonlinear** equations using first derivatives (reverse communication) C05PDF
Solution of system of **nonlinear** equations using function values only (comprehensive) C05NCF
Solution of system of **nonlinear** equations using function values only (easy-to-use) C05NBF
Solution of system of **nonlinear** equations using function values only (reverse... C05NDF
Covariance matrix for **nonlinear** least-squares problem (unconstrained) E04YCF
Nonlinear optimization E04
...difference technique with deferred correction, simple **nonlinear** problem D02GAF
Nonlinear regression E04
Nonlinear Volterra convolution equation, second kind D05BAF

Performs **non-metric** (ordinal) multidimensional scaling G03FCF

Last **non-negligible** element of real vector F06KLF

Kendall/Spearman **non-parametric** rank correlation coefficients, casewise treatment of... G02BPF
Kendall/Spearman **non-parametric** rank correlation coefficients, casewise treatment of... G02BRF
Kendall/Spearman **non-parametric** rank correlation coefficients, no missing values,... G02BNF
Kendall/Spearman **non-parametric** rank correlation coefficients, no missing values,... G02BQF
Kendall/Spearman **non-parametric** rank correlation coefficients, pairwise treatment of... G02BSF
Non-parametric tests G08

Initialise random number generating routines to give **non-repeatable** sequence G05CCF

Univariate time series, seasonal and **non-seasonal** differencing G13AAF

Linear **non-singular** Fredholm integral equation, second kind, smooth kernel D05ABF
Linear **non-singular** Fredholm integral equation, second kind, split kernel D05AAF

Solution of real sparse **nonsymmetric** linear system, RGMRES, CGS or... F11DEF
Solution of real sparse **nonsymmetric** linear system, RGMRES, CGS or... F11DCF
Real sparse **nonsymmetric** linear systems, diagnostic for F11BBF F11BCF
Real sparse **nonsymmetric** linear systems, diagnostic for F11BEF F11BFF
Real sparse **nonsymmetric** linear systems, incomplete LU factorization F11DAF
Real sparse **nonsymmetric** linear systems, line Jacobi preconditioner F11DKF
Real sparse **nonsymmetric** linear systems, preconditioned RGMRES, CGS,... F11BEF
Real sparse **nonsymmetric** linear systems, preconditioned RGMRES, CGS or... F11BBF
Real sparse **nonsymmetric** linear systems, set-up for F11BBF F11BAF
Real sparse **nonsymmetric** linear systems, set-up for F11BEF F11BDF
...matrix generated by applying SSOR to real sparse **nonsymmetric** matrix F11DDF
Real sparse **nonsymmetric** matrix reorder routine F11ZAF
Real sparse **nonsymmetric** matrix vector multiply F11XAF

Norm estimation (for use in condition estimation), complex matrix F04ZCF
Norm estimation (for use in condition estimation), real matrix F04YCF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex band... F06UBF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex general... F06UAF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UEF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UCF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UDF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UMF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UHF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UFF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UGF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UJF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06ULF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, complex... F06UKF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RBF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RAF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RMF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06REF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RCF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RDF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RJF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RLF
1-norm, ∞-**norm**, Frobenius norm, largest absolute element, real... F06RKF
Compute Euclidean **norm** from scaled form F06BMF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UBF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UAF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UEF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UCF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UDF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UMF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UHF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UFF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UGF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UJF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06ULF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06UKF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RBF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RAF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RMF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06REF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RCF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RDF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RJF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RLF
1-**norm**, ∞-norm, Frobenius norm, largest absolute element,... F06RKF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex band matrix F06UBF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex general matrix F06UAF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex Hermitian band matrix F06UEF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex Hermitian matrix F06UCF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex Hermitian matrix,... F06UDF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex Hessenberg matrix F06UMF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex symmetric band matrix F06UHF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex symmetric matrix F06UFF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex symmetric matrix,... F06UGF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex trapezoidal/triangular matrix F06UJF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex triangular band matrix F06ULF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, complex triangular matrix,... F06UKF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real band matrix F06RBF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real general matrix F06RAF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real Hessenberg matrix F06RMF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real symmetric band matrix F06REF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real symmetric matrix F06RCF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real symmetric matrix, packed storage F06RDF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real trapezoidal/triangular matrix F06RJF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real triangular band matrix F06RLF
1-norm, ∞-norm, Frobenius **norm**, largest absolute element, real triangular matrix, packed storage F06RKF
Compute Euclidean **norm** of complex vector F06JJF
Update Euclidean **norm** of complex vector in scaled form F06KJF

ODEs, IVP, weighted	**norm** of local error estimate for D02M–N routines	D02ZAF
Compute Euclidean	**norm** of real vector	F06EJF
Compute weighted Euclidean	**norm** of real vector	F06FKF
Update Euclidean	**norm** of real vector in scaled form	F06FJF
Computes probabilities for the standard	**Normal** distribution	G01EAF
Computes deviates for the standard	**Normal** distribution	G01FAF
Computes probability for the bivariate	**Normal** distribution	G01HAF
Computes probabilities for the multivariate	**Normal** distribution	G01HBF
Pseudo-random real numbers,	**Normal** distribution	G05DDF
Set up reference vector for multivariate	**Normal** distribution	G05EAF
Generates a vector of random numbers from a	**Normal** distribution	G05FDF
Computes maximum likelihood estimates for parameters of the	**Normal** distribution from grouped and/or censored data	G07BBF
Cumulative	**normal** distribution function $P(x)$	S15ABF
Complement of cumulative	**normal** distribution function $Q(x)$	S15ACF
Fits a generalized linear model with	**Normal** errors	G02GAF
Computes t-test statistic for a difference in means between two	**Normal** populations, confidence interval	G07CAF
Lineprinter scatterplot of one variable against	**Normal** scores	G01AHF
	Normal scores, accurate values	G01DAF
Ranks,	**Normal** scores, approximate Normal scores or exponential...	G01DHF
	Normal scores, approximate values	G01DBF
	Normal scores, approximate variance-covariance matrix	G01DCF
Ranks, Normal scores, approximate	**Normal** scores or exponential (Savage) scores	G01DHF
Cumulants and moments of quadratic forms in	**Normal** variables	G01NAF
Moments of ratios of quadratic forms in	**Normal** variables, and related statistics	G01NBF
Pseudo-random multivariate	**Normal** vector from reference vector	G05EZF
Shapiro and Wilk's W test for	**Normality**	G01DDF
	Numerical differentiation, derivatives up to order 14,...	D04AAF
Estimate (using	**numerical** differentiation) gradient and/or Hessian of a function	E04XAF
...conservative form, method of lines, upwind scheme using	**numerical** flux function based on Riemann solver, one space variable	D03PFF
...coupled DAEs, method of lines, upwind scheme using	**numerical** flux function based on Riemann solver, one space variable	D03PLF
...coupled DAEs, method of lines, upwind scheme using	**numerical** flux function based on Riemann solver, remeshing,...	D03PSF
	Numerical integration	D01
Second-order ODEs, IVP, Runge–Kutta–	**Nystrom** method	D02LAF
Update a weighted sum of squares matrix with a new	**observation**	G02BTF
Add/delete an	**observation** to/from a general linear regression model	G02DCF
Reorder data to give ordered distinct	**observations**	G10ZAF
Allocates	**observations** to groups according to selected rules...	G03DCF
nth-order linear	**ODEs**, boundary value problem, collocation and least-squares	D02TGF
	ODEs, boundary value problem, collocation and least-squares,...	D02JAF
	ODEs, boundary value problem, collocation and least-squares,...	D02JBF
	ODEs, boundary value problem, finite difference technique...	D02GBF
	ODEs, boundary value problem, finite difference technique...	D02GAF
	ODEs, boundary value problem, shooting and matching,...	D02HAF
	ODEs, boundary value problem, shooting and matching,...	D02HBF
	ODEs, boundary value problem, shooting and matching technique,...	D02AGF
	ODEs, boundary value problem, shooting and matching technique,...	D02SAF
	ODEs, general nonlinear boundary value problem,...	D02TKF
	ODEs, general nonlinear boundary value problem,...	D02TXF
	ODEs, general nonlinear boundary value problem,...	D02TZF
	ODEs, general nonlinear boundary value problem,...	D02RAF
	ODEs, general nonlinear boundary value problem,...	D02TYF
	ODEs, general nonlinear boundary value problem,...	D02TVF
	ODEs, IVP, Adams method, until function of solution is zero,...	D02CJF
	ODEs, IVP, Adams method with root-finding...	D02QFF
	ODEs, IVP, Adams method with root-finding...	D02QGF
	ODEs, IVP, BDF method, set-up for D02M–N routines	D02NVF
	ODEs, IVP, Blend method, set-up for D02M–N routines	D02NWF
	ODEs, IVP, DASSL method, set-up for D02M–N routines	D02MVF
Second-order	**ODEs**, IVP, diagnostics for D02LAF	D02LYF
	ODEs, IVP, diagnostics for D02QFF and D02QGF	D02QXF
	ODEs, IVP, error assessment diagnostics for D02PCF and D02PDF	D02PZF
	ODEs, IVP, for use with D02M–N routines,...	D02NTF
	ODEs, IVP, for use with D02M–N routines,...	D02NSF
	ODEs, IVP, for use with D02M–N routines,...	D02NRF
	ODEs, IVP, for use with D02M–N routines,...	D02NUF
	ODEs, IVP, integration diagnostics for D02PCF and D02PDF	D02PYF
	ODEs, IVP, integrator diagnostics, for use with D02M–N routines	D02NYF
Second-order	**ODEs**, IVP, interpolation for D02LAF	D02LZF
	ODEs, IVP, interpolation for D02M–N routines, C_1 interpolant	D02XKF
	ODEs, IVP, interpolation for D02M–N routines, natural interpolant	D02MZF
	ODEs, IVP, interpolation for D02M–N routines, natural interpolant	D02XJF
	ODEs, IVP, interpolation for D02PDF	D02PXF
	ODEs, IVP, interpolation for D02QFF or D02QGF	D02QZF
	ODEs, IVP, resets end of range for D02PDF	D02PWF
	ODEs, IVP, root-finding diagnostics for D02QFF and D02QGF	D02QYF
	ODEs, IVP, Runge–Kutta method, integration over one step	D02PDF
	ODEs, IVP, Runge–Kutta method, integration over range with output	D02PCF
	ODEs, IVP, Runge–Kutta method, until function...	D02BJF
	ODEs, IVP, Runge–Kutta–Merson method, until...	D02BGF
	ODEs, IVP, Runge–Kutta–Merson method, until...	D02BHF
Second-order	**ODEs**, IVP, Runge–Kutta–Nystrom method	D02LAF
	ODEs, IVP, set-up for continuation calls to integrator,...	D02NZF
Second-order	**ODEs**, IVP, set-up for D02LAF	D02LXF
	ODEs, IVP, set-up for D02PCF and D02PDF	D02PVF
	ODEs, IVP, set-up for D02QFF and D02QGF	D02QWF
	ODEs, IVP, sparse Jacobian, linear algebra diagnostics,...	D02NXF
	ODEs, IVP, weighted norm of local error estimate for D02M–N...	D02ZAF
Explicit	**ODEs**, stiff IVP, banded Jacobian (comprehensive)	D02NCF
Implicit/algebraic	**ODEs**, stiff IVP, banded Jacobian (comprehensive)	D02NHF
	ODEs, stiff IVP, BDF method, until function of solution is zero,...	D02EJF
Explicit	**ODEs**, stiff IVP, full Jacobian (comprehensive)	D02NBF
Implicit/algebraic	**ODEs**, stiff IVP, full Jacobian (comprehensive)	D02NGF
Explicit	**ODEs**, stiff IVP (reverse communication, comprehensive)	D02NMF
Implicit/algebraic	**ODEs**, stiff IVP (reverse communication, comprehensive)	D02NNF
Explicit	**ODEs**, stiff IVP, sparse Jacobian (comprehensive)	D02NDF
Implicit/algebraic	**ODEs**, stiff IVP, sparse Jacobian (comprehensive)	D02NJF
Single	**one-dimensional** complex discrete Fourier transform,...	C06PCF
Single	**one-dimensional** complex discrete Fourier transform, extra...	C06FCF
Single	**one-dimensional** complex discrete Fourier transform, no extra...	C06ECF
	One-dimensional complex discrete Fourier transform of...	C06FFF
	One-dimensional complex discrete Fourier transform of...	C06PFF
Multiple	**one-dimensional** complex discrete Fourier transforms	C06FRF
Multiple	**one-dimensional** complex discrete Fourier transforms using...	C06PRF
Multiple	**one-dimensional** complex discrete Fourier transforms using...	C06PSF
	One-dimensional Gaussian quadrature	D01BAF
Single	**one-dimensional** Hermitian discrete Fourier transform, extra...	C06FBF
Single	**one-dimensional** Hermitian discrete Fourier transform, no extra...	C06EBF
Multiple	**one-dimensional** Hermitian discrete Fourier transforms	C06FQF

	One-dimensional quadrature, adaptive, finite interval,...	D01ALF
	One-dimensional quadrature, adaptive, finite interval,...	D01AKF
	One-dimensional quadrature, adaptive, finite interval,...	D01AHF
	One-dimensional quadrature, adaptive, finite interval,...	D01AJF
	One-dimensional quadrature, adaptive, finite interval,...	D01ATF
	One-dimensional quadrature, adaptive, finite interval,...	D01AUF
	One-dimensional quadrature, adaptive, finite interval,...	D01AQF
	One-dimensional quadrature, adaptive, finite interval,...	D01ANF
	One-dimensional quadrature, adaptive, finite interval,...	D01APF
	One-dimensional quadrature, adaptive, infinite or semi-infinite...	D01AMF
	One-dimensional quadrature, adaptive, semi-infinite interval,...	D01ASF
	One-dimensional quadrature, integration of function defined by...	D01GAF
	One-dimensional quadrature, non-adaptive, finite interval	D01BDF
	One-dimensional quadrature, non-adaptive, finite interval with...	D01ARF
Single	**one-dimensional** real and Hermitian complex discrete Fourier...	C06PAF
Multiple	**one-dimensional** real and Hermitian complex discrete Fourier...	C06PPF
Multiple	**one-dimensional** real and Hermitian complex discrete Fourier...	C06PQF
Single	**one-dimensional** real discrete Fourier transform, extra workspace...	C06FAF
Single	**one-dimensional** real discrete Fourier transform, no extra workspace	C06EAF
Multiple	**one-dimensional** real discrete Fourier transforms	C06FPF
Computes probabilities for the	**one-sample** Kolmogorov–Smirnov distribution	G01EYF
Performs the	**one-sample** Kolmogorov–Smirnov test for a user-supplied distribution	G08CCF
Performs the	**one-sample** Kolmogorov–Smirnov test for standard distributions	G08CBF
Performs the Wilcoxon	**one-sample** (matched pairs) signed rank test	G08AGF
Kruskal–Wallis	**one-way** analysis of variance on k samples of unequal size	G08AFF
	Open unit number for reading, writing or appending,...	X04ACF
	Operations Research	H
	Operations with orthogonal matrices, form rows of Q,...	F01QKF
	Operations with unitary matrices, form rows of Q,...	F01RKF
Calculates the zeros of a vector autoregressive (or moving average)	**operator**	G13DXF
Korobov	**optimal** coefficients for use in D01GCF or D01GDF,...	D01GYF
Korobov	**optimal** coefficients for use in D01GCF or D01GDF,...	D01GZF
Nonlinear	**optimization**	E04
	Order statistics	G01D
Reorder data to give	**ordered** distinct observations	G10ZAF
Performs non-metric (**ordinal**) multidimensional scaling		G03FCF
Operations with	**orthogonal** matrices, form rows of Q,...	F01QKF
Computes random	**orthogonal** matrix	G05GAF
Computes	**orthogonal** polynomials or dummy variables for...	G04EAF
Form all or part of	**orthogonal** Q from LQ factorization determined by F08AHF	F08AJF
Form all or part of	**orthogonal** Q from QR factorization determined by F08AEF or...	F08AFF
	Orthogonal reduction of real general matrix to upper Hessenberg form	F08NEF
	Orthogonal reduction of real general rectangular matrix to...	F08KEF
	Orthogonal reduction of real symmetric band matrix to...	F08HEF
	Orthogonal reduction of real symmetric matrix to...	F08FEF
	Orthogonal reduction of real symmetric matrix to...	F08GEF
Computes	**orthogonal** rotations for loading matrix,...	G03BAF
Reorder Schur factorization of real matrix using	**orthogonal** similarity transformation	F08QFF
	Orthogonal similarity transformation of real symmetric matrix as...	F06QMF
Apply	**orthogonal** transformation determined by F08AEF or F08BEF	F08AGF
Apply	**orthogonal** transformation determined by F08AHF	F08AKF
Apply	**orthogonal** transformation determined by F08FEF	F08FGF
Apply	**orthogonal** transformation determined by F08GEF	F08GGF
Generate	**orthogonal** transformation matrices from reduction to...	F08KFF
Generate	**orthogonal** transformation matrix from reduction to...	F08NFF
Apply	**orthogonal** transformation matrix from reduction to...	F08NGF
Generate	**orthogonal** transformation matrix from reduction to...	F08FFF
Generate	**orthogonal** transformation matrix from reduction to...	F08GFF
Apply	**orthogonal** transformations from reduction to bidiagonal form...	F08KGF
Gram–Schmidt	**orthogonalisation** of n vectors of order m	F05AAF
Computes orthogonal rotations for loading matrix, generalized	**orthomax** criterion	G03BAF
...adaptive, finite interval, method suitable for	**oscillating** functions	D01AKF
	Osher's approximate Riemann solver for Euler equations...	D03PVF
Compute quotient of two real scalars, with	**overflow** flag	F06BLF
Compute quotient of two complex scalars, with	**overflow** flag	F06CLF
Incomplete Gamma functions	$P(a, x)$ and $Q(a, x)$	S14BAF
Cumulative normal distribution function	$P(x)$	S15ABF
Convert real matrix between	**packed** banded and rectangular storage schemes	F01ZCF
Convert complex matrix between	**packed** banded and rectangular storage schemes	F01ZDF
Print real	**packed** banded matrix (comprehensive)	X04CFF
Print complex	**packed** banded matrix (comprehensive)	X04DFF
Print real	**packed** banded matrix (easy-to-use)	X04CEF
Print complex	**packed** banded matrix (easy-to-use)	X04DEF
Matrix-vector product, real symmetric	**packed** matrix	F06PEF
Matrix-vector product, real triangular	**packed** matrix	F06PHF
System of equations, real triangular	**packed** matrix	F06PLF
Rank-1 update, real symmetric	**packed** matrix	F06PQF
Rank-2 update, real symmetric	**packed** matrix	F06PSF
Matrix-vector product, complex Hermitian	**packed** matrix	F06SEF
Matrix-vector product, complex triangular	**packed** matrix	F06SHF
System of equations, complex triangular	**packed** matrix	F06SLF
Rank-1 update, complex Hermitian	**packed** matrix	F06SQF
Rank-2 update, complex Hermitian	**packed** matrix	F06SSF
...largest absolute element, real symmetric matrix,	**packed** storage	F06RDF
...largest absolute element, real triangular matrix,	**packed** storage	F06RKF
...largest absolute element, complex Hermitian matrix,	**packed** storage	F06UDF
...largest absolute element, complex symmetric matrix,	**packed** storage	F06UGF
...absolute element, complex triangular matrix,	**packed** storage	F06UKF
Cholesky factorization of real symmetric positive-definite matrix,	**packed** storage	F07GDF
...right-hand sides, matrix already factorized by F07GDF,	**packed** storage	F07GEF
...matrix, matrix already factorized by F07GDF,	**packed** storage	F07GGF
...linear equations, multiple right-hand sides,	**packed** storage	F07GHF
...matrix, matrix already factorized by F07GDF,	**packed** storage	F07GJF
...of complex Hermitian positive-definite matrix,	**packed** storage	F07GRF
...right-hand sides, matrix already factorized by F07GRF,	**packed** storage	F07GSF
...matrix, matrix already factorized by F07GRF,	**packed** storage	F07GUF
...linear equations, multiple right-hand sides,	**packed** storage	F07GVF
...matrix, matrix already factorized by F07GRF,	**packed** storage	F07GWF
Bunch–Kaufman factorization of real symmetric indefinite matrix,	**packed** storage	F07PDF

...right-hand sides, matrix already factorized by F07PDF, **packed** storage F07PEF
...matrix, matrix already factorized by F07PDF, **packed** storage F07PGF
...linear equations, multiple right-hand sides, **packed** storage F07PHF
...matrix, matrix already factorized by F07PDF, **packed** storage F07PJF
...factorization of complex Hermitian indefinite matrix, **packed** storage F07PRF
...right-hand sides, matrix already factorized by F07PRF, **packed** storage F07PSF
...matrix, matrix already factorized by F07PRF, **packed** storage F07PUF
...linear equations, multiple right-hand sides, **packed** storage F07PVF
...matrix, matrix already factorized by F07PRF, **packed** storage F07PWF
Bunch–Kaufman factorization of complex symmetric matrix, **packed** storage F07QRF
...right-hand sides, matrix already factorized by F07QRF, **packed** storage F07QSF
...matrix, matrix already factorized by F07QRF, **packed** storage F07QUF
...linear equations, multiple right-hand sides, **packed** storage F07QVF
...matrix, matrix already factorized by F07QRF, **packed** storage F07QWF
...linear equations, multiple right-hand sides, **packed** storage F07UEF
Estimate condition number of real triangular matrix, **packed** storage F07UGF
...linear equations, multiple right-hand sides, **packed** storage F07UHF
Inverse of real triangular matrix, **packed** storage F07UJF
...linear equations, multiple right-hand sides, **packed** storage F07USF
Estimate condition number of complex triangular matrix, **packed** storage F07UUF
...linear equations, multiple right-hand sides, **packed** storage F07UVF
Inverse of complex triangular matrix, **packed** storage F07UWF
...symmetric matrix to symmetric tridiagonal form, **packed** storage F08GEF
...Hermitian matrix to real symmetric tridiagonal form, **packed** storage F08GSF
$\ldots Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$, **packed** storage, B factorized by F07GDF F08TEF
$\ldots Ax = \lambda Bx$, $ABx = \lambda x$ or $BAx = \lambda x$, **packed** storage, B factorized by F07GRF F08TSF
...optionally all eigenvectors of real symmetric matrix, **packed** storage, using divide and conquer F08GCF
...all eigenvectors of complex Hermitian matrix, **packed** storage, using divide and conquer F08GQF
Convert real matrix between **packed** triangular and square storage schemes F01ZAF
Convert complex matrix between **packed** triangular and square storage schemes F01ZBF
Print real **packed** triangular matrix (comprehensive) X04CDF
Print complex **packed** triangular matrix (comprehensive) X04DDF
Print real **packed** triangular matrix (easy-to-use) X04CCF
Print complex **packed** triangular matrix (easy-to-use) X04DCF

Sign test on two **paired** samples G08AAF

Performs the **pairs** (serial) test for randomness G08EBF
Performs the Wilcoxon one-sample (matched **pairs**) signed rank test G08AGF

Pearson product-moment correlation coefficients, all variables, **pairwise** treatment of missing values G02BCF
Correlation-like coefficients (about zero), all variables, **pairwise** treatment of missing values G02BFF
...correlation coefficients, subset of variables, **pairwise** treatment of missing values G02BJF
Correlation-like coefficients (about zero), subset of variables, **pairwise** treatment of missing values G02BMF
Kendall/Spearman non-parametric rank correlation coefficients, **pairwise** treatment of missing values G02BSF

General system of **parabolic** PDEs, coupled DAEs, method of lines,... D03PJF
General system of **parabolic** PDEs, coupled DAEs, method of lines,... D03PHF
General system of **parabolic** PDEs, coupled DAEs, method of lines,... D03PPF
General system of **parabolic** PDEs, method of lines, Chebyshev C^0 collocation,... D03PDF
General system of **parabolic** PDEs, method of lines, finite differences,... D03PCF

Kendall/Spearman non-**parametric** rank correlation coefficients, casewise treatment... G02BPF
Kendall/Spearman non-**parametric** rank correlation coefficients, casewise treatment... G02BRF
Kendall/Spearman non-**parametric** rank correlation coefficients, no missing values,... G02BNF
Kendall/Spearman non-**parametric** rank correlation coefficients, no missing values,... G02BQF
Kendall/Spearman non-**parametric** rank correlation coefficients, pairwise treatment... G02BSF
Non-**parametric** tests G08

Multivariate time series, multiple squared **partial** autocorrelations G13DBF
Univariate time series, **partial** autocorrelations from autocorrelations G13ACF
Multivariate time series, **partial** autoregression matrices G13DPF
Computes **partial** correlation/variance-covariance matrix from... G02BYF
Multivariate time series, sample **partial** lag correlation matrices, χ^2 statistics and significance levels G13DNF

...spectrum using rectangular, Bartlett, Tukey or **Parzen** lag window G13CAF
...spectrum using rectangular, Bartlett, Tukey or **Parzen** lag window G13CCF

...quadrature, adaptive, finite interval, strategy due to **Patterson**, suitable for well-behaved integrands D01AHF

Elliptic **PDE**, Helmholtz equation, three-dimensional Cartesian co-ordinates D03FAF
Elliptic **PDE**, Laplace's equation, two-dimensional arbitrary domain D03EAF
Discretize a second-order elliptic **PDE** on a rectangle D03EEF
Elliptic **PDE**, solution of finite difference equations by a multigrid technique D03EDF
Elliptic **PDE**, solution of finite difference equations by SIP,... D03EBF
Elliptic **PDE**, solution of finite difference equations by SIP,... D03UAF
Elliptic **PDE**, solution of finite difference equations by SIP... D03ECF
Elliptic **PDE**, solution of finite difference equations by SIP,... D03UBF

General system of parabolic **PDEs**, coupled DAEs, method of lines, Chebyshev C^0... D03PJF
General system of parabolic **PDEs**, coupled DAEs, method of lines, finite differences,... D03PHF
General system of parabolic **PDEs**, coupled DAEs, method of lines, finite differences,... D03PPF
General system of first-order **PDEs**, coupled DAEs, method of lines, Keller box discretisation,... D03PKF
General system of first-order **PDEs**, coupled DAEs, method of lines, Keller box discretisation,... D03PRF
General system of parabolic **PDEs**, method of lines, Chebyshev C^0 collocation,... D03PDF
General system of parabolic **PDEs**, method of lines, finite differences,... D03PCF
General system of second-order **PDEs**, method of lines, finite differences, remeshing,... D03RAF
General system of second-order **PDEs**, method of lines, finite differences, remeshing,... D03RBF
General system of first-order **PDEs**, method of lines, Keller box discretisation,... D03PEF
PDEs, spatial interpolation with D03PCF, D03PEF, D03PFF,... D03PZF
PDEs, spatial interpolation with D03PDF or D03PJF D03PYF
General system of convection-diffusion **PDEs** with source terms in conservative form,... D03PLF
General system of convection-diffusion **PDEs** with source terms in conservative form,... D03PSF
General system of convection-diffusion **PDEs** with source terms in conservative form,... D03PFF

Pearson product-moment correlation coefficients,... G02BBF
Pearson product-moment correlation coefficients,... G02BAF
Pearson product-moment correlation coefficients,... G02BCF
Pearson product-moment correlation coefficients,... G02BHF
Pearson product-moment correlation coefficients,... G02BGF
Pearson product-moment correlation coefficients,... G02BJF

...from set of classification factors using given **percentile/quantile** G11BBF

Invert a **permutation** M01ZAF
Check validity of a **permutation** M01ZBF
Decompose a **permutation** into cycles M01ZCF
Pseudo-random **permutation** of an integer vector G05EHF

Permute rows or columns, real rectangular matrix, **permutations** represented by a real array F06QKF
Permute rows or columns, complex rectangular matrix, **permutations** represented by a real array F06VKF
Permute rows or columns, real rectangular matrix, **permutations** represented by an integer array F06QJF
Permute rows or columns, complex rectangular matrix, **permutations** represented by an integer array F06VJF

Permute rows or columns, complex rectangular matrix,... F06VKF
Permute rows or columns, complex rectangular matrix,... F06VJF

	Permute rows or columns, real rectangular matrix,...	F06QKF
	Permute rows or columns, real rectangular matrix,...	F06QJF
Multivariate time series, gain,	**phase**, bounds, univariate and bivariate (cross) spectra	G13CFF
Provides the mathematical constant π		X01AAF
Interpolating functions, monotonicity-preserving,	**piecewise** cubic Hermite, one variable	E01BEF
...quadrature, adaptive, finite interval, strategy due to	**Piessens** and de Doncker, allowing for badly-behaved integrands	D01AJF
QR factorization of real general rectangular matrix with column	**pivoting**	F08BEF
...complex general rectangular matrix with column	**pivoting**	F08BSF
Triangulation of	**plane** region	D03MAF
Generate real	**plane** rotation	F06AAF
Generate real Jacobi	**plane** rotation	F06BEF
Apply real	**plane** rotation	F06EPF
Apply complex	**plane** rotation	F06HPF
Generate real	**plane** rotation, storing tangent	F06BAF
Generate complex	**plane** rotation, storing tangent, real cosine	F06CAF
Generate complex	**plane** rotation, storing tangent, real sine	F06CBF
Apply real	**plane** rotation to two complex vectors	F06KPF
Apply	**plane** rotation to two real sparse vectors	F06EXF
Apply real symmetric	**plane** rotation to two vectors	F06FPF
Generate sequence of real	**plane** rotations	F06FQF
Generate sequence of complex	**plane** rotations	F06HQF
...transformation of real symmetric matrix as a sequence of	**plane** rotations	F06QMF
...U real upper triangular, Z a sequence of	**plane** rotations	F06QTF
...transformation of Hermitian matrix as a sequence of	**plane** rotations	F06TMF
...U complex upper triangular, Z a sequence of	**plane** rotations	F06TTF
Apply sequence of	**plane** rotations, complex rectangular matrix, complex cosine...	F06TYF
Apply sequence of	**plane** rotations, complex rectangular matrix, real cosine...	F06TXF
Apply sequence of	**plane** rotations, complex rectangular matrix, real cosine and sine	F06VXF
QR or RQ factorization by sequence of	**plane** rotations, complex upper Hessenberg matrix	F06TRF
QR or RQ factorization by sequence of	**plane** rotations, complex upper spiked matrix	F06TSF
Compute upper Hessenberg matrix by sequence of	**plane** rotations, complex upper triangular matrix	F06TVF
Compute upper spiked matrix by sequence of	**plane** rotations, complex upper triangular matrix	F06TWF
$QRxk$ factorization by sequence of	**plane** rotations, complex upper triangular matrix...	F06TQF
QR factorization by sequence of	**plane** rotations, rank-1 update of complex upper triangular matrix	F06TPF
QR factorization by sequence of	**plane** rotations, rank-1 update of real upper triangular matrix	F06QPF
Apply sequence of	**plane** rotations, real rectangular matrix	F06QXF
QR or RQ factorization by sequence of	**plane** rotations, real upper Hessenberg matrix	F06QRF
QR or RQ factorization by sequence of	**plane** rotations, real upper spiked matrix	F06QSF
Compute upper Hessenberg matrix by sequence of	**plane** rotations, real upper triangular matrix	F06QVF
Compute upper spiked matrix by sequence of	**plane** rotations, real upper triangular matrix	F06QWF
QR factorization by sequence of	**plane** rotations, real upper triangular matrix augmented by a full row	F06QQF
Constructs a stem and leaf	**plot**	G01ARF
Constructs a box and whisker	**plot**	G01ASF
...needed for range-mean or standard deviation-mean	**plot**	G13AUF
Pseudo-random integer,	**Poisson** distribution	G05DRF
Set up reference vector for generating pseudo-random integers,	**Poisson** distribution	G05ECF
Computes confidence interval for the parameter of a	**Poisson** distribution	G07ABF
	Poisson distribution function	G01BKF
Fits a generalized linear model with	**Poisson** errors	G02GCF
Least-squares	**polynomial** fit, special data points (including interpolation)	E02AFF
Least-squares	**polynomial** fit, values and derivatives may be constrained,...	E02AGF
Derivative of fitted	**polynomial** in Chebyshev series form	E02AHF
Integral of fitted	**polynomial** in Chebyshev series form	E02AJF
Evaluation of fitted	**polynomial** in one variable, from Chebyshev series form	E02AKF
Evaluation of fitted	**polynomial** in one variable from Chebyshev series form...	E02AEF
Evaluation of fitted	**polynomial** in two variables	E02CBF
Interpolating functions,	**polynomial** interpolant, data may include derivative values,...	E01AEF
All zeros of complex	**polynomial**, modified Laguerre method	C02AFF
All zeros of real	**polynomial**, modified Laguerre method	C02AGF
Minimax curve fit by	**polynomials**	E02ACF
Least-squares curve fit, by	**polynomials**, arbitrary data points	E02ADF
Least-squares surface fit by	**polynomials**, data on lines	E02CAF
Computes orthogonal	**polynomials** or dummy variables for factor/classification variable	G04EAF
...for the Mann–Whitney U statistic, no ties in	**pooled** sample	G08AJF
...for the Mann–Whitney U statistic, ties in	**pooled** sample	G08AKF
Computes Mahalanobis squared distances for group or	**pooled** variance-covariance matrices (for use after G03DAF)	G03DBF
...for a difference in means between two Normal	**populations**, confidence interval	G07CAF
The machine	**precision**	X02AJF
Real inner product added to initial value, basic/additional	**precision**	X03AAF
Complex inner product added to initial value, basic/additional	**precision**	X03ABF
	Pre-computed weights and abscissae for Gaussian quadrature rules,...	D01BBF
Unconstrained minimum,	**pre-conditioned** conjugate gradient algorithm, function of...	E04DGF
Real sparse nonsymmetric linear systems, line Jacobi	**preconditioner**	F11DKF
...RGMRES, CGS or Bi-CGSTAB method, Jacobi or SSOR	**preconditioner** (Black Box)	F11DEF
...CGS, Bi-CGSTAB or TFQMR method, Jacobi or SSOR	**preconditioner** (Black Box)	F11DSF
...linear system, RGMRES, CGS or Bi-CGSTAB method,	**preconditioner** computed by F11DAF (Black Box)	F11DCF
...system, RGMRES, CGS, Bi-CGSTAB or TFQMR method,	**preconditioner** computed by F11DNF (Black Box)	F11DQF
Solution of linear system involving	**preconditioning** matrix generated by applying SSOR to...	F11JRF
Solution of linear system involving	**preconditioning** matrix generated by applying SSOR to...	F11DRF
Solution of linear system involving	**preconditioning** matrix generated by applying SSOR to...	F11DDF
Solution of linear system involving	**preconditioning** matrix generated by applying SSOR to...	F11JDF
Solution of linear system involving incomplete LU	**preconditioning** matrix generated by F11DAF	F11DBF
Solution of complex linear system involving incomplete LU	**preconditioning** matrix generated by F11DNF	F11DPF
Solution of linear system involving incomplete Cholesky	**preconditioning** matrix generated by F11JAF	F11JBF
Solution of complex linear system involving incomplete Cholesky	**preconditioning** matrix generated by F11JNF	F11JPF
Multivariate time series,	**preliminary** estimation of transfer function model	G13BDF
Univariate time series,	**preliminary** estimation, seasonal ARIMA model	G13ADF
Interpolating functions, monotonicity-	**preserving**, piecewise cubic Hermite, one variable	E01BEF
Multivariate time series, filtering (	**pre-whitening**) by an ARIMA model	G13BAF
...in D01GCF or D01GDF, when number of points is	**prime**	D01GYF
...D01GDF, when number of points is product of two	**primes**	D01GZF
Performs	**principal** component analysis	G03AAF
Performs	**principal** co-ordinate analysis, classical metric scaling	G03FAF
...finite interval, weight function $1/(x-c)$, Cauchy	**principal** value (Hilbert transform)	D01AQF

	Print complex general matrix (comprehensive)	X04DBF
	Print complex general matrix (easy-to-use)	X04DAF
	Print complex packed banded matrix (comprehensive)	X04DFF
	Print complex packed banded matrix (easy-to-use)	X04DEF
	Print complex packed triangular matrix (comprehensive)	X04DDF
	Print complex packed triangular matrix (easy-to-use)	X04DCF
	Print integer matrix (comprehensive)	X04EBF
	Print integer matrix (easy-to-use)	X04EAF
	Print real general matrix (comprehensive)	X04CBF
	Print real general matrix (easy-to-use)	X04CAF
	Print real packed banded matrix (comprehensive)	X04CFF
	Print real packed banded matrix (easy-to-use)	X04CEF
	Print real packed triangular matrix (comprehensive)	X04CDF
	Print real packed triangular matrix (easy-to-use)	X04CCF
Interpret MPSX data file defining IP or LP problem, optimize and	**print** solution	H02BFF
Computes Kaplan–Meier (product-limit) estimates of survival	**probabilities**	G12AAF
Computes upper and lower tail	**probabilities** and probability density function for the beta distribution	G01EEF
Computes	**probabilities** for χ^2 distribution	G01ECF
Computes	**probabilities** for F-distribution	G01EDF
Computes	**probabilities** for Student's t-distribution	G01EBF
Computes	**probabilities** for the gamma distribution	G01EFF
Computes the exact	**probabilities** for the Mann–Whitney U statistic, no ties in...	G08AJF
Computes the exact	**probabilities** for the Mann–Whitney U statistic, ties in...	G08AKF
Computes	**probabilities** for the multivariate Normal distribution	G01HBF
Computes	**probabilities** for the non-central beta distribution	G01GEF
Computes	**probabilities** for the non-central χ^2 distribution	G01GCF
Computes	**probabilities** for the non-central F-distribution	G01GDF
Computes	**probabilities** for the non-central Student's t-distribution	G01GBF
Computes	**probabilities** for the one-sample Kolmogorov–Smirnov distribution	G01EYF
Computes	**probabilities** for the standard Normal distribution	G01EAF
Computes	**probabilities** for the two-sample Kolmogorov–Smirnov distribution	G01EZF
Computes upper and lower tail probabilities and	**probability** density function for the beta distribution	G01EEF
...supplied cumulative distribution function or	**probability** distribution function	G05EXF
Computes lower tail	**probability** for a linear combination of (central) χ^2 variables	G01JDF
Computes	**probability** for a positive linear combination of χ^2 variables	G01JCF
Computes	**probability** for the bivariate Normal distribution	G01HAF
Computes	**probability** for the Studentized range statistic	G01EMF
Computes	**probability** for von Mises distribution	G01ERF
Computes	**Procrustes** rotations	G03BCF
Real inner	**product** added to initial value, basic/additional precision	X03AAF
Complex inner	**product** added to initial value, basic/additional precision	X03ABF
Matrix-vector	**product**, complex Hermitian band matrix	F06SDF
Matrix-vector	**product**, complex Hermitian matrix	F06SCF
Matrix-vector	**product**, complex Hermitian packed matrix	F06SEF
Matrix-vector	**product**, complex rectangular band matrix	F06SBF
Matrix-vector	**product**, complex rectangular matrix	F06SAF
Matrix-vector	**product**, complex triangular band matrix	F06SGF
Matrix-vector	**product**, complex triangular matrix	F06SFF
Matrix-vector	**product**, complex triangular packed matrix	F06SHF
Dot	**product** of two complex sparse vector, conjugated	F06GSF
Dot	**product** of two complex sparse vector, unconjugated	F06GRF
Dot	**product** of two complex vectors, conjugated	F06GBF
Dot	**product** of two complex vectors, unconjugated	F06GAF
...in D01GCF or D01GDF, when number of points is	**product** of two primes	D01GZF
Dot	**product** of two real sparse vectors	F06ERF
Dot	**product** of two real vectors	F06EAF
Matrix-matrix	**product**, one complex Hermitian matrix, one complex...	F06ZCF
Matrix-matrix	**product**, one complex symmetric matrix, one complex...	F06ZTF
Matrix-matrix	**product**, one complex triangular matrix, one complex...	F06ZFF
Matrix-matrix	**product**, one real symmetric matrix, one real rectangular matrix	F06YCF
Matrix-matrix	**product**, one real triangular matrix, one real rectangular matrix	F06YFF
Matrix-vector	**product**, real rectangular band matrix	F06PBF
Matrix-vector	**product**, real rectangular matrix	F06PAF
Matrix-vector	**product**, real symmetric band matrix	F06PDF
Matrix-vector	**product**, real symmetric matrix	F06PCF
Matrix-vector	**product**, real symmetric packed matrix	F06PEF
Matrix-vector	**product**, real triangular band matrix	F06PGF
Matrix-vector	**product**, real triangular matrix	F06PFF
Matrix-vector	**product**, real triangular packed matrix	F06PHF
Multi-dimensional quadrature, general	**product** region, number-theoretic method	D01GCF
Multi-dimensional quadrature, general	**product** region, number-theoretic method, variant of D01GCF...	D01GDF
Multi-dimensional quadrature, general	**product** region, number-theoretic method, variant of D01GCF...	D01GDF
Multi-dimensional quadrature, Sag–Szekeres method, general	**product** region or n-sphere	D01FDF
Matrix-matrix	**product**, two complex rectangular matrices	F06ZAF
Matrix-matrix	**product**, two real rectangular matrices	F06YAF
Computes Kaplan–Meier (	**product-limit**) estimates of survival probabilities	G12AAF
Pearson	**product-moment** correlation coefficients, all variables, casewise...	G02BBF
Pearson	**product-moment** correlation coefficients, all variables, no missing...	G02BAF
Pearson	**product-moment** correlation coefficients, all variables, pairwise...	G02BCF
Pearson	**product-moment** correlation coefficients, subset of variables,...	G02BHF
Pearson	**product-moment** correlation coefficients, subset of variables,...	G02BGF
Pearson	**product-moment** correlation coefficients, subset of variables,...	G02BJF
Integer	**Programming** See IP	
Linear	**Programming** See LP	
Quadratic	**Programming** See QP	
Integer	**programming** solution, supplies further information on solution...	H02BZF
Fits Cox's	**proportional** hazard model	G12BAF
Creates the risk sets associated with the Cox	**proportional** hazards model for fixed covariates	G12ZAF
	Pseudo-inverse and rank of real m by n matrix ($m \geq n$)	F01BLF
	Pseudo-random integer from reference vector	G05EYF
	Pseudo-random integer from uniform distribution	G05DYF
	Pseudo-random integer, Poisson distribution	G05DRF
Set up reference vector for generating	**pseudo-random** integers, binomial distribution	G05EDF
Set up reference vector for generating	**pseudo-random** integers, hypergeometric distribution	G05EFF
Set up reference vector for generating	**pseudo-random** integers, negative binomial distribution	G05EEF
Set up reference vector for generating	**pseudo-random** integers, Poisson distribution	G05ECF
Set up reference vector for generating	**pseudo-random** integers, uniform distribution	G05EBF
	Pseudo-random logical (boolean) value	G05DZF
	Pseudo-random multivariate Normal vector from reference vector	G05EZF
Generates a vector of	**pseudo-random** numbers from a beta distribution	G05FEF
Generates a vector of	**pseudo-random** numbers from a gamma distribution	G05FFF
	Pseudo-random permutation of an integer vector	G05EHF
	Pseudo-random real numbers, Cauchy distribution	G05DFF
	Pseudo-random real numbers, χ^2 distribution	G05DHF
	Pseudo-random real numbers, F-distribution	G05DKF

	Pseudo-random real numbers, logistic distribution	G05DCF
	Pseudo-random real numbers, log-normal distribution	G05DEF
	Pseudo-random real numbers, (negative) exponential distribution	G05DBF
	Pseudo-random real numbers, Normal distribution	G05DDF
	Pseudo-random real numbers, Student's t-distribution	G05DJF
	Pseudo-random real numbers, uniform distribution over (0,1)	G05CAF
	Pseudo-random real numbers, uniform distribution over (a, b)	G05DAF
	Pseudo-random real numbers, Weibull distribution	G05DPF
	Pseudo-random sample from an integer vector	G05EJF
Generates a vector of	**pseudo-random** variates from von Mises distribution	G05FSF
Scaled derivatives of $\psi(x)$		S14ADF
Incomplete Gamma functions $P(a, x)$ and $Q(a, x)$		S14BAF
Complement of cumulative normal distribution function $Q(x)$		S15ACF
...reduced from real symmetric matrix using implicit QL or QR		F08JEF
...symmetric tridiagonal matrix, root-free variant of QL or QR		F08JFF
...from complex Hermitian matrix, using implicit QL or QR		F08JSF
Minimum, function of several variables, sequential	**QP** method, nonlinear constraints, using function values...	E04UCF
Minimum, function of several variables, sequential	**QP** method, nonlinear constraints, using function values...	E04UFF
Minimum of a sum of squares, nonlinear constraints, sequential	**QP** method, using function values and...	E04UNF
	QP problem (dense)	E04NFF
Integer	**QP** problem (dense)	H02CBF
Convex	**QP** problem or linearly-constrained linear least-squares problem...	E04NCF
LP or	**QP** problem (sparse)	E04NKF
Integer LP or	**QP** problem (sparse)	H02CEF
Converts MPSX data file defining LP or	**QP** problem to format required by E04NKF	E04MZF
	QR factorization of complex general rectangular matrix...	F08BSF
	QR factorization of real general rectangular matrix...	F08BEF
...real symmetric matrix using implicit QL or QR		F08JEF
...tridiagonal matrix, root-free variant of QL or QR		F08JFF
...complex Hermitian matrix, using implicit QL or QR		F08JSF
	QR factorization by sequence of plane rotations, rank-1 update...	F06TPF
	QR factorization by sequence of plane rotations, rank-1 update...	F06QPF
	QR factorization by sequence of plane rotations,...	F06QQF
Form all or part of orthogonal Q from	QR factorization determined by F08AEF or F08BEF	F08AFF
Form all or part of unitary Q from	QR factorization determined by F08ASF or F08BSF	F08ATF
	QR factorization of complex general rectangular matrix	F08ASF
	QR factorization of real general rectangular matrix	F08AEF
	QR factorization of UZ or RQ factorization of ZU,...	F06TTF
	QR factorization of UZ or RQ factorization of ZU,...	F06QTF
	QR factorization, possibly followed by SVD	F02WDF
	QR or RQ factorization by sequence of plane rotations,...	F06TRF
	QR or RQ factorization by sequence of plane rotations,...	F06TSF
	QR or RQ factorization by sequence of plane rotations,...	F06QRF
	QR or RQ factorization by sequence of plane rotations,...	F06QSF
	$QRxk$ factorization by sequence of plane rotations,...	F06TQF
All zeros of complex	**quadratic**	C02AHF
All zeros of real	**quadratic**	C02AJF
Cumulants and moments of	**quadratic** forms in Normal variables	G01NAF
Moments of ratios of	**quadratic** forms in Normal variables, and related statistics	G01NBF
One-dimensional Gaussian	**quadrature**	D01BAF
One-dimensional	**quadrature**, adaptive, finite interval, allowing for singularities...	D01ALF
One-dimensional	**quadrature**, adaptive, finite interval, method suitable for...	D01AKF
One-dimensional	**quadrature**, adaptive, finite interval, strategy due to...	D01AHF
One-dimensional	**quadrature**, adaptive, finite interval, strategy due to...	D01AJF
One-dimensional	**quadrature**, adaptive, finite interval, variant of D01AJF...	D01ATF
One-dimensional	**quadrature**, adaptive, finite interval, variant of D01AKF...	D01AUF
One-dimensional	**quadrature**, adaptive, finite interval, weight function $1/(x - c)$,...	D01AQF
One-dimensional	**quadrature**, adaptive, finite interval, weight function $\cos(\omega x)$ or...	D01ANF
One-dimensional	**quadrature**, adaptive, finite interval, weight function with...	D01APF
One-dimensional	**quadrature**, adaptive, infinite or semi-infinite interval	D01AMF
One-dimensional	**quadrature**, adaptive, semi-infinite interval,...	D01ASF
Two-dimensional	**quadrature**, finite region	D01DAF
Multi-dimensional	**quadrature**, general product region, number-theoretic method	D01GCF
Multi-dimensional	**quadrature**, general product region, number-theoretic method,...	D01GDF
One-dimensional	**quadrature**, integration of function defined by data values,...	D01GAF
One-dimensional	**quadrature**, non-adaptive, finite interval	D01BDF
One-dimensional	**quadrature**, non-adaptive, finite interval with provision for...	D01ARF
Multi-dimensional	**quadrature** over an n-simplex	D01PAF
Multi-dimensional	**quadrature** over an n-sphere, allowing for badly-behaved integrands	D01JAF
Multi-dimensional Gaussian	**quadrature** over hyper-rectangle	D01FBF
Multi-dimensional adaptive	**quadrature** over hyper-rectangle	D01FCF
Multi-dimensional	**quadrature** over hyper-rectangle, Monte Carlo method	D01GBF
Multi-dimensional adaptive	**quadrature** over hyper-rectangle, multiple integrands	D01EAF
Calculation of weights and abscissae for Gaussian	**quadrature** rules, general choice of rule	D01BCF
Pre-computed weights and abscissae for Gaussian	**quadrature** rules, restricted choice of rule	D01BBF
Multi-dimensional	**quadrature**, Sag–Szekeres method, general product region or n-sphere	D01FDF
...classification factors using given percentile/	**quantile**	G11BBF
Discrete	**quarter-wave** cosine transform	C06HDF
Discrete	**quarter-wave** cosine transform (easy-to-use)	C06RDF
Discrete	**quarter-wave** sine transform	C06HCF
Discrete	**quarter-wave** sine transform (easy-to-use)	C06RCF
Minimum, function of several variables,	**quasi-Newton** algorithm, simple bounds, using first derivatives...	E04KYF
Minimum, function of several variables,	**quasi-Newton** algorithm, simple bounds, using function values only...	E04JYF
...a sum of squares, combined Gauss–Newton and	**quasi-Newton** algorithm using first derivatives (comprehensive)	E04GBF
...a sum of squares, combined Gauss–Newton and	**quasi-Newton** algorithm, using first derivatives (easy-to-use)	E04GYF
Left and right eigenvectors of real upper	**quasi-triangular** matrix	F08QKF
...selected eigenvalues and eigenvectors of real upper	**quasi-triangular** matrix	F08QLF
...equation $AX + XB = C$, A and B are upper	**quasi-triangular** or transposes	F08QHF
	Quotient of two complex numbers	A02ACF
Compute	**quotient** of two complex scalars, with overflow flag	F06CLF
Compute	**quotient** of two real scalars, with overflow flag	F06BLF
...eigenvectors of generalized complex eigenproblem by QZ algorithm (Black Box)		F02GJF
...optionally eigenvectors of generalized eigenproblem by QZ algorithm, real matrices (Black Box)		F02BJF
Computes	**random** correlation matrix	G05GBF
Pseudo-	**random** integer from reference vector	G05EYF
Pseudo-	**random** integer from uniform distribution	G05DYF
Pseudo-	**random** integer, Poisson distribution	G05DRF
Set up reference vector for generating pseudo-	**random** integers, binomial distribution	G05EDF
Set up reference vector for generating pseudo-	**random** integers, hypergeometric distribution	G05EFF
Set up reference vector for generating pseudo-	**random** integers, negative binomial distribution	G05EEF
Set up reference vector for generating pseudo-	**random** integers, Poisson distribution	G05ECF
Set up reference vector for generating pseudo-	**random** integers, uniform distribution	G05EBF
Pseudo-	**random** logical (boolean) value	G05DZF

Pseudo-**random** multivariate Normal vector from reference vector	G05EZF
Save state of **random** number generating routines	G05CFF
Restore state of **random** number generating routines	G05CGF
Initialise **random** number generating routines to give non-repeatable sequence	G05CCF
Initialise **random** number generating routines to give repeatable sequence	G05CBF
Selection of basic algorithm **random** number generator or Wichmann–Hill algorithm generators...	G05ZAF
Generates a vector of pseudo-**random** numbers from a beta distribution	G05FEF
Generates a vector of pseudo-**random** numbers from a gamma distribution	G05FFF
Generates a vector of **random** numbers from a Normal distribution	G05FDF
Generates a vector of **random** numbers from a uniform distribution	G05FAF
Generates a vector of **random** numbers from an (negative) exponential distribution	G05FBF
Computes **random** orthogonal matrix	G05GAF
Pseudo-**random** permutation of an integer vector	G05EHF
Pseudo-**random** real numbers, Cauchy distribution	G05DFF
Pseudo-**random** real numbers, χ^2 distribution	G05DHF
Pseudo-**random** real numbers, F-distribution	G05DKF
Pseudo-**random** real numbers, logistic distribution	G05DCF
Pseudo-**random** real numbers, log-normal distribution	G05DEF
Pseudo-**random** real numbers, (negative) exponential distribution	G05DBF
Pseudo-**random** real numbers, Normal distribution	G05DDF
Pseudo-**random** real numbers, Student's t-distribution	G05DJF
Pseudo-**random** real numbers, uniform distribution over (0,1)	G05CAF
Pseudo-**random** real numbers, uniform distribution over (a, b)	G05DAF
Pseudo-**random** real numbers, Weibull distribution	G05DPF
Pseudo-**random** sample from an integer vector	G05EJF
Generates a vector of pseudo-**random** variates from von Mises distribution	G05FSF
Analysis of variance, **randomized** block or completely randomized design,...	G04BBF
Analysis of variance, randomized block or completely **randomized** design, treatment means and standard errors	G04BBF
Performs the runs up or runs down test for **randomness**	G08EAF
Performs the pairs (serial) test for **randomness**	G08EBF
Performs the triplets test for **randomness**	G08ECF
Performs the gaps test for **randomness**	G08EDF
...problem, regular/singular system, finite/infinite **range**, eigenvalue and eigenfunction, user-specified break-points	D02KEF
Second-order Sturm–Liouville problem, regular system, finite **range**, eigenvalue only	D02KAF
...problem, regular/singular system, finite/infinite **range**, eigenvalue only, user-specified break-points	D02KDF
ODEs, IVP, resets end of **range** for D02PDF	D02PWF
The safe **range** parameter	X02AMF
The safe **range** parameter for complex floating-point arithmetic	X02ANF
Computes probability for the Studentized **range** statistic	G01EMF
Computes deviates for the Studentized **range** statistic	G01FMF
...function of solution is zero, integration over **range** with intermediate output (simple driver)	D02BJF
ODEs, IVP, Runge–Kutta method, integration over **range** with output	D02PCF
Computes quantities needed for **range-mean** or standard deviation-mean plot	G13AUF
Rank a vector, character data	M01DCF
Rank a vector, integer numbers	M01DBF
Rank a vector, real numbers	M01DAF
Rank arbitrary data	M01DZF
Rank columns of a matrix, integer numbers	M01DKF
Rank columns of a matrix, real numbers	M01DJF
Kendall/Spearman non-parametric **rank** correlation coefficients, casewise treatment of missing values,...	G02BPF
Kendall/Spearman non-parametric **rank** correlation coefficients, casewise treatment of missing values,...	G02BRF
Kendall/Spearman non-parametric **rank** correlation coefficients, no missing values, overwriting input data	G02BNF
Kendall/Spearman non-parametric **rank** correlation coefficients, no missing values, preserving input data	G02BQF
Kendall/Spearman non-parametric **rank** correlation coefficients, pairwise treatment of missing values	G02BSF
Pseudo-inverse and **rank** of real m by n matrix ($m \geq n$)	F01BLF
Rank rows of a matrix, integer numbers	M01DFF
Rank rows of a matrix, real numbers	M01DEF
Performs the Wilcoxon one-sample (matched pairs) signed **rank** test	G08AGF
Rank-1 update, complex Hermitian matrix	F06SPF
Rank-1 update, complex Hermitian packed matrix	F06SQF
Rank-1 update, complex rectangular matrix, conjugated vector	F06SNF
Rank-1 update, complex rectangular matrix, unconjugated vector	F06SMF
QR factorization by sequence of plane rotations, **rank-1** update of complex upper triangular matrix	F06TPF
QR factorization by sequence of plane rotations, **rank-1** update of real upper triangular matrix	F06QPF
Rank-1 update, real rectangular matrix	F06PMF
Rank-1 update, real symmetric matrix	F06PPF
Rank-1 update, real symmetric packed matrix	F06PQF
Rank-2 update, complex Hermitian matrix	F06SRF
Rank-2 update, complex Hermitian packed matrix	F06SSF
Rank-2 update, real symmetric matrix	F06PRF
Rank-2 update, real symmetric packed matrix	F06PSF
Rank-2k update of complex Hermitian matrix	F06ZRF
Rank-2k update of complex symmetric matrix	F06ZWF
Rank-2k update of real symmetric matrix	F06YRF
Rank-k update of complex Hermitian matrix	F06ZPF
Rank-k update of complex symmetric matrix	F06ZUF
Rank-k update of real symmetric matrix	F06YPF
Rearrange a vector according to given **ranks**, character data	M01ECF
Rearrange a vector according to given **ranks**, complex numbers	M01EDF
Rearrange a vector according to given **ranks**, integer numbers	M01EBF
Ranks, Normal scores, approximate Normal scores or...	G01DHF
Rearrange a vector according to given **ranks**, real numbers	M01EAF
Regression using **ranks**, right-censored data	G08RBF
Regression using **ranks**, uncensored data	G08RAF
Evaluation of fitted **rational** function as computed by E02RAF	E02RBF
Interpolated values, evaluate **rational** interpolant computed by E01RAF, one variable	E01RBF
Interpolating functions, **rational** interpolant, one variable	E01RAF
Generates a **realisation** of a multivariate time series from a VARMA model	G05HDF
Rearrange a vector according to given ranks, character data	M01ECF
Rearrange a vector according to given ranks, complex numbers	M01EDF
Rearrange a vector according to given ranks, integer numbers	M01EBF
Rearrange a vector according to given ranks, real numbers	M01EAF
Computes **reciprocal** of Mills' Ratio	G01MBF
Recover cosine and sine from given complex tangent, real cosine	F06CCF
Recover cosine and sine from given complex tangent, real sine	F06CDF
Recover cosine and sine from given real tangent	F06BCF
Multi-dimensional Gaussian quadrature over hyper-**rectangle**	D01FBF
Multi-dimensional adaptive quadrature over hyper-**rectangle**	D01FCF
Discretize a second-order elliptic PDE on a **rectangle**	D03EEF
Multi-dimensional quadrature over hyper-**rectangle**, Monte Carlo method	D01GBF
Multi-dimensional adaptive quadrature over hyper-**rectangle**, multiple integrands	D01EAF
Matrix-vector product, real **rectangular** band matrix	F06PBF
Matrix-vector product, complex **rectangular** band matrix	F06SBF

Univariate time series, smoothed sample spectrum using **rectangular**, Bartlett, Tukey or Parzen lag window G13CAF
Multivariate time series, smoothed sample cross spectrum using **rectangular**, Bartlett, Tukey or Parzen lag window G13CCF
Interpolating functions, fitting bicubic spline, data on **rectangular** grid E01DAF
...splines with automatic knot placement, data on **rectangular** grid E02DCF
Matrix-matrix product, two real **rectangular** matrices F06YAF
Matrix-matrix product, two complex **rectangular** matrices F06ZAF
Matrix-vector product, real **rectangular** matrix F06PAF
Rank-1 update, real **rectangular** matrix F06PMF
Matrix initialisation, real **rectangular** matrix F06QHF
Apply sequence of plane rotations, real **rectangular** matrix F06QXF
Matrix-vector product, complex **rectangular** matrix F06SAF
Matrix initialisation, complex **rectangular** matrix F06THF
Matrix-matrix product, one real symmetric matrix, one real **rectangular** matrix F06YCF
Matrix-matrix product, one real triangular matrix, one real **rectangular** matrix F06YFF
...product, one complex Hermitian matrix, one complex **rectangular** matrix F06ZCF
...product, one complex triangular matrix, one complex **rectangular** matrix F06ZFF
...product, one complex symmetric matrix, one complex **rectangular** matrix F06ZTF
QR factorization of real general **rectangular** matrix F08AEF
LQ factorization of real general **rectangular** matrix F08AHF
QR factorization of complex general **rectangular** matrix F08ASF
LQ factorization of complex general **rectangular** matrix F08AVF
Apply sequence of plane rotations, complex **rectangular** matrix, complex cosine and real sine F06TYF
Rank-1 update, complex **rectangular** matrix, conjugated vector F06SNF
Permute rows or columns, real **rectangular** matrix, permutations represented by a real array F06QKF
Permute rows or columns, complex **rectangular** matrix, permutations represented by a real array F06VKF
Permute rows or columns, real **rectangular** matrix, permutations represented by an integer array F06QJF
Permute rows or columns, complex **rectangular** matrix, permutations represented by an integer array F06VJF
Apply sequence of plane rotations, complex **rectangular** matrix, real cosine and complex sine F06TXF
Apply sequence of plane rotations, complex **rectangular** matrix, real cosine and sine F06VXF
Orthogonal reduction of real general **rectangular** matrix to bidiagonal form F08KEF
Unitary reduction of complex general **rectangular** matrix to bidiagonal form F08KSF
Rank-1 update, complex **rectangular** matrix, unconjugated vector F06SMF
QR factorization of real general **rectangular** matrix with column pivoting F08BEF
QR factorization of complex general **rectangular** matrix with column pivoting F08BSF
Matrix copy, real **rectangular** or trapezoidal matrix F06QFF
Matrix copy, complex **rectangular** or trapezoidal matrix F06TFF
...differences, remeshing, two space variables, **rectangular** region D03RAF
Convert real matrix between packed banded and **rectangular** storage schemes F01ZCF
Convert complex matrix between packed banded and **rectangular** storage schemes F01ZDF

...differences, remeshing, two space variables, **rectilinear** region D03RBF

SVD of real bidiagonal matrix **reduced** from complex general matrix F08MSF
...factorization of complex upper Hessenberg matrix **reduced** from complex general matrix F08PSF
...eigenvectors of real symmetric tridiagonal matrix, **reduced** from complex Hermitian matrix, using implicit QL or QR F08JSF
...symmetric positive-definite tridiagonal matrix, **reduced** from complex Hermitian positive-definite matrix F08JUF
SVD of real bidiagonal matrix **reduced** from real general matrix F08MEF
...factorization of real upper Hessenberg matrix **reduced** from real general matrix F08PEF
...eigenvectors of real symmetric tridiagonal matrix, **reduced** from real symmetric matrix using implicit QL or QR F08JEF
...symmetric positive-definite tridiagonal matrix, **reduced** from real symmetric positive-definite matrix F08JGF

Unitary **reduction** of complex general matrix to upper Hessenberg form F08NSF
Unitary **reduction** of complex general rectangular matrix to... F08KSF
Unitary **reduction** of complex Hermitian band matrix to... F08HSF
Unitary **reduction** of complex Hermitian matrix to... F08FSF
Unitary **reduction** of complex Hermitian matrix to... F08GSF
Reduction of complex Hermitian-definite banded generalized... F08USF
Reduction of complex rectangular band matrix to upper bidiagonal... F08LSF
Orthogonal **reduction** of real general matrix to upper Hessenberg form F08NEF
Orthogonal **reduction** of real general rectangular matrix to bidiagonal form F08KEF
Reduction of real rectangular band matrix to upper bidiagonal form F08LEF
Orthogonal **reduction** of real symmetric band matrix to symmetric tridiagonal... F08HEF
Orthogonal **reduction** of real symmetric matrix to symmetric tridiagonal form F08FEF
Orthogonal **reduction** of real symmetric matrix to symmetric tridiagonal... F08GEF
Reduction of real symmetric-definite banded generalized... F08UEF
Generate orthogonal transformation matrices from **reduction** to bidiagonal form determined by F08KEF F08KFF
Apply orthogonal transformations from **reduction** to bidiagonal form determined by F08KEF F08KGF
Generate unitary transformation matrices from **reduction** to bidiagonal form determined by F08KSF F08KTF
Apply unitary transformations from **reduction** to bidiagonal form determined by F08KSF F08KUF
Generate orthogonal transformation matrix from **reduction** to Hessenberg form determined by F08NEF F08NFF
Apply orthogonal transformation matrix from **reduction** to Hessenberg form determined by F08NEF F08NGF
Generate unitary transformation matrix from **reduction** to Hessenberg form determined by F08NSF F08NTF
Apply unitary transformation matrix from **reduction** to Hessenberg form determined by F08NSF F08NUF
Reduction to standard form, generalized real symmetric-definite... F01BVF
Reduction to standard form of complex Hermitian-definite... F08SSF
Reduction to standard form of complex Hermitian-definite... F08TSF
Reduction to standard form of real symmetric-definite generalized... F08SEF
Reduction to standard form of real symmetric-definite generalized... F08TEF
Generate orthogonal transformation matrix from **reduction** to tridiagonal form determined by F08FEF F08FFF
Generate unitary transformation matrix from **reduction** to tridiagonal form determined by F08FSF F08FTF
Generate orthogonal transformation matrix from **reduction** to tridiagonal form determined by F08GEF F08GFF
Generate unitary transformation matrix from **reduction** to tridiagonal form determined by F08GSF F08GTF

Pseudo-random integer from **reference** vector G05EYF
Pseudo-random multivariate Normal vector from **reference** vector G05EZF
Generate next term from **reference** vector for ARMA time series model G05EWF
Set up **reference** vector for generating pseudo-random integers,... G05EDF
Set up **reference** vector for generating pseudo-random integers,... G05EFF
Set up **reference** vector for generating pseudo-random integers,... G05EEF
Set up **reference** vector for generating pseudo-random integers,... G05ECF
Set up **reference** vector for generating pseudo-random integers,... G05EBF
Set up **reference** vector for multivariate Normal distribution G05EAF
Set up **reference** vector for univariate ARMA time series model G05EGF
Set up **reference** vector from supplied cumulative distribution function... G05EXF

Refined solution with error bounds of complex band system of... F07BVF
Refined solution with error bounds of complex Hermitian... F07MVF
Refined solution with error bounds of complex Hermitian... F07PVF
Refined solution with error bounds of complex Hermitian... F07HVF
Refined solution with error bounds of complex Hermitian... F07FVF
Refined solution with error bounds of complex Hermitian... F07GVF
Refined solution with error bounds of complex symmetric... F07NVF
Refined solution with error bounds of complex symmetric... F07QVF
Refined solution with error bounds of complex system of linear... F07AVF
Refined solution with error bounds of real band system of linear... F07BHF
Refined solution with error bounds of real symmetric indefinite... F07MHF
Refined solution with error bounds of real symmetric indefinite... F07PHF
Refined solution with error bounds of real symmetric... F07HHF
Refined solution with error bounds of real symmetric... F07FHF
Refined solution with error bounds of real symmetric... F07GHF
Refined solution with error bounds of real system of... F07AHF

Inverse of real symmetric positive-definite matrix using iterative **refinement** F01ABF
...with multiple right-hand sides using iterative **refinement** (Black Box) F04ABF
...with multiple right-hand sides using iterative **refinement** (Black Box) F04AEF
...unknowns, rank $= n$, $m \geq n$ using iterative **refinement** (Black Box) F04AMF

...equations, one right-hand side using iterative	**refinement** (Black Box)	F04ASF
...equations, one right-hand side using iterative	**refinement** (Black Box)	F04ATF
...simultaneous linear equations using iterative	**refinement** (coefficient matrix already factorized by F03AEF)	F04AFF
Solution of real simultaneous linear equations using iterative	**refinement** (coefficient matrix already factorized by F03AFF)	F04AHF
Generate complex elementary	**reflection**	F06HRF
Apply complex elementary	**reflection**	F06HTF
Generate real elementary	**reflection**, LINPACK style	F06FSF
Apply real elementary	**reflection**, LINPACK style	F06FUF
Generate real elementary	**reflection**, NAG style	F06FRF
Apply real elementary	**reflection**, NAG style	F06FTF
Nonlinear	**regression**	E04
Robust	**regression**, compute regression with user-supplied functions...	G02HDF
Robust	**regression**, compute weights for use with G02HDF	G02HBF
Multiple linear	**regression**, from correlation coefficients, with constant term	G02CGF
Multiple linear	**regression**, from correlation-like coefficients, without constant term	G02CHF
Fits a general (multiple) linear	**regression** model	G02DAF
Add/delete an observation to/from a general linear	**regression** model	G02DCF
Add a new variable to a general linear	**regression** model	G02DEF
Delete a variable from a general linear	**regression** model	G02DFF
Computes estimable function of a general linear	**regression** model and its standard error	G02DNF
Fits a linear	**regression** model by forward selection	G02EEF
Estimates and standard errors of parameters of a general linear	**regression** model for given constraints	G02DKF
Fits a general linear	**regression** model for new dependent variable	G02DGF
Estimates of linear parameters and general linear	**regression** model from updated model	G02DDF
Service routines for multiple linear	**regression**, re-order elements of vectors and matrices	G02CFF
Service routines for multiple linear	**regression**, select elements from vectors and matrices	G02CEF
Robust	**regression**, standard M-estimates	G02HAF
	Regression using ranks, right-censored data	G08RBF
	Regression using ranks, uncensored data	G08RAF
Robust	**regression**, variance-covariance matrix following G02HDF	G02HFF
Simple linear	**regression** with constant term, missing values	G02CCF
Simple linear	**regression** with constant term, no missing values	G02CAF
Simple linear	**regression** without constant term, missing values	G02CDF
Simple linear	**regression** without constant term, no missing values	G02CBF
Computes residual sums of squares for all possible linear	**regressions** for a set of independent variables	G02EAF
Second-order Sturm–Liouville problem,	**regular** system, finite range, eigenvalue only	D02KAF
Second-order Sturm–Liouville problem,	**regular/singular** system, finite/infinite range, eigenvalue...	D02KEF
Second-order Sturm–Liouville problem,	**regular/singular** system, finite/infinite range, eigenvalue only,...	D02KDF
...coupled DAEs, method of lines, finite differences,	**remeshing**, one space variable	D03PPF
...DAEs, method of lines, Keller box discretisation,	**remeshing**, one space variable	D03PRF
...numerical flux function based on Riemann solver,	**remeshing**, one space variable	D03PSF
...second-order PDEs, method of lines, finite differences,	**remeshing**, two space variables, rectangular region	D03RAF
...second-order PDEs, method of lines, finite differences,	**remeshing**, two space variables, rectilinear region	D03RBF
Interpolating functions, method of	**Renka** and Cline, two variables	E01SAF
	Reorder data to give ordered distinct observations	G10ZAF
Real sparse nonsymmetric matrix	**reorder** routine	F11ZAF
Real sparse symmetric matrix	**reorder** routine	F11ZBF
Complex sparse non-Hermitian matrix	**reorder** routine	F11ZNF
Complex sparse Hermitian matrix	**reorder** routine	F11ZPF
	Reorder Schur factorization of complex matrix, form orthonormal...	F08QUF
	Reorder Schur factorization of complex matrix using...	F08QTF
	Reorder Schur factorization of real matrix, form orthonormal...	F08QGF
	Reorder Schur factorization of real matrix using orthogonal...	F08QFF
Initialise random number generating routines to give	**repeatable** sequence	G05CBF
Initialise random number generating routines to give non-	**repeatable** sequence	G05CCF
...analysis model, factor loadings, communalities and	**residual** correlations	G03CAF
Calculates R^2 and C_P values from	**residual** sums of squares	G02ECF
Computes	**residual** sums of squares for all possible linear regressions for...	G02EAF
Calculates standardized	**residuals** and influence statistics	G02FAF
Univariate time series, diagnostic checking of	**residuals**, following G13AEF or G13AFF	G13ASF
Multivariate time series, diagnostic checking of	**residuals**, following G13DCF	G13DSF
Multivariate time series, noise spectrum, bounds, impulse	**response** function and its standard error	G13CGF
Real sparse nonsymmetric linear systems, preconditioned	**RGMRES**, CGS, Bi-CGSTAB or TFQMR method	F11BEF
Complex sparse non-Hermitian linear systems, preconditioned	**RGMRES**, CGS, Bi-CGSTAB or TFQMR method	F11BSF
Solution of complex sparse non-Hermitian linear system,	**RGMRES**, CGS, Bi-CGSTAB or TFQMR method, Jacobi or...	F11DSF
Solution of complex sparse non-Hermitian linear system,	**RGMRES**, CGS, Bi-CGSTAB or TFQMR method,...	F11DQF
Real sparse nonsymmetric linear systems, preconditioned	**RGMRES**, CGS or Bi-CGSTAB	F11BBF
Solution of real sparse nonsymmetric linear system,	**RGMRES**, CGS or Bi-CGSTAB method, Jacobi or...	F11DEF
Solution of real sparse nonsymmetric linear system,	**RGMRES**, CGS or Bi-CGSTAB method,...	F11DCF
Roe's approximate	**Riemann** solver for Euler equations in conservative form,...	D03PUF
Osher's approximate	**Riemann** solver for Euler equations in conservative form,...	D03PVF
Modified HLL	**Riemann** solver for Euler equations in conservative form,...	D03PWF
Exact	**Riemann** Solver for Euler equations in conservative form,...	D03PXF
...scheme using numerical flux function based on	**Riemann** solver, one space variable	D03PFF
...scheme using numerical flux function based on	**Riemann** solver, one space variable	D03PLF
...scheme using numerical flux function based on	**Riemann** solver, remeshing, one space variable	D03PSF
Selected	**right** and/or left eigenvectors of complex upper Hessenberg matrix...	F08PXF
Selected	**right** and/or left eigenvectors of real upper Hessenberg matrix...	F08PKF
Left and	**right** eigenvectors of complex upper triangular matrix	F08QXF
Left and	**right** eigenvectors of real upper quasi-triangular matrix	F08QKF
...factorization of real matrix, form orthonormal basis of	**right** invariant subspace for selected eigenvalues,...	F08QGF
...of complex matrix, form orthonormal basis of	**right** invariant subspace for selected eigenvalues,...	F08QUF
Regression using ranks,	**right-censored** data	G08RBF
Creates the	**risk** sets associated with the Cox proportional hazards model...	G12ZAF
	Robust confidence intervals, one-sample	G07EAF
	Robust confidence intervals, two-sample	G07EBF
	Robust estimation, median, median absolute deviation,...	G07DAF
	Robust estimation, M-estimates for location and scale...	G07DBF
	Robust estimation, M-estimates for location and scale...	G07DCF
Calculates a	**robust** estimation of a correlation matrix, Huber's weight function	G02HKF
Calculates a	**robust** estimation of a correlation matrix, user-supplied weight...	G02HMF
Calculates a	**robust** estimation of a correlation matrix, user-supplied weight...	G02HLF
	Robust regression, compute regression with user-supplied functions...	G02HDF
	Robust regression, compute weights for use with G02HDF	G02HBF
	Robust regression, standard M-estimates	G02HAF
	Robust regression, variance-covariance matrix following G02HDF	G02HFF
Robust estimation, median, median absolute deviation,	**robust** standard deviation	G07DAF
	Roe's approximate Riemann solver for Euler equations in...	D03PUF

...iteration of Kalman filter, time-varying, square **root** covariance filter G13EAF
...iteration of Kalman filter, time-invariant, square **root** covariance filter G13EBF
Compute square **root** of $(a^2 + b^2)$, real a and b F06BNF
Square **root** of complex number A02AAF

ODEs, IVP, **root-finding** diagnostics for D02QFF and D02QGF D02QYF
ODEs, IVP, Adams method with **root-finding** (forward communication, comprehensive) D02QFF
ODEs, IVP, Adams method with **root-finding** (reverse communication, comprehensive) D02QGF

All eigenvalues of real symmetric tridiagonal matrix, **root-free** variant of QL or QR F08JFF

Generate real plane **rotation** F06AAF
Generate real Jacobi plane **rotation** F06BEF
Apply real plane **rotation** F06EPF
Apply complex plane **rotation** F06HPF
Generate real plane **rotation**, storing tangent F06BAF
Generate complex plane **rotation**, storing tangent, real cosine F06CAF
Generate complex plane **rotation**, storing tangent, real sine F06CBF
Apply complex similarity **rotation** to 2 by 2 Hermitian matrix F06CHF
Apply real similarity **rotation** to 2 by 2 symmetric matrix F06BHF
Apply real plane **rotation** to two complex vectors F06KPF
Apply plane **rotation** to two real sparse vectors F06EXF
Apply real symmetric plane **rotation** to two vectors F06FPF

Generate sequence of real plane **rotations** F06FQF
Generate sequence of complex plane **rotations** F06HQF
...real symmetric matrix as a sequence of plane **rotations** F06QMF
...real upper triangular, Z a sequence of plane **rotations** F06QTF
...transformation of Hermitian matrix as a sequence of plane **rotations** F06TMF
...complex upper triangular, Z a sequence of plane **rotations** F06TTF
Computes Procrustes **rotations** G03BCF
Apply sequence of plane **rotations**, complex rectangular matrix, complex cosine and real sine F06TYF
Apply sequence of plane **rotations**, complex rectangular matrix, real cosine and complex sine F06TXF
Apply sequence of plane **rotations**, complex rectangular matrix, real cosine and sine F06VXF
QR or RQ factorization by sequence of plane **rotations**, complex upper Hessenberg matrix F06TRF
QR or RQ factorization by sequence of plane **rotations**, complex upper spiked matrix F06TSF
Compute upper Hessenberg matrix by sequence of plane **rotations**, complex upper triangular matrix F06TVF
Compute upper spiked matrix by sequence of plane **rotations**, complex upper triangular matrix F06TWF
$QRxk$ factorization by sequence of plane **rotations**, complex upper triangular matrix augmented by a full row F06TQF
Computes orthogonal **rotations** for loading matrix, generalized orthomax criterion G03BAF
QR factorization by sequence of plane **rotations**, rank-1 update of complex upper triangular matrix F06TPF
QR factorization by sequence of plane **rotations**, rank-1 update of real upper triangular matrix F06QPF
Apply sequence of plane **rotations**, real rectangular matrix F06QXF
QR or RQ factorization by sequence of plane **rotations**, real upper Hessenberg matrix F06QRF
QR or RQ factorization by sequence of plane **rotations**, real upper spiked matrix F06QSF
Compute upper Hessenberg matrix by sequence of plane **rotations**, real upper triangular matrix F06QVF
Compute upper spiked matrix by sequence of plane **rotations**, real upper triangular matrix F06QWF
QR factorization by sequence of plane **rotations**, real upper triangular matrix augmented by a full row F06QQF

Allocates observations to groups according to selected **rules** (for use after G03DAF) G03DCF
Calculation of weights and abscissae for Gaussian quadrature **rules**, general choice of rule D01BCF
Pre-computed weights and abscissae for Gaussian quadrature **rules**, restricted choice of rule D01BBF

ODEs, IVP, **Runge–Kutta** method, integration over one step D02PDF
ODEs, IVP, **Runge–Kutta** method, integration over range with output D02PCF
ODEs, IVP, **Runge–Kutta** method, until function of solution is zero,... D02BJF
ODEs, IVP, **Runge–Kutta–Merson** method, until a component attains given... D02BGF
ODEs, IVP, **Runge–Kutta–Merson** method, until function of solution is zero... D02BHF
Second-order ODEs, IVP, **Runge–Kutta–Nystrom** method D02LAF

Compute smoothed data sequence using **running** median smoothers G10CAF

Performs the runs up or **runs** down test for randomness G08EAF
Performs the **runs** up or runs down test for randomness G08EAF

Fresnel integral $S(x)$ S20ACF

The **safe range** parameter X02AMF
The **safe range** parameter for complex floating-point arithmetic X02ANF

Multi-dimensional quadrature, **Sag–Szekeres** method, general product region or n-sphere D01FDF

Robust confidence intervals, one-**sample** G07EAF
Robust confidence intervals, two-**sample** G07EBF
...Mann–Whitney U statistic, no ties in pooled **sample** G08AJF
...the Mann–Whitney U statistic, ties in pooled **sample** G08AKF
Univariate time series, **sample** autocorrelation function G13ABF
Multivariate time series, smoothed **sample** cross spectrum using rectangular, Bartlett, Tukey or... G13CCF
Multivariate time series, smoothed **sample** cross spectrum using spectral smoothing by... G13CDF
Multivariate time series, **sample** cross-correlation or cross-covariance matrices G13DMF
Pseudo-random **sample** from an integer vector G05EJF
Computes probabilities for the one-**sample** Kolmogorov–Smirnov distribution G01EYF
Computes probabilities for the two-**sample** Kolmogorov–Smirnov distribution G01EZF
Performs the two-**sample** Kolmogorov–Smirnov test G08CDF
Performs the one-**sample** Kolmogorov–Smirnov test for a user-supplied distribution G08CCF
Performs the one-**sample** Kolmogorov–Smirnov test for standard distributions G08CBF
Performs the Wilcoxon one-**sample** (matched pairs) signed rank test G08AGF
Multivariate time series, **sample** partial lag correlation matrices, χ^2 statistics and... G13DNF
Univariate time series, smoothed **sample** spectrum using rectangular, Bartlett, Tukey or... G13CAF
Univariate time series, smoothed **sample** spectrum using spectral smoothing by... G13CBF
Computes a trimmed and winsorized mean of a single **sample** with estimates of their variance G07DDF

Sign test on two paired **samples** G08AAF
Friedman two-way analysis of variance on k matched **samples** G08AEF
Performs the Mann–Whitney U test on two independent **samples** G08AHF
Median test on two **samples** of unequal size G08ACF
Kruskal–Wallis one-way analysis of variance on k **samples** of unequal size G08AFF
Mood's and David's tests on two **samples** of unequal size G08BAF

Ranks, Normal scores, approximate Normal scores or exponential (**Savage**) scores G01DHF

Multiply real vector by **scalar** F06EDF
Multiply complex vector by complex **scalar** F06GDF
Multiply complex vector by real **scalar** F06JDF
Broadcast **scalar** into complex vector F06HBF
Broadcast **scalar** into integer vector F06DBF
Broadcast **scalar** into real vector F06FBF
Multiply real vector by **scalar**, preserving input vector F06FDF
Multiply complex vector by complex **scalar**, preserving input vector F06HDF
Multiply complex vector by real **scalar**, preserving input vector F06KDF
Add **scalar** times complex sparse vector to complex sparse vector F06GTF
Add **scalar** times complex vector to complex vector F06GCF
Add **scalar** times real sparse vector to real sparse vector F06ETF
Add **scalar** times real vector to real vector F06ECF

Compute quotient of two real **scalars**, with overflow flag F06BLF

Compute quotient of two complex	**scalars**, with overflow flag	F06CLF
Robust estimation, M-estimates for location and	**scale** parameters, standard weight functions	G07DBF
Robust estimation, M-estimates for location and	**scale** parameters, user-defined weight functions	G07DCF
	Scaled complex complement of error function, $\exp(-z^2)\mathrm{erfc}(-iz)$	S15DDF
	Scaled derivatives of $\psi(x)$	S14ADF
Compute Euclidean norm from	**scaled** form	F06BMF
Update Euclidean norm of real vector in	**scaled** form	F06FJF
Update Euclidean norm of complex vector in	**scaled** form	F06KJF
Performs principal co-ordinate analysis, classical metric	**scaling**	G03FAF
Performs non-metric (ordinal) multidimensional	**scaling**	G03FCF
Sum or difference of two real matrices, optional	**scaling** and transposition	F01CTF
Sum or difference of two complex matrices, optional	**scaling** and transposition	F01CWF
	Scatter complex sparse vector	F06GWF
	Scatter real sparse vector	F06EWF
...bicubic splines with automatic knot placement,	**scattered** data	E02DDF
Lineprinter	**scatterplot** of one variable against Normal scores	G01AHF
Lineprinter	**scatterplot** of two variables	G01AGF
Gram–	**Schmidt** orthogonalisation of n vectors of order m	F05AAF
All eigenvalues and	**Schur** factorization of complex general matrix (Black Box)	F02GAF
Reorder	**Schur** factorization of complex matrix, form orthonormal basis...	F08QUF
Reorder	**Schur** factorization of complex matrix using unitary...	F08QTF
Eigenvalues and	**Schur** factorization of complex upper Hessenberg matrix...	F08PSF
All eigenvalues and	**Schur** factorization of real general matrix (Black Box)	F02EAF
Reorder	**Schur** factorization of real matrix, form orthonormal basis...	F08QGF
Reorder	**Schur** factorization of real matrix using orthogonal...	F08QFF
Eigenvalues and	**Schur** factorization of real upper Hessenberg matrix...	F08PEF
Computes factor	**score** coefficients (for use after G03CAF)	G03CCF
Lineprinter scatterplot of one variable against Normal	**scores**	G01AHF
...approximate Normal scores or exponential (Savage)	**scores**	G01DHF
Normal	**scores**, accurate values	G01DAF
Ranks, Normal	**scores**, approximate Normal scores or exponential (Savage) scores	G01DHF
Normal	**scores**, approximate values	G01DBF
Normal	**scores**, approximate variance-covariance matrix	G01DCF
Produces standardized values (z-**scores**) for a data matrix		G03ZAF
Ranks, Normal scores, approximate Normal	**scores** or exponential (Savage) scores	G01DHF
...algorithm, from given starting value, binary	**search** for interval	C05AGF
Binary	**search** for interval containing zero of continuous function...	C05AVF
Univariate time series,	**seasonal** and non-seasonal differencing	G13AAF
Univariate time series, preliminary estimation,	**seasonal** ARIMA model	G13ADF
Univariate time series, state set and forecasts, from fully specified	**seasonal** ARIMA model	G13AJF
Univariate time series, estimation,	**seasonal** ARIMA model (comprehensive)	G13AEF
Univariate time series, estimation,	**seasonal** ARIMA model (easy-to-use)	G13AFF
Univariate time series, seasonal and non-	**seasonal** differencing	G13AAF
	Selected eigenvalues and eigenvectors of complex Hermitian...	F02HCF
	Selected eigenvalues and eigenvectors of complex nonsymmetric...	F02GCF
Estimates of sensitivities of	**selected** eigenvalues and eigenvectors of complex upper triangular...	F08QYF
	Selected eigenvalues and eigenvectors of real nonsymmetric...	F02ECF
	Selected eigenvalues and eigenvectors of real symmetric...	F02FCF
Estimates of sensitivities of	**selected** eigenvalues and eigenvectors of real upper quasi-triangular...	F08QLF
	Selected eigenvalues and eigenvectors of sparse symmetric...	F02FJF
	Selected eigenvalues of real symmetric tridiagonal matrix by...	F08JJF
...orthonormal basis of right invariant subspace for	**selected** eigenvalues, with estimates of sensitivities	F08QGF
...orthonormal basis of right invariant subspace for	**selected** eigenvalues, with estimates of sensitivities	F08QUF
	Selected eigenvectors of real symmetric tridiagonal matrix by...	F08JXF
	Selected eigenvectors of real symmetric tridiagonal matrix by...	F08JKF
	Selected right and/or left eigenvectors of complex upper...	F08PXF
	Selected right and/or left eigenvectors of real upper...	F08PKF
Allocates observations to groups according to	**selected** rules (for use after G03DAF)	G03DCF
Computes multiway table from set of classification factors using	**selected** statistic	G11BAF
One-dimensional quadrature, adaptive, infinite or	**semi-infinite** interval	D01AMF
One-dimensional quadrature, adaptive,	**semi-infinite** interval, weight function $\cos(\omega x)$ or $\sin(\omega x)$	D01ASF
...selected eigenvalues, with estimates of	**sensitivities**	F08QGF
...subspace for selected eigenvalues, with estimates of	**sensitivities**	F08QUF
Estimates of	**sensitivities** of selected eigenvalues and eigenvectors of...	F08QYF
Estimates of	**sensitivities** of selected eigenvalues and eigenvectors of...	F08QLF
Complex conjugate of Hermitian	**sequence**	C06GBF
Complex conjugate of complex	**sequence**	C06GCF
Initialise random number generating routines to give repeatable	**sequence**	G05CBF
...number generating routines to give non-repeatable	**sequence**	G05CCF
Generate	**sequence** of complex plane rotations	F06HQF
Orthogonal similarity transformation of real symmetric matrix as a	**sequence** of plane rotations	F06QMF
...factorization of ZU, U real upper triangular, Z a	**sequence** of plane rotations	F06QTF
Unitary similarity transformation of Hermitian matrix as a	**sequence** of plane rotations	F06TMF
...of ZU, U complex upper triangular, Z a	**sequence** of plane rotations	F06TTF
Apply	**sequence** of plane rotations, complex rectangular matrix,...	F06TYF
Apply	**sequence** of plane rotations, complex rectangular matrix,...	F06TXF
Apply	**sequence** of plane rotations, complex rectangular matrix,...	F06VXF
QR or RQ factorization by	**sequence** of plane rotations, complex upper Hessenberg matrix	F06TRF
QR or RQ factorization by	**sequence** of plane rotations, complex upper spiked matrix	F06TSF
Compute upper Hessenberg matrix by	**sequence** of plane rotations, complex upper triangular matrix	F06TVF
Compute upper spiked matrix by	**sequence** of plane rotations, complex upper triangular matrix	F06TWF
$QRxk$ factorization by	**sequence** of plane rotations, complex upper triangular matrix...	F06TQF
QR factorization by	**sequence** of plane rotations, rank-1 update of complex upper...	F06TPF
QR factorization by	**sequence** of plane rotations, rank-1 update of real upper...	F06QPF
Apply	**sequence** of plane rotations, real rectangular matrix	F06QXF
QR or RQ factorization by	**sequence** of plane rotations, real upper Hessenberg matrix	F06QRF
QR or RQ factorization by	**sequence** of plane rotations, real upper spiked matrix	F06QSF
Compute upper Hessenberg matrix by	**sequence** of plane rotations, real upper triangular matrix	F06QVF
Compute upper spiked matrix by	**sequence** of plane rotations, real upper triangular matrix	F06QWF
QR factorization by	**sequence** of plane rotations, real upper triangular matrix...	F06QQF
Generate	**sequence** of real plane rotations	F06FQF
Acceleration of convergence of	**sequence**, Shanks' transformation and epsilon algorithm	C06BAF
Compute smoothed data	**sequence** using running median smoothers	G10CAF
Complex conjugate of multiple Hermitian	**sequences**	C06GQF
Convert Hermitian sequences to general complex	**sequences**	C06GSF
...transform, using complex data format for Hermitian	**sequences**	C06PAF
Convert Hermitian	**sequences** to general complex sequences	C06GSF
Minimum, function of several variables,	**sequential** QP method, nonlinear constraints, using function values...	E04UCF
Minimum, function of several variables,	**sequential** QP method, nonlinear constraints, using function values...	E04UFF

Minimum of a sum of squares, nonlinear constraints, **sequential** QP method, using function values... E04UNF

Performs the pairs (**serial**) test for randomness G08EBF

Creates the risk **sets** associated with the Cox proportional hazards model... G12ZAF

Elliptic PDE, solution of finite difference equations by SIP for **seven-point** three-dimensional molecule, iterate to convergence D03ECF
Elliptic PDE, solution of finite difference equations by SIP, **seven-point** three-dimensional molecule, one iteration D03UBF

Acceleration of convergence of sequence, **Shanks'** transformation and epsilon algorithm C06BAF

Shapiro and Wilk's W test for Normality G01DDF

Interpolating functions, modified **Shepard's** method, two variables E01SEF
Interpolating functions, modified **Shepard's** method, two variables E01SGF

ODEs, boundary value problem, **shooting** and matching, boundary values to be determined D02HAF
ODEs, boundary value problem, **shooting** and matching, general parameters to be determined D02HBF
ODEs, boundary value problem, **shooting** and matching technique, allowing interior matching point,... D02AGF
ODEs, boundary value problem, **shooting** and matching technique, subject to extra algebraic D02SAF

Shortest path problem, Dijkstra's algorithm H03ADF

Sign test on two paired samples G08AAF

Performs the Wilcoxon one-sample (matched pairs) **signed** rank test G08AGF

...correlation matrices, χ^2 statistics and **significance** levels G13DNF
Computes bounds for the **significance** of a Durbin–Watson statistic G01EPF

Apply complex **similarity** rotation to 2 by 2 Hermitian matrix F06CHF
Apply real **similarity** rotation to 2 by 2 symmetric matrix F06BHF
Reorder Schur factorization of real matrix using orthogonal **similarity** transformation F08QFF
Reorder Schur factorization of complex matrix using unitary **similarity** transformation F08QTF
Unitary **similarity** transformation of Hermitian matrix as a sequence... F06TMF
Orthogonal **similarity** transformation of real symmetric matrix as a sequence... F06QMF

Multi-dimensional quadrature over an n-**simplex** D01PAF
Unconstrained minimum, **simplex** algorithm, function of several variables using... E04CCF

Solution of real sparse **simultaneous** linear equations (coefficient matrix already factorized) F04AXF
Solution of real tridiagonal **simultaneous** linear equations (coefficient matrix already factorized... F04LEF
Solution of real almost block diagonal **simultaneous** linear equations (coefficient matrix already factorized... F04LHF
Solution of real symmetric positive-definite variable-bandwidth **simultaneous** linear equations (coefficient matrix already factorized... F04MCF
Solution of real symmetric positive-definite **simultaneous** linear equations (coefficient matrix already factorized... F04AGF
Solution of real **simultaneous** linear equations (coefficient matrix already factorized... F04AJF
Solution of real **simultaneous** linear equations, one right-hand side (Black Box) F04ARF
Solution of real tridiagonal **simultaneous** linear equations, one right-hand side (Black Box) F04EAF
Solution of real symmetric positive-definite tridiagonal **simultaneous** linear equations, one right-hand side (Black Box) F04FAF
Solution of real symmetric positive-definite **simultaneous** linear equations, one right-hand side using... F04ASF
Solution of real **simultaneous** linear equations, one right-hand side using... F04ATF
Solution of real symmetric positive-definite **simultaneous** linear equations using iterative refinement... F04AFF
Solution of real **simultaneous** linear equations using iterative refinement... F04AHF
Solution of real **simultaneous** linear equations with multiple right-hand sides... F04AAF
Solution of real symmetric positive-definite banded **simultaneous** linear equations with multiple right-hand sides... F04ACF
Solution of complex **simultaneous** linear equations with multiple right-hand sides... F04ADF
Solution of real symmetric positive-definite **simultaneous** linear equations with multiple right-hand sides using... F04ABF
Solution of real **simultaneous** linear equations with multiple right-hand sides using... F04AEF

The largest permissible argument for **sin** and cos X02AHF

Generate complex plane rotation, storing tangent, real **sine** F06CBF
Recover cosine and sine from given complex tangent, real **sine** F06CDF
...complex rectangular matrix, real cosine and complex **sine** F06TXF
...complex rectangular matrix, complex cosine and real **sine** F06TYF
...rotations, complex rectangular matrix, real cosine and **sine** F06VXF
Recover cosine and **sine** from given complex tangent, real cosine F06CCF
Recover cosine and **sine** from given complex tangent, real sine F06CDF
Recover cosine and **sine** from given real tangent F06BCF
Sine integral $\mathrm{Si}(x)$ S13ADF
Discrete **sine** transform C06HAF
Discrete quarter-wave **sine** transform C06HCF
Discrete **sine** transform (easy-to-use) C06RAF
Discrete quarter-wave **sine** transform (easy-to-use) C06RCF

Nonlinear convolution Volterra–Abel equation, second kind, weakly **singular** D05BDF
Nonlinear convolution Volterra–Abel equation, first kind, weakly **singular** D05BEF
Generate weights for use in solving weakly **singular** Abel-type equations D05BYF
Linear non-**singular** Fredholm integral equation, second kind, smooth kernel D05ABF
Linear non-**singular** Fredholm integral equation, second kind, split kernel D05AAF
Second-order Sturm–Liouville problem, regular/**singular** system, finite/infinite range, eigenvalue and... D02KEF
Second-order Sturm–Liouville problem, regular/**singular** system, finite/infinite range, eigenvalue only,... D02KDF

One-dimensional quadrature, adaptive, finite interval, allowing for **singularities** at user-specified break-points D01ALF
...finite interval, weight function with end-point **singularities** of algebraico-logarithmic type D01APF

$\sinh x$ S10ABF

Elliptic PDE, solution of finite difference equations by **SIP**, five-point two-dimensional molecule, iterate to convergence D03EBF
Elliptic PDE, solution of finite difference equations by **SIP**, five-point two-dimensional molecule, one iteration D03UAF
Elliptic PDE, solution of finite difference equations by **SIP** for seven-point three-dimensional molecule, iterate to convergence D03ECF
Elliptic PDE, solution of finite difference equations by **SIP**, seven-point three-dimensional molecule, one iteration D03UBF

Mean, variance, **skewness**, kurtosis, etc, one variable, from frequency table G01ADF
Mean, variance, **skewness**, kurtosis, etc, one variable, from raw data G01AAF
Mean, variance, **skewness**, kurtosis, etc, two variables, from raw data G01ABF

Elements of real vector with largest and **smallest** absolute value F06FLF
The **smallest** positive model number X02AKF

Computes probabilities for the one-sample Kolmogorov–**Smirnov** distribution G01EYF
Computes probabilities for the two-sample Kolmogorov–**Smirnov** distribution G01EZF
Performs the two-sample Kolmogorov–**Smirnov** test G08CDF
Performs the one-sample Kolmogorov–**Smirnov** test for a user-supplied distribution G08CCF
Performs the one-sample Kolmogorov–**Smirnov** test for standard distributions G08CBF

Linear non-singular Fredholm integral equation, second kind, **smooth** kernel D05ABF

Compute **smoothed** data sequence using running median smoothers G10CAF
Multivariate time series, **smoothed** sample cross spectrum using rectangular, Bartlett,... G13CCF
Multivariate time series, **smoothed** sample cross spectrum using spectral smoothing by... G13CDF
Univariate time series, **smoothed** sample spectrum using rectangular, Bartlett,... G13CAF
Univariate time series, **smoothed** sample spectrum using spectral smoothing by... G13CBF

Compute smoothed data sequence using running median **smoothers** G10CAF

Univariate time series, smoothed sample spectrum using spectral **smoothing** by the trapezium frequency (Daniell) window G13CBF

...smoothed sample cross spectrum using spectral **smoothing** by the trapezium frequency (Daniell) window G13CDF
Fit cubic smoothing spline, **smoothing** parameter estimated G10ACF
Fit cubic smoothing spline, **smoothing** parameter given G10ABF
Fit cubic **smoothing** spline, smoothing parameter estimated G10ACF
Fit cubic **smoothing** spline, smoothing parameter given G10ABF

Jacobian elliptic functions **sn**, cn and dn S21CAF

Soft fail P01

Sort a vector, character data M01CCF
Sort a vector, integer numbers M01CBF
Sort a vector, real numbers M01CAF
Sort two-dimensional data into panels for fitting bicubic splines E02ZAF

Solution of complex **sparse** Hermitian linear system, conjugate gradient/Lanczos... F11JSF
Solution of complex **sparse** Hermitian linear system, conjugate gradient/Lanczos... F11JQF
...matrix generated by applying SSOR to complex **sparse** Hermitian matrix F11JRF
Complex **sparse** Hermitian matrix, incomplete Cholesky factorization F11JNF
Complex **sparse** Hermitian matrix reorder routine F11ZPF
Complex **sparse** Hermitian matrix vector multiply F11XSF
Explicit ODEs, stiff IVP, **sparse** Jacobian (comprehensive) D02NDF
Implicit/algebraic ODEs, stiff IVP, **sparse** Jacobian (comprehensive) D02NJF
ODEs, IVP, for use with D02M–N routines, **sparse** Jacobian, enquiry routine D02NRF
ODEs, IVP, **sparse** Jacobian, linear algebra diagnostics, for use with D02M–N... D02NXF
ODEs, IVP, for use with D02M–N routines, **sparse** Jacobian, linear algebra set-up D02NUF
Sparse linear least-squares problem, m real equations in n unknowns F04QAF
LU factorization of real **sparse** matrix F01BRF
LU factorization of real **sparse** matrix with known sparsity pattern F01BSF
Complex **sparse** non-Hermitian linear systems, preconditioned RGMRES,... F11BSF
Solution of complex **sparse** non-Hermitian linear system, RGMRES, CGS,... F11DSF
Solution of complex **sparse** non-Hermitian linear system, RGMRES, CGS,... F11DQF
Complex **sparse** non-Hermitian linear systems, diagnostic for F11BSF F11BTF
Complex **sparse** non-Hermitian linear systems, incomplete LU factorization F11DNF
Complex **sparse** non-Hermitian linear systems, set-up for F11BSF F11BRF
...matrix generated by applying SSOR to complex **sparse** non-Hermitian matrix F11DRF
Complex **sparse** non-Hermitian matrix reorder routine F11ZNF
Complex **sparse** non-Hermitian matrix vector multiply F11XNF
Solution of real **sparse** nonsymmetric linear system, RGMRES, CGS or... F11DEF
Solution of real **sparse** nonsymmetric linear system, RGMRES, CGS or... F11DCF
Real **sparse** nonsymmetric linear systems, diagnostic for F11BBF F11BCF
Real **sparse** nonsymmetric linear systems, diagnostic for F11BEF F11BFF
Real **sparse** nonsymmetric linear systems, incomplete LU factorization F11DAF
Real **sparse** nonsymmetric linear systems, line Jacobi preconditioner F11DKF
Real **sparse** nonsymmetric linear systems, preconditioned RGMRES,... F11BEF
Real **sparse** nonsymmetric linear systems, preconditioned RGMRES,... F11BBF
Real **sparse** nonsymmetric linear systems, set-up for F11BBF F11BAF
Real **sparse** nonsymmetric linear systems, set-up for F11BEF F11BDF
...pre-conditioning matrix generated by applying SSOR to real **sparse** nonsymmetric matrix F11DDF
Real **sparse** nonsymmetric matrix reorder routine F11ZAF
Real **sparse** nonsymmetric matrix vector multiply F11XAF
Solution of real **sparse** simultaneous linear equations (coefficient matrix... F04AXF
Selected eigenvalues and eigenvectors of **sparse** symmetric eigenproblem (Black Box) F02FJF
Solution of real **sparse** symmetric linear system, conjugate gradient/Lanczos... F11JEF
Solution of real **sparse** symmetric linear system, conjugate gradient/Lanczos... F11JCF
Real **sparse** symmetric linear systems, diagnostic for F11GBF F11GCF
Real **sparse** symmetric linear systems, diagnostic for F11GEF F11GFF
Real **sparse** symmetric linear systems, pre-conditioned conjugate gradient... F11GBF
Real **sparse** symmetric linear systems, pre-conditioned conjugate gradient... F11GEF
Real **sparse** symmetric linear systems, set-up for F11GBF F11GAF
Real **sparse** symmetric linear systems, set-up for F11GEF F11GDF
...preconditioning matrix generated by applying SSOR to real **sparse** symmetric matrix F11JDF
Real **sparse** symmetric matrix, incomplete Cholesky factorization F11JAF
Real **sparse** symmetric matrix reorder routine F11ZBF
Real **sparse** symmetric matrix vector multiply F11XEF
Add scalar times real sparse vector to real **sparse** vector F06ETF
Gather real **sparse** vector F06EUF
Gather and set to zero real **sparse** vector F06EVF
Scatter real **sparse** vector F06EWF
Add scalar times complex sparse vector to complex **sparse** vector F06GTF
Gather complex **sparse** vector F06GUF
Gather and set to zero complex **sparse** vector F06GVF
Scatter complex **sparse** vector F06GWF
Dot product of two complex **sparse** vector, conjugated F06GSF
Add scalar times complex **sparse** vector to complex sparse vector F06GTF
Add scalar times real **sparse** vector to real sparse vector F06ETF
Dot product of two complex **sparse** vector, unconjugated F06GRF
Dot product of two real **sparse** vectors F06ERF
Apply plane rotation to two real **sparse** vectors F06EXF

LU factorization of real sparse matrix with known **sparsity** pattern F01BSF

PDEs, **spatial** interpolation with D03PCF, D03PEF, D03PFF, D03PHF,... D03PZF
PDEs, **spatial** interpolation with D03PDF or D03PJF D03PYF

Kendall/**Spearman** non-parametric rank correlation coefficients,... G02BPF
Kendall/**Spearman** non-parametric rank correlation coefficients,... G02BRF
Kendall/**Spearman** non-parametric rank correlation coefficients,... G02BNF
Kendall/**Spearman** non-parametric rank correlation coefficients,... G02BQF
Kendall/**Spearman** non-parametric rank correlation coefficients,... G02BSF

Least-squares polynomial fit, **special** data points (including interpolation) E02AFF
Approximation of **special** functions S

...coherency, bounds, univariate and bivariate (cross) **spectra** G13CEF
...phase, bounds, univariate and bivariate (cross) **spectra** G13CFF

Univariate time series, smoothed sample spectrum using **spectral** smoothing by the trapezium frequency (Daniell) window G13CBF
Multivariate time series, smoothed sample cross spectrum using **spectral** smoothing by the trapezium frequency (Daniell) window G13CDF

Multivariate time series, noise **spectrum**, bounds, impulse response function and its standard error G13CGF
Multivariate time series, cross amplitude **spectrum**, squared coherency, bounds, univariate and bivariate... G13CEF
Univariate time series, smoothed sample **spectrum** using rectangular, Bartlett, Tukey or Parzen lag window G13CAF
Multivariate time series, smoothed sample cross **spectrum** using rectangular, Bartlett, Tukey or Parzen lag window G13CCF
Univariate time series, smoothed sample **spectrum** using spectral smoothing by the trapezium frequency... G13CBF
Multivariate time series, smoothed sample cross **spectrum** using spectral smoothing by the trapezium frequency... G13CDF

...Sag–Szekeres method, general product region or n-**sphere** D01FDF
Multi-dimensional quadrature over an n-**sphere**, allowing for badly-behaved integrands D01JAF

QR or RQ factorization by sequence of plane rotations, real upper **spiked** matrix F06QSF
...by sequence of plane rotations, complex upper **spiked** matrix F06TSF
Compute upper **spiked** matrix by sequence of plane rotations, complex... F06TWF
Compute upper **spiked** matrix by sequence of plane rotations, real... F06QWF

Evaluation of fitted bicubic **spline** at a mesh of points E02DFF
Evaluation of fitted bicubic **spline** at a vector of points E02DEF

Least-squares cubic **spline** curve fit, automatic knot placement	E02BEF
Interpolating functions, fitting bicubic **spline**, data on rectangular grid	E01DAF
Evaluation of fitted cubic **spline**, definite integral	E02BDF
Least-squares curve cubic **spline** fit (including interpolation)	E02BAF
Evaluation of fitted cubic **spline**, function and derivatives	E02BCF
Evaluation of fitted cubic **spline**, function only	E02BBF
Interpolating functions, cubic **spline** interpolant, one variable	E01BAF
Fit cubic smoothing **spline**, smoothing parameter estimated	G10ACF
Fit cubic smoothing **spline**, smoothing parameter given	G10ABF
B-**splines**	E02
Least-squares surface fit, bicubic **splines**	E02DAF
Sort two-dimensional data into panels for fitting bicubic **splines**	E02ZAF
Least-squares surface fit by bicubic **splines** with automatic knot placement, data on rectangular grid	E02DCF
Least-squares surface fit by bicubic **splines** with automatic knot placement, scattered data	E02DDF
Linear non-singular Fredholm integral equation, second kind, **split** kernel	D05AAF
SPRINT package	D02M-N
...one iteration of Kalman filter, time-varying, **square** root covariance filter	G13EAF
...one iteration of Kalman filter, time-invariant, **square** root covariance filter	G13EBF
Compute **square** root of $(a^2 + b^2)$, real a and b	F06BNF
Square root of complex number	A02AAF
Convert real matrix between packed triangular and **square** storage schemes	F01ZAF
Convert complex matrix between packed triangular and **square** storage schemes	F01ZBF
Multivariate time series, cross amplitude spectrum, **squared** coherency, bounds, univariate and bivariate...	G13CEF
Computes Mahalanobis **squared** distances for group or pooled variance-covariance...	G03DBF
Multivariate time series, multiple **squared** partial autocorrelations	G13DBF
...boundary value problem, collocation and least-**squares**	D02TGF
Check user's routine for calculating Hessian of a sum of **squares**	E04YBF
Real general Gauss–Markov linear model (including weighted least-**squares**)	F04JLF
...Gauss–Markov linear model (including weighted least-**squares**)	F04KLF
Calculates R^2 and C_P values from residual sums of **squares**	G02ECF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm...	E04GDF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm...	E04GZF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm...	E04FCF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm...	E04FYF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm,...	E04HEF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and modified Newton algorithm,...	E04HYF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and quasi-Newton algorithm...	E04GBF
Unconstrained minimum of a sum of **squares**, combined Gauss–Newton and quasi-Newton algorithm,...	E04GYF
Least-**squares** cubic spline curve fit, automatic knot placement	E02BEF
Least-**squares** curve cubic spline fit (including interpolation)	E02BAF
Least-**squares** curve fit, by polynomials, arbitrary data points	E02ADF
Computes residual sums of **squares** for all possible linear regressions for a set of...	G02EAF
Computes sum of **squares** for contrast between means	G04DAF
Least-**squares** (if rank $= n$) or minimal least-squares (if rank $< n$)...	F04JGF
Least-squares (if rank $= n$) or minimal least-**squares** (if rank $< n$) solution of m real equations in n unknowns,...	F04JGF
Computes a weighted sum of **squares** matrix	G02BUF
Computes a correlation matrix from a sum of **squares** matrix	G02BWF
Update a weighted sum of **squares** matrix with a new observation	G02BTF
Minimum of a sum of **squares**, nonlinear constraints, sequential QP method,...	E04UNF
Least-**squares** polynomial fit, special data points (including interpolation)	E02AFF
Least-**squares** polynomial fit, values and derivatives may be...	E02AGF
Equality-constrained real linear least-**squares** problem	F04JMF
Equality-constrained complex linear least-**squares** problem	F04KMF
Convex QP problem or linearly-constrained linear least-**squares** problem (dense)	E04NCF
Sparse linear least-**squares** problem, m real equations in n unknowns	F04QAF
Covariance matrix for nonlinear least-**squares** problem (unconstrained)	E04YCF
Covariance matrix for linear least-**squares** problems, m real equations in n unknowns	F04YAF
ODEs, boundary value problem, collocation and least-**squares**, single nth-order linear equation	D02JAF
Least-**squares** solution of m real equations in n unknowns,...	F04AMF
Minimal least-**squares** solution of m real equations in n unknowns,...	F04JAF
Minimal least-**squares** solution of m real equations in n unknowns,...	F04JDF
Least-**squares** surface fit, bicubic splines	E02DAF
Least-**squares** surface fit by bicubic splines with automatic knot...	E02DCF
Least-**squares** surface fit by bicubic splines with automatic knot...	E02DDF
Least-**squares** surface fit by polynomials, data on lines	E02CAF
ODEs, boundary value problem, collocation and least-**squares**, system of first-order linear equations	D02JBF
...system, RGMRES, CGS or Bi-CGSTAB method, Jacobi or **SSOR** preconditioner (Black Box)	F11DEF
...RGMRES, CGS, Bi-CGSTAB or TFQMR method, Jacobi or **SSOR** preconditioner (Black Box)	F11DSF
...conjugate gradient/Lanczos method, Jacobi or **SSOR** preconditioner (Black Box)	F11JEF
...conjugate gradient/Lanczos method, Jacobi or **SSOR** preconditioner (Black Box)	F11JSF
...preconditioning matrix generated by applying **SSOR** to complex sparse Hermitian matrix	F11JRF
...preconditioning matrix generated by applying **SSOR** to complex sparse non-Hermitian matrix	F11DRF
...pre-conditioning matrix generated by applying **SSOR** to real sparse nonsymmetric matrix	F11DDF
...preconditioning matrix generated by applying **SSOR** to real sparse symmetric matrix	F11JDF
Performs the χ^2 goodness of fit test, for **standard** continuous distributions	G08CGF
Robust estimation, median, median absolute deviation, robust **standard** deviation	G07DAF
Computes quantities needed for range-mean or **standard** deviation-mean plot	G13AUF
Performs the one-sample Kolmogorov–Smirnov test for **standard** distributions	G08CBF
...of a general linear regression model and its **standard** error	G02DNF
Computes estimable function of a generalized linear model and its **standard** error	G02GNF
...spectrum, bounds, impulse response function and its **standard** error	G13CGF
...completely randomized design, treatment means and **standard** errors	G04BBF
...general row and column design, treatment means and **standard** errors	G04BCF
...complete factorial design, treatment means and **standard** errors	G04CAF
Multivariate time series, forecasts and their **standard** errors	G13DJF
Multivariate time series, updates forecasts and their **standard** errors	G13DKF
Estimates and **standard** errors of parameters of a general linear model...	G02GKF
Estimates and **standard** errors of parameters of a general linear regression model...	G02DKF
...generalized eigenproblem $Ax = \lambda Bx$ to **standard** form $Cy = \lambda y$, such that C has the same bandwidth as A	F08UEF
...generalized eigenproblem $Ax = \lambda Bx$ to **standard** form $Cy = \lambda y$, such that C has the same bandwidth as A	F08USF
Reduction to **standard** form, generalized real symmetric-definite banded...	F01BVF
Reduction to **standard** form of complex Hermitian-definite generalized...	F08SSF
Reduction to **standard** form of complex Hermitian-definite generalized...	F08TSF
Reduction to **standard** form of real symmetric-definite generalized...	F08SEF
Reduction to **standard** form of real symmetric-definite generalized...	F08TEF
Robust regression, **standard** M-estimates	G02HAF
Computes probabilities for the **standard** Normal distribution	G01EAF
Computes deviates for the **standard** Normal distribution	G01FAF
Robust estimation, M-estimates for location and scale parameters, **standard** weight functions	G07DBF
Calculates **standardized** residuals and influence statistics	G02FAF
Produces **standardized** values (z-scores) for a data matrix	G03ZAF
Computes probability for the Studentized range **statistic**	G01EMF
Computes bounds for the significance of a Durbin–Watson **statistic**	G01EPF
Computes deviates for the Studentized range **statistic**	G01FMF
Computes Durbin–Watson test **statistic**	G02FCF
...set of classification factors using selected **statistic**	G11BAF

Computes t-test	**statistic** for a difference in means between two Normal populations,...	G07CAF
Computes test	**statistic** for equality of within-group covariance matrices and...	G03DAF
Computes the exact probabilities for the Mann–Whitney U	**statistic**, no ties in pooled sample	G08AJF
Computes the exact probabilities for the Mann–Whitney U	**statistic**, ties in pooled sample	G08AKF
Order	**statistics**	G01D
...quadratic forms in Normal variables, and related	**statistics**	G01NBF
Calculates standardized residuals and influence	**statistics**	G02FAF
Multivariate time series, sample partial lag correlation matrices, χ^2	**statistics** and significance levels	G13DNF
χ^2	**statistics** for two-way contingency table	G11AAF
Constructs a	**stem** and leaf plot	G01ARF
Transportation problem, modified	**'stepping stone'** method	H03ABF
Explicit ODEs,	**stiff** IVP, banded Jacobian (comprehensive)	D02NCF
Implicit/algebraic ODEs,	**stiff** IVP, banded Jacobian (comprehensive)	D02NHF
ODEs,	**stiff** IVP, BDF method, until function of solution is zero,...	D02EJF
Explicit ODEs,	**stiff** IVP, full Jacobian (comprehensive)	D02NBF
Implicit/algebraic ODEs,	**stiff** IVP, full Jacobian (comprehensive)	D02NGF
Explicit ODEs,	**stiff** IVP (reverse communication, comprehensive)	D02NMF
Implicit/algebraic ODEs,	**stiff** IVP (reverse communication, comprehensive)	D02NNF
Explicit ODEs,	**stiff** IVP, sparse Jacobian (comprehensive)	D02NDF
Implicit/algebraic ODEs,	**stiff** IVP, sparse Jacobian (comprehensive)	D02NJF
Computes probability for the	**Studentized** range statistic	G01EMF
Computes deviates for the	**Studentized** range statistic	G01FMF
Computes probabilities for	**Student's** t-distribution	G01EBF
Computes deviates for	**Student's** t-distribution	G01FBF
Computes probabilities for the non-central	**Student's** t-distribution	G01GBF
Pseudo-random real numbers,	**Student's** t-distribution	G05DJF
Second-order	**Sturm–Liouville** problem, regular system, finite range,...	D02KAF
Second-order	**Sturm–Liouville** problem, regular/singular system,...	D02KEF
Second-order	**Sturm–Liouville** problem, regular/singular system,...	D02KDF
Two-way analysis of variance, hierarchical classification,	**subgroups** of unequal size	G04AGF
Basic Linear Algebra	**Subprograms**	F06
	Sum absolute values of complex vector elements	F06JKF
	Sum absolute values of real vector elements	F06EKF
	Sum of a Chebyshev series	C06DBF
Check user's routine for calculating Hessian of a	**sum** of squares	E04YBF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04GDF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04GZF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04FCF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04FYF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04HEF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and modified Newton...	E04HYF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and quasi-Newton...	E04GBF
Unconstrained minimum of a	**sum** of squares, combined Gauss–Newton and quasi-Newton...	E04GYF
Computes	**sum** of squares for contrast between means	G04DAF
Computes a weighted	**sum** of squares matrix	G02BUF
Computes a correlation matrix from a	**sum** of squares matrix	G02BWF
Update a weighted	**sum** of squares matrix with a new observation	G02BTF
Minimum of a	**sum** of squares, nonlinear constraints, sequential QP method,...	E04UNF
	Sum or difference of two complex matrices,...	F01CWF
	Sum or difference of two real matrices,...	F01CTF
Computes a five-point	**summary** (median, hinges and extremes)	G01ALF
	Summation of Series	C06
Calculates R^2 and C_P values from residual	**sums** of squares	G02ECF
Computes residual	**sums** of squares for all possible linear regressions for...	G02EAF
Least-squares	**surface** fit, bicubic splines	E02DAF
Least-squares	**surface** fit by bicubic splines with automatic knot placement,...	E02DCF
Least-squares	**surface** fit by bicubic splines with automatic knot placement,...	E02DDF
Least-squares	**surface** fit by polynomials, data on lines	E02CAF
Computes Kaplan–Meier (product-limit) estimates of	**survival** probabilities	G12AAF
QR factorization, possibly followed by	**SVD**	F02WDF
	SVD of complex matrix (Black Box)	F02XEF
	SVD of complex upper triangular matrix (Black Box)	F02XUF
	SVD of real bidiagonal matrix reduced from complex general matrix	F08MSF
	SVD of real bidiagonal matrix reduced from real general matrix	F08MEF
	SVD of real matrix (Black Box)	F02WEF
	SVD of real upper triangular matrix (Black Box)	F02WUF
	Swap two complex vectors	F06GGF
	Swap two real vectors	F06EGF
Solve real	**Sylvester** matrix equation $AX + XB = C$, A and B are...	F08QHF
Solve complex	**Sylvester** matrix equation $AX + XB = C$, A and B are...	F08QVF
Matrix-vector product, real	**symmetric** band matrix	F06PDF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real	**symmetric** band matrix	F06REF
...Frobenius norm, largest absolute element, complex	**symmetric** band matrix	F06UHF
Orthogonal reduction of real	**symmetric** band matrix to symmetric tridiagonal form	F08HEF
All eigenvalues and optionally all eigenvectors of real	**symmetric** band matrix, using divide and conquer	F08HCF
Selected eigenvalues and eigenvectors of sparse	**symmetric** eigenproblem (Black Box)	F02FJF
Bunch–Kaufman factorization of real	**symmetric** indefinite matrix	F07MDF
Estimate condition number of real	**symmetric** indefinite matrix, matrix already factorized by F07MDF	F07MGF
Inverse of real	**symmetric** indefinite matrix, matrix already factorized by F07MDF	F07MJF
Estimate condition number of real	**symmetric** indefinite matrix, matrix already factorized by F07PDF,...	F07PGF
Inverse of real	**symmetric** indefinite matrix, matrix already factorized by F07PDF,...	F07PJF
Bunch–Kaufman factorization of real	**symmetric** indefinite matrix, packed storage	F07PDF
Refined solution with error bounds of real	**symmetric** indefinite system of linear equations,...	F07MHF
Solution of real	**symmetric** indefinite system of linear equations,...	F07MEF
Solution of real	**symmetric** indefinite system of linear equations,...	F07PEF
Refined solution with error bounds of real	**symmetric** indefinite system of linear equations,...	F07PHF
Solution of real sparse	**symmetric** linear system, conjugate gradient/Lanczos method,...	F11JEF
Solution of real sparse	**symmetric** linear system, conjugate gradient/Lanczos method,...	F11JCF
Real sparse	**symmetric** linear systems, diagnostic for F11GBF	F11GCF
Real sparse	**symmetric** linear systems, diagnostic for F11GEF	F11GFF
Real sparse	**symmetric** linear systems, pre-conditioned conjugate gradient or...	F11GBF
Real sparse	**symmetric** linear systems, pre-conditioned conjugate gradient or...	F11GEF
Real sparse	**symmetric** linear systems, set-up for F11GBF	F11GAF
Real sparse	**symmetric** linear systems, set-up for F11GEF	F11GDF
Apply real similarity rotation to 2 by 2	**symmetric** matrix	F06BHF
Compute eigenvalue of 2 by 2 real	**symmetric** matrix	F06BPF
Matrix-vector product, real	**symmetric** matrix	F06PCF

Rank-1 update, real **symmetric** matrix F06PPF
Rank-2 update, real **symmetric** matrix F06PRF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real **symmetric** matrix F06RCF
...norm, largest absolute element, complex **symmetric** matrix F06UFF
Rank-k update of real **symmetric** matrix F06YPF
Rank-$2k$ update of real **symmetric** matrix F06YRF
Rank-k update of complex **symmetric** matrix F06ZUF
Rank-$2k$ update of complex **symmetric** matrix F06ZWF
Bunch–Kaufman factorization of complex **symmetric** matrix F07NRF
...matrix generated by applying SSOR to real sparse **symmetric** matrix F11JDF
Orthogonal similarity transformation of real **symmetric** matrix as a sequence of plane rotations F06QMF
All eigenvalues and eigenvectors of real **symmetric** matrix (Black Box) F02FAF
Selected eigenvalues and eigenvectors of real **symmetric** matrix (Black Box) F02FCF
Real sparse **symmetric** matrix, incomplete Cholesky factorization F11JAF
Estimate condition number of complex **symmetric** matrix, matrix already factorized by F07NRF F07NUF
Inverse of complex **symmetric** matrix, matrix already factorized by F07NRF F07NWF
Estimate condition number of complex **symmetric** matrix, matrix already factorized by F07QRF,... F07QUF
Inverse of complex **symmetric** matrix, matrix already factorized by F07QRF,... F07QWF
Matrix-matrix product, one complex **symmetric** matrix, one complex rectangular matrix F06ZTF
Matrix-matrix product, one real **symmetric** matrix, one real rectangular matrix F06YCF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real **symmetric** matrix, packed storage F06RDF
...Frobenius norm, largest absolute element, complex **symmetric** matrix, packed storage F06UGF
Bunch–Kaufman factorization of complex **symmetric** matrix, packed storage F07QRF
All eigenvalues and optionally all eigenvectors of real **symmetric** matrix, packed storage, using divide and conquer F08GCF
Real sparse **symmetric** matrix reorder routine F11ZBF
Orthogonal reduction of real **symmetric** matrix to symmetric tridiagonal form F08FEF
Orthogonal reduction of real **symmetric** matrix to symmetric tridiagonal form, packed storage F08GEF
All eigenvalues and optionally all eigenvectors of real **symmetric** matrix, using divide and conquer F08FCF
...symmetric tridiagonal matrix, reduced from real **symmetric** matrix using implicit QL or QR F08JEF
Real sparse **symmetric** matrix vector multiply F11XEF
Matrix-vector product, real **symmetric** packed matrix F06PEF
Rank-1 update, real **symmetric** packed matrix F06PQF
Rank-2 update, real **symmetric** packed matrix F06PSF
Apply real **symmetric** plane rotation to two vectors F06FPF
Cholesky factorization of real **symmetric** positive-definite band matrix F07HDF
Computes a split Cholesky factorization of real **symmetric** positive-definite band matrix A F08UFF
Determinant of real **symmetric** positive-definite band matrix (Black Box) F03ACF
Estimate condition number of real **symmetric** positive-definite band matrix,... F07HGF
Refined solution with error bounds of real **symmetric** positive-definite band system of linear equations,... F07HHF
Solution of real **symmetric** positive-definite band system of linear equations,... F07HEF
Solution of real **symmetric** positive-definite banded simultaneous linear equations... F04ACF
Inverse of real **symmetric** positive-definite matrix F01ADF
LL^T factorization and determinant of real **symmetric** positive-definite matrix F03AEF
Cholesky factorization of real **symmetric** positive-definite matrix F07FDF
...positive-definite tridiagonal matrix, reduced from real **symmetric** positive-definite matrix F08JGF
Determinant of real **symmetric** positive-definite matrix (Black Box) F03ABF
Estimate condition number of real **symmetric** positive-definite matrix, matrix already factorized... F07FGF
Inverse of real **symmetric** positive-definite matrix, matrix already factorized... F07FJF
Estimate condition number of real **symmetric** positive-definite matrix, matrix already factorized... F07GGF
Inverse of real **symmetric** positive-definite matrix, matrix already factorized... F07GJF
Cholesky factorization of real **symmetric** positive-definite matrix, packed storage F07GDF
Inverse of real **symmetric** positive-definite matrix using iterative refinement F01ABF
Solution of real **symmetric** positive-definite simultaneous linear equations... F04AGF
Solution of real **symmetric** positive-definite simultaneous linear equations,... F04ASF
Solution of real **symmetric** positive-definite simultaneous linear equations using... F04AFF
Solution of real **symmetric** positive-definite simultaneous linear equations with... F04ABF
Refined solution with error bounds of real **symmetric** positive-definite system of linear equations,... F07FHF
Solution of real **symmetric** positive-definite system of linear equations,... F07FEF
Solution of real **symmetric** positive-definite system of linear equations,... F07GEF
Refined solution with error bounds of real **symmetric** positive-definite system of linear equations,... F07GHF
Update solution of the Yule–Walker equations for real **symmetric** positive-definite Toeplitz matrix F04MEF
Solution of the Yule–Walker equations for real **symmetric** positive-definite Toeplitz matrix,... F04FEF
Update solution of real **symmetric** positive-definite Toeplitz system F04MFF
Solution of real **symmetric** positive-definite Toeplitz system,... F04FFF
All eigenvalues and eigenvectors of real **symmetric** positive-definite tridiagonal matrix, reduced... F08JUF
All eigenvalues and eigenvectors of real **symmetric** positive-definite tridiagonal matrix, reduced... F08JGF
Solution of real **symmetric** positive-definite tridiagonal simultaneous linear... F04FAF
LDL^T factorization of real **symmetric** positive-definite variable-bandwidth matrix F01MCF
Solution of real **symmetric** positive-definite variable-bandwidth simultaneous linear... F04MCF
Refined solution with error bounds of complex **symmetric** system of linear equations, multiple right-hand sides F07NVF
Solution of complex **symmetric** system of linear equations, multiple right-hand sides,... F07NSF
Solution of complex **symmetric** system of linear equations, multiple right-hand sides,... F07QSF
Refined solution with error bounds of complex **symmetric** system of linear equations, multiple right-hand sides,... F07QVF
Orthogonal reduction of real symmetric matrix to **symmetric** tridiagonal form F08FEF
Unitary reduction of complex Hermitian matrix to real **symmetric** tridiagonal form F08FSF
Orthogonal reduction of real symmetric band matrix to **symmetric** tridiagonal form F08HEF
Unitary reduction of complex Hermitian band matrix to real **symmetric** tridiagonal form F08HSF
Orthogonal reduction of real symmetric matrix to **symmetric** tridiagonal form, packed storage F08GEF
Unitary reduction of complex Hermitian matrix to real **symmetric** tridiagonal form, packed storage F08GSF
Selected eigenvalues of real **symmetric** tridiagonal matrix by bisection F08JJF
Selected eigenvectors of real **symmetric** tridiagonal matrix by inverse iteration,... F08JXF
Selected eigenvectors of real **symmetric** tridiagonal matrix by inverse iteration,... F08JKF
All eigenvalues and eigenvectors of real **symmetric** tridiagonal matrix, reduced from complex Hermitian... F08JSF
All eigenvalues and eigenvectors of real **symmetric** tridiagonal matrix, reduced from real symmetric matrix... F08JEF
All eigenvalues of real **symmetric** tridiagonal matrix, root-free variant of QL or QR F08JFF
All eigenvalues and optionally all eigenvectors of real **symmetric** tridiagonal matrix, using divide and conquer F08JCF

Reduction to standard form, generalized real **symmetric-definite** banded eigenproblem F01BVF
Reduction of real **symmetric-definite** banded generalized eigenproblem $Ax = \lambda Bx$... F08UEF
All eigenvalues of generalized banded real **symmetric-definite** eigenproblem (Black Box) F02FHF
Reduction to standard form of real **symmetric-definite** generalized eigenproblem $Ax = \lambda Bx$,... F08SEF
Reduction to standard form of real **symmetric-definite** generalized eigenproblem $Ax = \lambda Bx$,... F08TEF
All eigenvalues and eigenvectors of real **symmetric-definite** generalized problem (Black Box) F02FDF

Degenerate **symmetrised** elliptic integral of 1st kind $R_C(x, y)$ S21BAF
Symmetrised elliptic integral of 1st kind $R_F(x, y, z)$ S21BBF
Symmetrised elliptic integral of 2nd kind $R_D(x, y, z)$ S21BCF
Symmetrised elliptic integral of 3rd kind $R_J(x, y, z, r)$ S21BDF

Update solution of real symmetric positive-definite Toeplitz **system** F04MFF
Solution of real sparse symmetric linear **system**, conjugate gradient/Lanczos method, Jacobi or... F11JEF
Solution of complex sparse Hermitian linear **system**, conjugate gradient/Lanczos method, Jacobi or... F11JSF
Solution of real sparse symmetric linear **system**, conjugate gradient/Lanczos method,... F11JCF
Solution of complex sparse Hermitian linear **system**, conjugate gradient/Lanczos method,... F11JQF
Second-order Sturm–Liouville problem, regular **system**, finite range, eigenvalue only D02KAF
Second-order Sturm–Liouville problem, regular/singular **system**, finite/infinite range, eigenvalue and eigenfunction,... D02KEF
Second-order Sturm–Liouville problem, regular/singular **system**, finite/infinite range, eigenvalue only,... D02KDF
Solution of linear **system** involving incomplete Cholesky preconditioning matrix... F11JBF
Solution of complex linear **system** involving incomplete Cholesky preconditioning matrix... F11JPF
Solution of linear **system** involving incomplete LU preconditioning matrix... F11DBF
Solution of complex linear **system** involving incomplete LU preconditioning matrix... F11DPF
Solution of linear **system** involving preconditioning matrix generated by applying... F11JRF
Solution of linear **system** involving preconditioning matrix generated by applying... F11DRF
Solution of linear **system** involving pre-conditioning matrix generated by applying... F11DDF
Solution of linear **system** involving preconditioning matrix generated by applying... F11JDF
General **system** of convection-diffusion PDEs with source terms in... D03PLF

General **system** of convection-diffusion PDEs with source terms in...	D03PSF
General **system** of convection-diffusion PDEs with source terms in...	D03PFF
System of equations, complex triangular band matrix	F06SKF
System of equations, complex triangular matrix	F06SJF
System of equations, complex triangular packed matrix	F06SLF
System of equations, real triangular band matrix	F06PKF
System of equations, real triangular matrix	F06PJF
System of equations, real triangular packed matrix	F06PLF
Solves **system** of equations with multiple right-hand sides,...	F06ZJF
Solves **system** of equations with multiple right-hand sides,...	F06YJF
ODEs, boundary value problem, collocation and least-squares, **system** of first-order linear equations	D02JBF
General **system** of first-order PDEs, coupled DAEs, method of lines,...	D03PKF
General **system** of first-order PDEs, coupled DAEs, method of lines,...	D03PRF
General **system** of first-order PDEs, method of lines, Keller box...	D03PEF
Refined solution with error bounds of real **system** of linear equations, multiple right-hand sides	F07AHF
Refined solution with error bounds of complex **system** of linear equations, multiple right-hand sides	F07AVF
Refined solution with error bounds of real band **system** of linear equations, multiple right-hand sides	F07BHF
Refined solution with error bounds of complex band **system** of linear equations, multiple right-hand sides	F07BVF
...error bounds of real symmetric positive-definite **system** of linear equations, multiple right-hand sides	F07FHF
...bounds of complex Hermitian positive-definite **system** of linear equations, multiple right-hand sides	F07FVF
...bounds of real symmetric positive-definite band **system** of linear equations, multiple right-hand sides	F07HHF
...bounds of complex Hermitian positive-definite band **system** of linear equations, multiple right-hand sides	F07HVF
Refined solution with error bounds of real symmetric indefinite **system** of linear equations, multiple right-hand sides	F07MHF
Refined solution with error bounds of complex Hermitian indefinite **system** of linear equations, multiple right-hand sides	F07MVF
Refined solution with error bounds of complex symmetric **system** of linear equations, multiple right-hand sides	F07NVF
Solution of real triangular **system** of linear equations, multiple right-hand sides	F07TEF
Error bounds for solution of real triangular **system** of linear equations, multiple right-hand sides	F07THF
Solution of complex triangular **system** of linear equations, multiple right-hand sides	F07TSF
Error bounds for solution of complex triangular **system** of linear equations, multiple right-hand sides	F07TVF
Solution of real band triangular **system** of linear equations, multiple right-hand sides	F07VEF
Error bounds for solution of real band triangular **system** of linear equations, multiple right-hand sides	F07VHF
Solution of complex band triangular **system** of linear equations, multiple right-hand sides	F07VSF
Error bounds for solution of complex band triangular **system** of linear equations, multiple right-hand sides	F07VVF
Solution of real **system** of linear equations, multiple right-hand sides,...	F07AEF
Solution of complex **system** of linear equations, multiple right-hand sides,...	F07ASF
Solution of real band **system** of linear equations, multiple right-hand sides,...	F07BEF
Solution of complex band **system** of linear equations, multiple right-hand sides,...	F07BSF
Solution of real symmetric positive-definite **system** of linear equations, multiple right-hand sides,...	F07FEF
Solution of complex Hermitian positive-definite **system** of linear equations, multiple right-hand sides,...	F07FSF
Solution of real symmetric positive-definite **system** of linear equations, multiple right-hand sides,...	F07GEF
Solution of complex Hermitian positive-definite **system** of linear equations, multiple right-hand sides,...	F07GSF
Solution of real symmetric positive-definite band **system** of linear equations, multiple right-hand sides,...	F07HEF
Solution of complex Hermitian positive-definite band **system** of linear equations, multiple right-hand sides,...	F07HSF
Solution of real symmetric indefinite **system** of linear equations, multiple right-hand sides,...	F07MEF
Solution of complex Hermitian indefinite **system** of linear equations, multiple right-hand sides,...	F07MSF
Solution of complex symmetric **system** of linear equations, multiple right-hand sides,...	F07NSF
Solution of real symmetric indefinite **system** of linear equations, multiple right-hand sides,...	F07PEF
Solution of complex Hermitian indefinite **system** of linear equations, multiple right-hand sides,...	F07PSF
Solution of complex symmetric **system** of linear equations, multiple right-hand sides,...	F07QSF
...error bounds of real symmetric positive-definite **system** of linear equations, multiple right-hand sides, packed storage	F07GHF
...bounds of complex Hermitian positive-definite **system** of linear equations, multiple right-hand sides, packed storage	F07GVF
Refined solution with error bounds of real symmetric indefinite **system** of linear equations, multiple right-hand sides, packed storage	F07PHF
Refined solution with error bounds of complex Hermitian indefinite **system** of linear equations, multiple right-hand sides, packed storage	F07PVF
Refined solution with error bounds of complex symmetric **system** of linear equations, multiple right-hand sides, packed storage	F07QVF
Solution of real triangular **system** of linear equations, multiple right-hand sides, packed storage	F07UEF
Error bounds for solution of real triangular **system** of linear equations, multiple right-hand sides, packed storage	F07UHF
Solution of complex triangular **system** of linear equations, multiple right-hand sides, packed storage	F07USF
Error bounds for solution of complex triangular **system** of linear equations, multiple right-hand sides, packed storage	F07UVF
Solution of **system** of nonlinear equations using first derivatives (comprehensive)	C05PCF
Solution of **system** of nonlinear equations using first derivatives (easy-to-use)	C05PBF
Solution of **system** of nonlinear equations using first derivatives...	C05PDF
Solution of **system** of nonlinear equations using function values only...	C05NCF
Solution of **system** of nonlinear equations using function values only...	C05NBF
Solution of **system** of nonlinear equations using function values only...	C05NDF
General **system** of parabolic PDEs, coupled DAEs, method of lines,...	D03PJF
General **system** of parabolic PDEs, coupled DAEs, method of lines,...	D03PHF
General **system** of parabolic PDEs, coupled DAEs, method of lines,...	D03PPF
General **system** of parabolic PDEs, method of lines, Chebyshev C^0...	D03PDF
General **system** of parabolic PDEs, method of lines, finite differences,...	D03PCF
General **system** of second-order PDEs, method of lines, finite differences,...	D03RAF
General **system** of second-order PDEs, method of lines, finite differences,...	D03RBF
Solution of real symmetric positive-definite Toeplitz **system**, one right-hand side	F04FFF
Solution of complex sparse non-Hermitian linear **system**, RGMRES, CGS, Bi-CGSTAB or TFQMR method,...	F11DSF
Solution of complex sparse non-Hermitian linear **system**, RGMRES, CGS, Bi-CGSTAB or TFQMR method,...	F11DQF
Solution of real sparse nonsymmetric linear **system**, RGMRES, CGS or Bi-CGSTAB method, Jacobi or SSOR...	F11DEF
Solution of real sparse nonsymmetric linear **system**, RGMRES, CGS or Bi-CGSTAB method,...	F11DCF
Real sparse nonsymmetric linear **systems**, diagnostic for F11BBF	F11BCF
Real sparse nonsymmetric linear **systems**, diagnostic for F11BEF	F11BFF
Complex sparse non-Hermitian linear **systems**, diagnostic for F11BSF	F11BTF
Real sparse symmetric linear **systems**, diagnostic for F11GBF	F11GCF
Real sparse symmetric linear **systems**, diagnostic for F11GEF	F11GFF
Real sparse nonsymmetric linear **systems**, incomplete LU factorization	F11DAF
Complex sparse non-Hermitian linear **systems**, incomplete LU factorization	F11DNF
Real sparse nonsymmetric linear **systems**, line Jacobi preconditioner	F11DKF
Real sparse symmetric linear **systems**, pre-conditioned conjugate gradient or Lanczos	F11GBF
Real sparse symmetric linear **systems**, pre-conditioned conjugate gradient or Lanczos, threadsafe	F11GEF
Real sparse nonsymmetric linear **systems**, preconditioned RGMRES, CGS, Bi-CGSTAB...	F11BEF
Complex sparse non-Hermitian linear **systems**, preconditioned RGMRES, CGS, Bi-CGSTAB...	F11BSF
Real sparse nonsymmetric linear **systems**, preconditioned RGMRES, CGS or Bi-CGSTAB	F11BBF
Real sparse nonsymmetric linear **systems**, set-up for F11BBF	F11BAF
Real sparse nonsymmetric linear **systems**, set-up for F11BEF	F11BDF
Complex sparse non-Hermitian linear **systems**, set-up for F11BSF	F11BRF
Real sparse symmetric linear **systems**, set-up for F11GBF	F11GAF
Real sparse symmetric linear **systems**, set-up for F11GEF	F11GDF
Multi-dimensional quadrature, Sag–**Szekeres** method, general product region or n-sphere	D01FDF
Computes probabilities for Student's t-**distribution**	G01EBF
Computes deviates for Student's t-**distribution**	G01FBF
Computes probabilities for the non-central Student's t-**distribution**	G01GBF
Pseudo-random real numbers, Student's t-**distribution**	G05DJF
Computes t-**test** statistic for a difference in means between two Normal...	G07CAF
...skewness, kurtosis, etc, one variable, from frequency **table**	G01ADF
χ^2 statistics for two-way contingency **table**	G11AAF
Two-way contingency **table** analysis, with χ^2/Fisher's exact test	G01AFF
Computes marginal tables for multiway **table** computed by G11BAF or G11BBF	G11BCF
Frequency **table** from raw data	G01AEF
Computes multiway **table** from set of classification factors using given percentile/quantile	G11BBF
Computes multiway **table** from set of classification factors using selected statistic	G11BAF
Contingency **table**, latent variable model for binary data	G11SAF
Computes marginal **tables** for multiway table computed by G11BAF or G11BBF	G11BCF

Computes upper and lower **tail** probabilities and probability density function for...		G01EEF
Computes lower **tail** probability for a linear combination of (central) χ^2 variables		G01JDF
	$\tan x$	S07AAF
Generate real plane rotation, storing **tangent**		F06BAF
Recover cosine and sine from given real **tangent**		F06BCF
Generate complex plane rotation, storing **tangent**, real cosine		F06CAF
Recover cosine and sine from given complex **tangent**, real cosine		F06CCF
Generate complex plane rotation, storing **tangent**, real sine		F06CBF
Recover cosine and sine from given complex **tangent**, real sine		F06CDF
	$\tanh x$	S10AAF
Two-way contingency table analysis, with χ^2/Fisher's exact **test**		G01AFF
Performs the Wilcoxon one-sample (matched pairs) signed rank **test**		G08AGF
Performs the two-sample Kolmogorov–Smirnov **test**		G08CDF
Performs the one-sample Kolmogorov–Smirnov **test** for a user-supplied distribution		G08CCF
Shapiro and Wilk's W **test** for Normality		G01DDF
Performs the runs up or runs down **test** for randomness		G08EAF
Performs the pairs (serial) **test** for randomness		G08EBF
Performs the triplets **test** for randomness		G08ECF
Performs the gaps **test** for randomness		G08EDF
Performs the χ^2 goodness of fit **test**, for standard continuous distributions		G08CGF
Performs the one-sample Kolmogorov–Smirnov **test** for standard distributions		G08CBF
Performs the Cochran Q **test** on cross-classified binary data		G08ALF
Performs the Mann–Whitney U **test** on two independent samples		G08AHF
Sign **test** on two paired samples		G08AAF
Median **test** on two samples of unequal size		G08ACF
Computes Durbin–Watson **test** statistic		G02FCF
Computes t-**test** statistic for a difference in means between two Normal...		G07CAF
Computes **test** statistic for equality of within-group covariance matrices...		G03DAF
Dispersion **tests**		G08
Goodness of fit **tests**		G08
Location **tests**		G08
Non-parametric **tests**		G08
Mood's and David's **tests** on two samples of unequal size		G08BAF
...systems, preconditioned RGMRES, CGS, Bi-CGSTAB or **TFQMR** method		F11BEF
...systems, preconditioned RGMRES, CGS, Bi-CGSTAB or **TFQMR** method		F11BSF
...non-Hermitian linear system, RGMRES, CGS, Bi-CGSTAB or **TFQMR** method, Jacobi or SSOR preconditioner (Black Box)		F11DSF
...non-Hermitian linear system, RGMRES, CGS, Bi-CGSTAB or **TFQMR** method, preconditioner computed by F11DNF (Black Box)		F11DQF
Elliptic PDE, Helmholtz equation, **three-dimensional** Cartesian co-ordinates		D03FAF
Three-dimensional complex discrete Fourier transform		C06FXF
Three-dimensional complex discrete Fourier transform, complex...		C06PXF
...finite difference equations by SIP for seven-point **three-dimensional** molecule, iterate to convergence		D03ECF
...finite difference equations by SIP, seven-point **three-dimensional** molecule, one iteration		D03UBF
...probabilities for the Mann–Whitney U statistic, no **ties** in pooled sample		G08AJF
...probabilities for the Mann–Whitney U statistic, **ties** in pooled sample		G08AKF
Compare two character strings representing date and **time**		X05ACF
Return the CPU **time**		X05BAF
Return date and **time** as an array of integers		X05AAF
Multivariate **time** series, cross amplitude spectrum, squared coherency,...		G13CEF
Multivariate **time** series, cross-correlations		G13BCF
Univariate **time** series, diagnostic checking of residuals,...		G13ASF
Multivariate **time** series, diagnostic checking of residuals,...		G13DSF
Multivariate **time** series, differences and/or transforms...		G13DLF
Multivariate **time** series, estimation of multi-input model		G13BEF
Multivariate **time** series, estimation of VARMA model		G13DCF
Univariate **time** series, estimation, seasonal ARIMA model (comprehensive)		G13AEF
Univariate **time** series, estimation, seasonal ARIMA model (easy-to-use)		G13AFF
Multivariate **time** series, filtering by a transfer function model		G13BBF
Multivariate **time** series, filtering (pre-whitening) by an ARIMA model		G13BAF
Univariate **time** series, forecasting from state set		G13AHF
Multivariate **time** series, forecasting from state set of multi-input model		G13BHF
Multivariate **time** series, forecasts and their standard errors		G13DJF
Generates a realisation of a multivariate **time** series from a VARMA model		G05HDF
Multivariate **time** series, gain, phase, bounds, univariate and bivariate...		G13CFF
Set up reference vector for univariate ARMA **time** series model		G05EGF
Generate next term from reference vector for ARMA **time** series model		G05EWF
Multivariate **time** series, multiple squared partial autocorrelations		G13DBF
Multivariate **time** series, noise spectrum, bounds, impulse response function...		G13CGF
Univariate **time** series, partial autocorrelations from autocorrelations		G13ACF
Multivariate **time** series, partial autoregression matrices		G13DPF
Multivariate **time** series, preliminary estimation of transfer function model		G13BDF
Univariate **time** series, preliminary estimation, seasonal ARIMA model		G13ADF
Univariate **time** series, sample autocorrelation function		G13ABF
Multivariate **time** series, sample cross-correlation or cross-covariance matrices		G13DMF
Multivariate **time** series, sample partial lag correlation matrices, χ^2 statistics...		G13DNF
Univariate **time** series, seasonal and non-seasonal differencing		G13AAF
Multivariate **time** series, smoothed sample cross spectrum using rectangular,...		G13CCF
Multivariate **time** series, smoothed sample cross spectrum using...		G13CDF
Univariate **time** series, smoothed sample spectrum using...		G13CAF
Univariate **time** series, smoothed sample spectrum using...		G13CBF
Multivariate **time** series, state set and forecasts from...		G13BJF
Univariate **time** series, state set and forecasts, from...		G13AJF
Univariate **time** series, update state set for forecasting		G13AGF
Multivariate **time** series, update state set for forecasting from...		G13BGF
Multivariate **time** series, updates forecasts and their standard errors		G13DKF
Convert array of integers representing date and **time** to character string		X05ABF
Combined measurement and **time** update, one iteration of Kalman filter, time-invariant,...		G13EBF
Combined measurement and **time** update, one iteration of Kalman filter, time-varying,...		G13EAF
...time update, one iteration of Kalman filter, **time-invariant**, square root covariance filter		G13EBF
...time update, one iteration of Kalman filter, **time-varying**, square root covariance filter		G13EAF
...equations for real symmetric positive-definite **Toeplitz** matrix		F04MEF
...equations for real symmetric positive-definite **Toeplitz** matrix, one right-hand side		F04FEF
Update solution of real symmetric positive-definite **Toeplitz** system		F04MFF
Solution of real symmetric positive-definite **Toeplitz** system, one right-hand side		F04FFF
Multivariate time series, filtering by a **transfer** function model		G13BBF
Multivariate time series, preliminary estimation of **transfer** function model		G13BDF
Two-dimensional complex discrete Fourier **transform**		C06FUF
Three-dimensional complex discrete Fourier **transform**		C06FXF
Discrete sine **transform**		C06HAF
Discrete cosine **transform**		C06HBF
Discrete quarter-wave sine **transform**		C06HCF
Discrete quarter-wave cosine **transform**		C06HDF
...function $1/(x-c)$, Cauchy principal value (Hilbert **transform**)		D01AQF

Evaluate inverse Laplace **transform** as computed by C06LBF	C06LCF
Single one-dimensional complex discrete Fourier **transform**, complex data format	C06PCF
Two-dimensional complex discrete Fourier **transform**, complex data format	C06PUF
Three-dimensional complex discrete Fourier **transform**, complex data format	C06PXF
Inverse Laplace **transform**, Crump's method	C06LAF
Discrete sine **transform** (easy-to-use)	C06RAF
Discrete cosine **transform** (easy-to-use)	C06RBF
Discrete quarter-wave sine **transform** (easy-to-use)	C06RCF
Discrete quarter-wave cosine **transform** (easy-to-use)	C06RDF
Transform eigenvectors of complex balanced matrix to...	F08NWF
Transform eigenvectors of real balanced matrix to...	F08NJF
Single one-dimensional real discrete Fourier **transform**, extra workspace for greater speed	C06FAF
Single one-dimensional Hermitian discrete Fourier **transform**, extra workspace for greater speed	C06FBF
Single one-dimensional complex discrete Fourier **transform**, extra workspace for greater speed	C06FCF
Inverse Laplace **transform**, modified Weeks' method	C06LBF
Single one-dimensional real discrete Fourier **transform**, no extra workspace	C06EAF
Single one-dimensional Hermitian discrete Fourier **transform**, no extra workspace	C06EBF
Single one-dimensional complex discrete Fourier **transform**, no extra workspace	C06ECF
One-dimensional complex discrete Fourier **transform** of multi-dimensional data	C06FFF
Multi-dimensional complex discrete Fourier **transform** of multi-dimensional data	C06FJF
One-dimensional complex discrete Fourier **transform** of multi-dimensional data (using complex data type)	C06PFF
Multi-dimensional complex discrete Fourier **transform** of multi-dimensional data (using complex data type)	C06PJF
Single one-dimensional real and Hermitian complex discrete Fourier **transform**, using complex data format for Hermitian sequences	C06PAF
...factorization of real matrix using orthogonal similarity **transformation**	F08QFF
...factorization of complex matrix using unitary similarity **transformation**	F08QTF
Acceleration of convergence of sequence, Shanks' **transformation** and epsilon algorithm	C06BAF
Apply orthogonal **transformation** determined by F08AEF or F08BEF	F08AGF
Apply orthogonal **transformation** determined by F08AHF	F08AKF
Apply unitary **transformation** determined by F08ASF or F08BSF	F08AUF
Apply unitary **transformation** determined by F08AVF	F08AXF
Apply orthogonal **transformation** determined by F08FEF	F08FGF
Apply orthogonal **transformation** determined by F08GEF	F08GGF
Generate orthogonal **transformation** matrices from reduction to bidiagonal form...	F08KFF
Generate unitary **transformation** matrices from reduction to bidiagonal form...	F08KTF
Apply unitary **transformation** matrix determined by F08FSF	F08FUF
Apply unitary **transformation** matrix determined by F08GSF	F08GUF
Generate orthogonal **transformation** matrix from reduction to Hessenberg form...	F08NFF
Apply orthogonal **transformation** matrix from reduction to Hessenberg form...	F08NGF
Generate unitary **transformation** matrix from reduction to Hessenberg form...	F08NTF
Apply unitary **transformation** matrix from reduction to Hessenberg form...	F08NUF
Generate orthogonal **transformation** matrix from reduction to tridiagonal form...	F08FFF
Generate unitary **transformation** matrix from reduction to tridiagonal form...	F08FTF
Generate orthogonal **transformation** matrix from reduction to tridiagonal form...	F08GFF
Generate unitary **transformation** matrix from reduction to tridiagonal form...	F08GTF
Unitary similarity **transformation** of Hermitian matrix as a sequence of plane...	F06TMF
Orthogonal similarity **transformation** of real symmetric matrix as a sequence of plane...	F06QMF
Apply orthogonal **transformations** from reduction to bidiagonal form determined...	F08KGF
Apply unitary **transformations** from reduction to bidiagonal form determined...	F08KUF
Multiple one-dimensional real discrete Fourier **transforms**	C06FPF
Multiple one-dimensional Hermitian discrete Fourier **transforms**	C06FQF
Multiple one-dimensional complex discrete Fourier **transforms**	C06FRF
Multivariate time series, differences and/or **transforms** (for use before G13DCF)	G13DLF
Multiple one-dimensional complex discrete Fourier **transforms** using complex data format	C06PRF
Multiple one-dimensional complex discrete Fourier **transforms** using complex data format and sequences stored...	C06PSF
...one-dimensional real and Hermitian complex discrete Fourier **transforms**, using complex data format for Hermitian sequences	C06PPF
...one-dimensional real and Hermitian complex discrete Fourier **transforms**, using complex data format for Hermitian sequences...	C06PQF
Transportation problem, modified 'stepping stone' method	H03ABF
Matrix **transposition**	F01CRF
Sum or difference of two real matrices, optional scaling and **transposition**	F01CTF
Sum or difference of two complex matrices, optional scaling and **transposition**	F01CWF
...sample spectrum using spectral smoothing by the **trapezium** frequency (Daniell) window	G13CBF
...cross spectrum using spectral smoothing by the **trapezium** frequency (Daniell) window	G13CDF
Matrix copy, real rectangular or **trapezoidal** matrix	F06QFF
Matrix copy, complex rectangular or **trapezoidal** matrix	F06TFF
RQ factorization of complex m by n upper **trapezoidal** matrix ($m \leq n$)	F01RGF
RQ factorization of real m by n upper **trapezoidal** matrix ($m \leq n$)	F01QGF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real **trapezoidal/triangular** matrix	F06RJF
...Frobenius norm, largest absolute element, complex **trapezoidal/triangular** matrix	F06UJF
Convert real matrix between packed **triangular** and square storage schemes	F01ZAF
Convert complex matrix between packed **triangular** and square storage schemes	F01ZBF
Matrix-vector product, real **triangular** band matrix	F06PGF
System of equations, real **triangular** band matrix	F06PKF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real **triangular** band matrix	F06RLF
Matrix-vector product, complex **triangular** band matrix	F06SGF
System of equations, complex **triangular** band matrix	F06SKF
...Frobenius norm, largest absolute element, complex **triangular** band matrix	F06ULF
Solves system of equations with multiple right-hand sides, real **triangular** coefficient matrix	F06YJF
Solves system of equations with multiple right-hand sides, complex **triangular** coefficient matrix	F06ZJF
Matrix-vector product, real **triangular** matrix	F06PFF
System of equations, real **triangular** matrix	F06PJF
...plane rotations, rank-1 update of real upper **triangular** matrix	F06QPF
...matrix by sequence of plane rotations, real upper **triangular** matrix	F06QVF
...matrix by sequence of plane rotations, real upper **triangular** matrix	F06QWF
...norm, largest absolute element, real trapezoidal/**triangular** matrix	F06RJF
Matrix-vector product, complex **triangular** matrix	F06SFF
System of equations, complex **triangular** matrix	F06SJF
...plane rotations, rank-1 update of complex upper **triangular** matrix	F06TPF
...by sequence of plane rotations, complex upper **triangular** matrix	F06TVF
...by sequence of plane rotations, complex upper **triangular** matrix	F06TWF
...largest absolute element, complex trapezoidal/**triangular** matrix	F06UJF
Estimate condition number of real **triangular** matrix	F07TGF
Inverse of real **triangular** matrix	F07TJF
Estimate condition number of complex **triangular** matrix	F07TUF
Inverse of complex **triangular** matrix	F07TWF
Estimate condition number of real band **triangular** matrix	F07VGF
Estimate condition number of complex band **triangular** matrix	F07VUF
Left and right eigenvectors of real upper quasi-**triangular** matrix	F08QKF
...eigenvalues and eigenvectors of real upper quasi-**triangular** matrix	F08QLF
Left and right eigenvectors of complex upper **triangular** matrix	F08QXF
...eigenvalues and eigenvectors of complex upper **triangular** matrix	F08QYF
QR factorization by sequence of plane rotations, real upper **triangular** matrix augmented by a full row	F06QQF
$QRxk$ factorization by sequence of plane rotations, complex upper **triangular** matrix augmented by a full row	F06TQF
SVD of real upper **triangular** matrix (Black Box)	F02WUF
SVD of complex upper **triangular** matrix (Black Box)	F02XUF
Print real packed **triangular** matrix (comprehensive)	X04CDF
Print complex packed **triangular** matrix (comprehensive)	X04DDF
Print real packed **triangular** matrix (easy-to-use)	X04CCF
Print complex packed **triangular** matrix (easy-to-use)	X04DCF

Matrix-matrix product, one complex	**triangular** matrix, one complex rectangular matrix	F06ZFF
Matrix-matrix product, one real	**triangular** matrix, one real rectangular matrix	F06YFF
1-norm, ∞-norm, Frobenius norm, largest absolute element, real	**triangular** matrix, packed storage	F06RKF
...Frobenius norm, largest absolute element, complex	**triangular** matrix, packed storage	F06UKF
Estimate condition number of real	**triangular** matrix, packed storage	F07UGF
Inverse of real	**triangular** matrix, packed storage	F07UJF
Estimate condition number of complex	**triangular** matrix, packed storage	F07UUF
Inverse of complex	**triangular** matrix, packed storage	F07UWF
...equation $AX + XB = C$, A and B are upper	**triangular** or conjugate-transposes	F08QVF
...equation $AX + XB = C$, A and B are upper quasi-	**triangular** or transposes	F08QHF
Matrix-vector product, real	**triangular** packed matrix	F06PHF
System of equations, real	**triangular** packed matrix	F06PLF
Matrix-vector product, complex	**triangular** packed matrix	F06SHF
System of equations, complex	**triangular** packed matrix	F06SLF
Solution of real	**triangular** system of linear equations, multiple right-hand sides	F07TEF
Error bounds for solution of real	**triangular** system of linear equations, multiple right-hand sides	F07THF
Solution of complex	**triangular** system of linear equations, multiple right-hand sides	F07TSF
Error bounds for solution of complex	**triangular** system of linear equations, multiple right-hand sides	F07TVF
Solution of real band	**triangular** system of linear equations, multiple right-hand sides	F07VEF
Error bounds for solution of real band	**triangular** system of linear equations, multiple right-hand sides	F07VHF
Solution of complex band	**triangular** system of linear equations, multiple right-hand sides	F07VSF
Error bounds for solution of complex band	**triangular** system of linear equations, multiple right-hand sides	F07VVF
Solution of real	**triangular** system of linear equations, multiple right-hand sides,...	F07UEF
Error bounds for solution of real	**triangular** system of linear equations, multiple right-hand sides,...	F07UHF
Solution of complex	**triangular** system of linear equations, multiple right-hand sides,...	F07USF
Error bounds for solution of complex	**triangular** system of linear equations, multiple right-hand sides,...	F07UVF
QR factorization of UZ or RQ factorization of ZU, U real upper	**triangular**, Z a sequence of plane rotations	F06QTF
...RQ factorization of ZU, U complex upper	**triangular**, Z a sequence of plane rotations	F06TTF
	Triangulation of plane region	D03MAF
Orthogonal reduction of real symmetric matrix to symmetric	**tridiagonal** form	F08FEF
Unitary reduction of complex Hermitian matrix to real symmetric	**tridiagonal** form	F08FSF
Orthogonal reduction of real symmetric band matrix to symmetric	**tridiagonal** form	F08HEF
...complex Hermitian band matrix to real symmetric	**tridiagonal** form	F08HSF
Generate orthogonal transformation matrix from reduction to	**tridiagonal** form determined by F08FEF	F08FFF
Generate unitary transformation matrix from reduction to	**tridiagonal** form determined by F08FSF	F08FTF
Generate orthogonal transformation matrix from reduction to	**tridiagonal** form determined by F08GEF	F08GFF
Generate unitary transformation matrix from reduction to	**tridiagonal** form determined by F08GSF	F08GTF
Orthogonal reduction of real symmetric matrix to symmetric	**tridiagonal** form, packed storage	F08GEF
Unitary reduction of complex Hermitian matrix to real symmetric	**tridiagonal** form, packed storage	F08GSF
LU factorization of real	**tridiagonal** matrix	F01LEF
Selected eigenvalues of real symmetric	**tridiagonal** matrix by bisection	F08JJF
Selected eigenvectors of real symmetric	**tridiagonal** matrix by inverse iteration, storing eigenvectors...	F08JXF
Selected eigenvectors of real symmetric	**tridiagonal** matrix by inverse iteration, storing eigenvectors...	F08JKF
All eigenvalues and eigenvectors of real symmetric	**tridiagonal** matrix, reduced from complex Hermitian matrix,...	F08JSF
All eigenvalues and eigenvectors of real symmetric positive-definite	**tridiagonal** matrix, reduced from complex Hermitian...	F08JUF
All eigenvalues and eigenvectors of real symmetric	**tridiagonal** matrix, reduced from real symmetric matrix using...	F08JEF
All eigenvalues and eigenvectors of real symmetric positive-definite	**tridiagonal** matrix, reduced from real symmetric...	F08JGF
All eigenvalues of real symmetric	**tridiagonal** matrix, root-free variant of QL or QR	F08JFF
All eigenvalues and optionally all eigenvectors of real symmetric	**tridiagonal** matrix, using divide and conquer	F08JCF
Solution of real	**tridiagonal** simultaneous linear equations...	F04LEF
Solution of real	**tridiagonal** simultaneous linear equations, one right-hand side...	F04EAF
Solution of real symmetric positive-definite	**tridiagonal** simultaneous linear equations, one right-hand side...	F04FAF
Computes a	**trimmed** and winsorized mean of a single sample with estimates...	G07DDF
Performs the	**triplets** test for randomness	G08ECF
...sample spectrum using rectangular, Bartlett,	**Tukey** or Parzen lag window	G13CAF
...sample cross spectrum using rectangular, Bartlett,	**Tukey** or Parzen lag window	G13CCF
Elliptic PDE, Laplace's equation,	**two-dimensional** arbitrary domain	D03EAF
	Two-dimensional complex discrete Fourier transform	C06FUF
	Two-dimensional complex discrete Fourier transform,...	C06PUF
Sort	**two-dimensional** data into panels for fitting bicubic splines	E02ZAF
...finite difference equations by SIP, five-point	**two-dimensional** molecule, iterate to convergence	D03EBF
...finite difference equations by SIP, five-point	**two-dimensional** molecule, one iteration	D03UAF
Computes probabilities for the	**two-sample** Kolmogorov–Smirnov distribution	G01EZF
Performs the	**two-sample** Kolmogorov–Smirnov test	G08CDF
	Two-way analysis of variance, hierarchical classification,...	G04AGF
Friedman	**two-way** analysis of variance on k matched samples	G08AEF
χ^2 statistics for	**two-way** contingency table	G11AAF
	Two-way contingency table analysis, with χ^2/Fisher's exact test	G01AFF
Regression using ranks,	**uncensored** data	G08RAF
Dot product of two complex vectors,	**unconjugated**	F06GAF
Dot product of two complex sparse vector,	**unconjugated**	F06GRF
Rank-1 update, complex rectangular matrix,	**unconjugated** vector	F06SMF
	Unconstrained minimum of a sum of squares, combined...	E04GDF
	Unconstrained minimum of a sum of squares, combined...	E04GZF
	Unconstrained minimum of a sum of squares, combined...	E04FCF
	Unconstrained minimum of a sum of squares, combined...	E04FYF
	Unconstrained minimum of a sum of squares, combined...	E04HEF
	Unconstrained minimum of a sum of squares, combined...	E04HYF
	Unconstrained minimum of a sum of squares, combined...	E04GBF
	Unconstrained minimum of a sum of squares, combined...	E04GYF
	Unconstrained minimum, pre-conditioned conjugate gradient...	E04DGF
	Unconstrained minimum, simplex algorithm, function of...	E04CCF
Switch for taking precautions to avoid	**underflow**	X02DAF
Interpolated values, Aitken's technique,	**unequally** spaced data, one variable	E01AAF
Pseudo-random integer from	**uniform** distribution	G05DYF
Set up reference vector for generating pseudo-random integers,	**uniform** distribution	G05EBF
Generates a vector of random numbers from a	**uniform** distribution	G05FAF
Pseudo-random real numbers,	**uniform** distribution over (0,1)	G05CAF
Pseudo-random real numbers,	**uniform** distribution over (a, b)	G05DAF
Operations with	**unitary** matrices, form rows of Q, after RQ factorization by F01RJF	F01RKF
Form all or part of	**unitary** Q from LQ factorization determined by F08AVF	F08AWF
Form all or part of	**unitary** Q from QR factorization determined by F08ASF or F08BSF	F08ATF
	Unitary reduction of complex general matrix to upper Hessenberg...	F08NSF
	Unitary reduction of complex general rectangular matrix to...	F08KSF
	Unitary reduction of complex Hermitian band matrix to...	F08HSF
	Unitary reduction of complex Hermitian matrix to...	F08FSF
	Unitary reduction of complex Hermitian matrix to...	F08GSF
Reorder Schur factorization of complex matrix using	**unitary** similarity transformation	F08QTF
	Unitary similarity transformation of Hermitian matrix as...	F06TMF
Apply	**unitary** transformation determined by F08ASF or F08BSF	F08AUF
Apply	**unitary** transformation determined by F08AVF	F08AXF

Generate	**unitary** transformation matrices from reduction to...	F08KTF
Apply	**unitary** transformation matrix determined by F08FSF	F08FUF
Apply	**unitary** transformation matrix determined by F08GSF	F08GUF
Generate	**unitary** transformation matrix from reduction to...	F08NTF
Apply	**unitary** transformation matrix from reduction to...	F08NUF
Generate	**unitary** transformation matrix from reduction to...	F08FTF
Generate	**unitary** transformation matrix from reduction to...	F08GTF
Apply	**unitary** transformations from reduction to...	F08KUF
...amplitude spectrum, squared coherency, bounds,	**univariate** and bivariate (cross) spectra	G13CEF
Multivariate time series, gain, phase, bounds,	**univariate** and bivariate (cross) spectra	G13CFF
Set up reference vector for	**univariate** ARMA time series model	G05EGF
	Univariate time series, diagnostic checking of residuals,...	G13ASF
	Univariate time series, estimation, seasonal ARIMA model...	G13AEF
	Univariate time series, estimation, seasonal ARIMA model...	G13AFF
	Univariate time series, forecasting from state set	G13AHF
	Univariate time series, partial autocorrelations from autocorrelations	G13ACF
	Univariate time series, preliminary estimation, seasonal ARIMA...	G13ADF
	Univariate time series, sample autocorrelation function	G13ABF
	Univariate time series, seasonal and non-seasonal differencing	G13AAF
	Univariate time series, smoothed sample spectrum using...	G13CAF
	Univariate time series, smoothed sample spectrum using...	G13CBF
	Univariate time series, state set and forecasts, from fully specified...	G13AJF
	Univariate time series, update state set for forecasting	G13AGF
	Update a weighted sum of squares matrix with a new observation	G02BTF
Rank-1	**update**, complex Hermitian matrix	F06SPF
Rank-2	**update**, complex Hermitian matrix	F06SRF
Rank-1	**update**, complex Hermitian packed matrix	F06SQF
Rank-2	**update**, complex Hermitian packed matrix	F06SSF
Rank-1	**update**, complex rectangular matrix, conjugated vector	F06SNF
Rank-1	**update**, complex rectangular matrix, unconjugated vector	F06SMF
	Update Euclidean norm of complex vector in scaled form	F06KJF
	Update Euclidean norm of real vector in scaled form	F06FJF
Rank-k	**update** of complex Hermitian matrix	F06ZPF
Rank-2k	**update** of complex Hermitian matrix	F06ZRF
Rank-k	**update** of complex symmetric matrix	F06ZUF
Rank-2k	**update** of complex symmetric matrix	F06ZWF
QR factorization by sequence of plane rotations, rank-1	**update** of complex upper triangular matrix	F06TPF
Rank-k	**update** of real symmetric matrix	F06YPF
Rank-2k	**update** of real symmetric matrix	F06YRF
QR factorization by sequence of plane rotations, rank-1	**update** of real upper triangular matrix	F06QPF
Combined measurement and time	**update**, one iteration of Kalman filter, time-invariant,...	G13EBF
Combined measurement and time	**update**, one iteration of Kalman filter, time-varying,...	G13EAF
Rank-1	**update**, real rectangular matrix	F06PMF
Rank-1	**update**, real symmetric matrix	F06PPF
Rank-2	**update**, real symmetric matrix	F06PRF
Rank-1	**update**, real symmetric packed matrix	F06PQF
Rank-2	**update**, real symmetric packed matrix	F06PSF
	Update solution of real symmetric positive-definite Toeplitz system	F04MFF
	Update solution of the Yule–Walker equations for real symmetric...	F04MEF
Univariate time series,	**update** state set for forecasting	G13AGF
Multivariate time series,	**update** state set for forecasting from multi-input model	G13BGF
...parameters and general linear regression model from	**updated** model	G02DDF
Multivariate time series,	**updates** forecasts and their standard errors	G13DKF
Computes	**upper** and lower tail probabilities and probability density...	G01EEF
Orthogonal reduction of real general matrix to	**upper** Hessenberg form	F08NEF
Unitary reduction of complex general matrix to	**upper** Hessenberg form	F08NSF
QR or RQ factorization by sequence of plane rotations, real	**upper** Hessenberg matrix	F06QRF
QR or RQ factorization by sequence of plane rotations, complex	**upper** Hessenberg matrix	F06TRF
Selected right and/or left eigenvectors of real	**upper** Hessenberg matrix by inverse iteration	F08PKF
Selected right and/or left eigenvectors of complex	**upper** Hessenberg matrix by inverse iteration	F08PXF
Compute	**upper** Hessenberg matrix by sequence of plane rotations,...	F06TVF
Compute	**upper** Hessenberg matrix by sequence of plane rotations,...	F06QVF
Eigenvalues and Schur factorization of complex	**upper** Hessenberg matrix reduced from complex general matrix	F08PSF
Eigenvalues and Schur factorization of real	**upper** Hessenberg matrix reduced from real general matrix	F08PEF
Left and right eigenvectors of real	**upper** quasi-triangular matrix	F08QKF
...selected eigenvalues and eigenvectors of real	**upper** quasi-triangular matrix	F08QLF
Solve real Sylvester matrix equation $AX + XB = C$, A and B are	**upper** quasi-triangular or transposes	F08QHF
QR or RQ factorization by sequence of plane rotations, real	**upper** spiked matrix	F06QSF
QR or RQ factorization by sequence of plane rotations, complex	**upper** spiked matrix	F06TSF
Compute	**upper** spiked matrix by sequence of plane rotations,...	F06TWF
Compute	**upper** spiked matrix by sequence of plane rotations,...	F06QWF
RQ factorization of complex m by n	**upper** trapezoidal matrix ($m \leq n$)	F01RGF
RQ factorization of real m by n	**upper** trapezoidal matrix ($m \leq n$)	F01QGF
...sequence of plane rotations, rank-1 update of real	**upper** triangular matrix	F06QPF
...Hessenberg matrix by sequence of plane rotations, real	**upper** triangular matrix	F06QVF
Compute upper spiked matrix by sequence of plane rotations, real	**upper** triangular matrix	F06QWF
...of plane rotations, rank-1 update of complex	**upper** triangular matrix	F06TPF
...matrix by sequence of plane rotations, complex	**upper** triangular matrix	F06TVF
...matrix by sequence of plane rotations, complex	**upper** triangular matrix	F06TWF
Left and right eigenvectors of complex	**upper** triangular matrix	F08QXF
...selected eigenvalues and eigenvectors of complex	**upper** triangular matrix	F08QYF
QR factorization by sequence of plane rotations, real	**upper** triangular matrix augmented by a full row	F06QQF
$QRxk$ factorization by sequence of plane rotations, complex	**upper** triangular matrix augmented by a full row	F06TQF
SVD of real	**upper** triangular matrix (Black Box)	F02WUF
SVD of complex	**upper** triangular matrix (Black Box)	F02XUF
...matrix equation $AX + XB = C$, A and B are	**upper** triangular or conjugate-transposes	F08QVF
QR factorization of UZ or RQ factorization of ZU, U real	**upper** triangular, Z a sequence of plane rotations	F06QTF
QR factorization of UZ or RQ factorization of ZU, U complex	**upper** triangular, Z a sequence of plane rotations	F06TTF
...terms in conservative form, method of lines,	**upwind** scheme using numerical flux function based on Riemann...	D03PFF
...conservative form, coupled DAEs, method of lines,	**upwind** scheme using numerical flux function based on Riemann...	D03PLF
...conservative form, coupled DAEs, method of lines,	**upwind** scheme using numerical flux function based on Riemann...	D03PSF
Input/output	**utilities**	X04
...mean of a single sample with estimates of their	**variance**	G07DDF
Analysis of	**variance**, complete factorial design, treatment means and...	G04CAF
Analysis of	**variance**, general row and column design, treatment means and...	G04BCF
Two-way analysis of	**variance**, hierarchical classification, subgroups of unequal size	G04AGF
Friedman two-way analysis of	**variance** on k matched samples	G08AEF
Kruskal–Wallis one-way analysis of	**variance** on k samples of unequal size	G08AFF
Analysis of	**variance**, randomized block or completely randomized design,...	G04BBF
Mean,	**variance**, skewness, kurtosis, etc, one variable, from frequency table	G01ADF
Mean,	**variance**, skewness, kurtosis, etc, one variable, from raw data	G01AAF
Mean,	**variance**, skewness, kurtosis, etc, two variables, from raw data	G01ABF
Computes Mahalanobis squared distances for group or pooled	**variance-covariance** matrices (for use after G03DAF)	G03DBF
Normal scores, approximate	**variance-covariance** matrix	G01DCF
...correlation/variance-covariance matrix from correlation/	**variance-covariance** matrix computed by G02BXF	G02BYF
Robust regression,	**variance-covariance** matrix following G02HDF	G02HFF
Computes partial correlation/	**variance-covariance** matrix from correlation/variance-covariance...	G02BYF

Performs canonical **variate** analysis G03ACF

Generates a vector of pseudo-random **variates** from von Mises distribution G05FSF

Generates a realisation of a multivariate time series from a **VARMA** model G05HDF
Multivariate time series, estimation of **VARMA** model G13DCF

Broadcast scalar into integer **vector** F06DBF
Copy integer **vector** F06DFF
Add scalar times real vector to real **vector** F06ECF
Copy real **vector** F06EFF
Compute Euclidean norm of real **vector** F06EJF
Add scalar times real sparse vector to real sparse **vector** F06ETF
Gather real sparse **vector** F06EUF
Gather and set to zero real sparse **vector** F06EVF
Scatter real sparse **vector** F06EWF
Broadcast scalar into real **vector** F06FBF
Multiply real vector by scalar, preserving input **vector** F06FDF
Negate real **vector** F06FGF
Compute weighted Euclidean norm of real **vector** F06FKF
Add scalar times complex vector to complex **vector** F06GCF
Copy complex **vector** F06GFF
Add scalar times complex sparse vector to complex sparse **vector** F06GTF
Gather complex sparse **vector** F06GUF
Gather and set to zero complex sparse **vector** F06GVF
Scatter complex sparse **vector** F06GWF
Broadcast scalar into complex **vector** F06HBF
Multiply complex vector by complex scalar, preserving input **vector** F06HDF
Negate complex **vector** F06HGF
Compute Euclidean norm of complex **vector** F06JJF
Multiply complex vector by real scalar, preserving input **vector** F06KDF
Copy real vector to complex **vector** F06KFF
Last non-negligible element of real **vector** F06KLF
Rank-1 update, complex rectangular matrix, unconjugated **vector** F06SMF
Rank-1 update, complex rectangular matrix, conjugated **vector** F06SNF
Pseudo-random permutation of an integer **vector** G05EHF
Pseudo-random sample from an integer **vector** G05EJF
Pseudo-random integer from reference **vector** G05EYF
Pseudo-random multivariate Normal vector from reference **vector** G05EZF
Rearrange a **vector** according to given ranks, character data M01ECF
Rearrange a **vector** according to given ranks, complex numbers M01EDF
Rearrange a **vector** according to given ranks, integer numbers M01EBF
Rearrange a **vector** according to given ranks, real numbers M01EAF
Calculates the zeros of a **vector** autoregressive (or moving average) operator G13DXF
Multiply complex **vector** by complex diagonal matrix F06HCF
Multiply complex **vector** by complex scalar F06GDF
Multiply complex **vector** by complex scalar, preserving input vector F06HDF
Multiply real **vector** by diagonal matrix F06FCF
Multiply complex **vector** by real diagonal matrix F06KCF
Multiply complex **vector** by real scalar F06JDF
Multiply complex **vector** by real scalar, preserving input vector F06KDF
Multiply real **vector** by scalar F06EDF
Multiply real **vector** by scalar, preserving input vector F06FDF
Sort a **vector**, character data M01CCF
Rank a **vector**, character data M01DCF
Dot product of two complex sparse **vector**, conjugated F06GSF
Index, real **vector** element with largest absolute value F06JLF
Index, complex **vector** element with largest absolute value F06JMF
Sum absolute values of real **vector** elements F06EKF
Sum absolute values of complex **vector** elements F06JKF
Generate next term from reference **vector** for ARMA time series model G05EWF
Set up reference **vector** for generating pseudo-random integers, binomial distribution G05EDF
Set up reference **vector** for generating pseudo-random integers,... G05EFF
Set up reference **vector** for generating pseudo-random integers,... G05EEF
Set up reference **vector** for generating pseudo-random integers, Poisson distribution G05ECF
Set up reference **vector** for generating pseudo-random integers, uniform distribution G05EBF
Set up reference **vector** for multivariate Normal distribution G05EAF
Set up reference **vector** for univariate ARMA time series model G05EGF
Pseudo-random multivariate Normal **vector** from reference vector G05EZF
Set up reference **vector** from supplied cumulative distribution function or... G05EXF
Update Euclidean norm of real **vector** in scaled form F06FJF
Update Euclidean norm of complex **vector** in scaled form F06KJF
Sort a **vector**, integer numbers M01CBF
Rank a **vector**, integer numbers M01DBF
...finite interval, variant of D01AJF efficient on **vector** machines D01ATF
...finite interval, variant of D01AKF efficient on **vector** machines D01AUF
...number-theoretic method, variant of D01GCF efficient on **vector** machines D01GDF
Real sparse nonsymmetric matrix **vector** multiply F11XAF
Real sparse symmetric matrix **vector** multiply F11XEF
Complex sparse Hermitian matrix **vector** multiply F11XSF
Complex sparse non-Hermitian matrix **vector** multiply F11XNF
Evaluation of fitted bicubic spline at a **vector** of points E02DEF
Generates a **vector** of pseudo-random numbers from a beta distribution G05FEF
Generates a **vector** of pseudo-random numbers from a gamma distribution G05FFF
Generates a **vector** of pseudo-random variates from von Mises distribution G05FSF
Generates a **vector** of random numbers from a Normal distribution G05FDF
Generates a **vector** of random numbers from a uniform distribution G05FAF
Generates a **vector** of random numbers from an (negative) exponential distribution G05FBF
Matrix-**vector** product, complex Hermitian band matrix F06SDF
Matrix-**vector** product, complex Hermitian matrix F06SCF
Matrix-**vector** product, complex Hermitian packed matrix F06SEF
Matrix-**vector** product, complex rectangular band matrix F06SBF
Matrix-**vector** product, complex rectangular matrix F06SAF
Matrix-**vector** product, complex triangular band matrix F06SGF
Matrix-**vector** product, complex triangular matrix F06SFF
Matrix-**vector** product, complex triangular packed matrix F06SHF
Matrix-**vector** product, real rectangular band matrix F06PBF
Matrix-**vector** product, real rectangular matrix F06PAF
Matrix-**vector** product, real symmetric band matrix F06PDF
Matrix-**vector** product, real symmetric matrix F06PCF
Matrix-**vector** product, real symmetric packed matrix F06PEF
Matrix-**vector** product, real triangular band matrix F06PGF
Matrix-**vector** product, real triangular matrix F06PFF
Matrix-**vector** product, real triangular packed matrix F06PHF
Sort a **vector**, real numbers M01CAF
Rank a **vector**, real numbers M01DAF
Add scalar times complex sparse **vector** to complex sparse vector F06GTF
Add scalar times complex **vector** to complex vector F06GCF
Copy real **vector** to complex vector F06KFF
Add scalar times real sparse **vector** to real sparse vector F06ETF
Add scalar times real **vector** to real vector F06ECF
Dot product of two complex sparse **vector**, unconjugated F06GRF
Elements of real **vector** with largest and smallest absolute value F06FLF

Circular convolution or correlation of two complex **vectors** C06PKF
Dot product of two real **vectors** F06EAF

Swap two real **vectors**	F06EGF
Dot product of two real sparse **vectors**	F06ERF
Apply plane rotation to two real sparse **vectors**	F06EXF
Compute cosine of angle between two real **vectors**	F06FAF
Apply real symmetric plane rotation to two **vectors**	F06FPF
Swap two complex **vectors**	F06GGF
Apply real plane rotation to two complex **vectors**	F06KPF
Service routines for multiple linear regression, select elements from **vectors** and matrices	G02CEF
Service routines for multiple linear regression, re-order elements of **vectors** and matrices	G02CFF
Dot product of two complex **vectors**, conjugated	F06GBF
Circular convolution or correlation of two real **vectors**, extra workspace for greater speed	C06FKF
Circular convolution or correlation of two real **vectors**, no extra workspace	C06EKF
Gram–Schmidt orthogonalisation of n **vectors** of order m	F05AAF
Dot product of two complex **vectors**, unconjugated	F06GAF
Nonlinear **Volterra** convolution equation, second kind	D05BAF
Generate weights for use in solving **Volterra** equations	D05BWF
Nonlinear convolution **Volterra–Abel** equation, first kind, weakly singular	D05BEF
Nonlinear convolution **Volterra–Abel** equation, second kind, weakly singular	D05BDF
Computes probability for **von Mises** distribution	G01ERF
Generates a vector of pseudo-random variates from **von Mises** distribution	G05FSF
Shapiro and Wilk's W test for Normality	G01DDF
Update solution of the Yule–**Walker** equations for real symmetric positive-definite Toeplitz...	F04MEF
Solution of the Yule–**Walker** equations for real symmetric positive-definite Toeplitz...	F04FEF
Kruskal–**Wallis** one-way analysis of variance on k samples of unequal size	G08AFF
Computes bounds for the significance of a Durbin–**Watson** statistic	G01EPF
Computes Durbin–**Watson** test statistic	G02FCF
Nonlinear convolution Volterra–Abel equation, second kind, **weakly** singular	D05BDF
Nonlinear convolution Volterra–Abel equation, first kind, **weakly** singular	D05BEF
Generate weights for use in solving **weakly** singular Abel-type equations	D05BYF
Inverse Laplace transform, modified **Weeks'** method	C06LBF
Pseudo-random real numbers, **Weibull** distribution	G05DPF
Computes maximum likelihood estimates for parameters of the **Weibull** distribution	G07BEF
Calculates a robust estimation of a correlation matrix, Huber's **weight** function	G02HKF
...estimation of a correlation matrix, user-supplied **weight** function	G02HMF
One-dimensional quadrature, adaptive, finite interval, **weight** function $1/(x-c)$, Cauchy principal value...	D01AQF
One-dimensional quadrature, adaptive, finite interval, **weight** function $\cos(\omega x)$ or $\sin(\omega x)$	D01ANF
One-dimensional quadrature, adaptive, semi-infinite interval, **weight** function $\cos(\omega x)$ or $\sin(\omega x)$	D01ASF
...estimation of a correlation matrix, user-supplied **weight** function plus derivatives	G02HLF
One-dimensional quadrature, adaptive, finite interval, **weight** function with end-point singularities of...	D01APF
...M-estimates for location and scale parameters, standard **weight** functions	G07DBF
...for location and scale parameters, user-defined **weight** functions	G07DCF
Computes (optionally **weighted**) correlation and covariance matrices	G02BXF
Compute **weighted** Euclidean norm of real vector	F06FKF
Real general Gauss–Markov linear model (including **weighted** least-squares)	F04JLF
Complex general Gauss–Markov linear model (including **weighted** least-squares)	F04KLF
ODEs, IVP, **weighted** norm of local error estimate for D02M–N routines	D02ZAF
Computes a **weighted** sum of squares matrix	G02BUF
Update a **weighted** sum of squares matrix with a new observation	G02BTF
...compute regression with user-supplied functions and **weights**	G02HDF
Calculation of **weights** and abscissae for Gaussian quadrature rules,...	D01BCF
Pre-computed **weights** and abscissae for Gaussian quadrature rules,...	D01BBF
Generate **weights** for use in solving Volterra equations	D05BWF
Generate **weights** for use in solving weakly singular Abel-type equations	D05BYF
Robust regression, compute **weights** for use with G02HDF	G02HBF
Constructs a box and **whisker** plot	G01ASF
Multivariate time series, filtering (pre-**whitening**) by an ARIMA model	G13BAF
Computes the exact probabilities for the Mann–**Whitney** U statistic, no ties in pooled sample	G08AJF
Computes the exact probabilities for the Mann–**Whitney** U statistic, ties in pooled sample	G08AKF
Performs the Mann–**Whitney** U test on two independent samples	G08AHF
Selection of basic algorithm random number generator or **Wichmann**–Hill algorithm generators for subsequent calls to...	G05ZAF
Performs the **Wilcoxon** one-sample (matched pairs) signed rank test	G08AGF
Shapiro and **Wilk's** W test for Normality	G01DDF
...using rectangular, Bartlett, Tukey or Parzen lag **window**	G13CAF
...smoothing by the trapezium frequency (Daniell) **window**	G13CBF
...using rectangular, Bartlett, Tukey or Parzen lag **window**	G13CCF
...smoothing by the trapezium frequency (Daniell) **window**	G13CDF
Computes a trimmed and **winsorized** mean of a single sample with estimates of their variance	G07DDF
Write formatted record to external file	X04BAF
Computes probabilities for χ^2 distribution	G01ECF
Computes deviates for the χ^2 distribution	G01FCF
Computes probabilities for the non-central χ^2 distribution	G01GCF
Pseudo-random real numbers, χ^2 distribution	G05DHF
Performs the χ^2 goodness of fit test, for standard continuous distributions	G08CGF
Multivariate time series, sample partial lag correlation matrices, χ^2 statistics and significance levels	G13DNF
χ^2 statistics for two-way contingency table	G11AAF
Computes probability for a positive linear combination of χ^2 variables	G01JCF
...probability for a linear combination of (central) χ^2 variables	G01JDF
Two-way contingency table analysis, with χ^2**/Fisher's** exact test	G01AFF
Update solution of the **Yule–Walker** equations for real symmetric positive-definite...	F04MEF
Solution of the **Yule–Walker** equations for real symmetric positive-definite...	F04FEF
Correlation-like coefficients (about **zero**), all variables, casewise treatment of missing values	G02BEF
Correlation-like coefficients (about **zero**), all variables, no missing values	G02BDF
Correlation-like coefficients (about **zero**), all variables, pairwise treatment of missing values	G02BFF
Gather and set to **zero** complex sparse vector	F06GVF
Zero in given interval of continuous function by Bus and Dekker...	C05AZF
ODEs, IVP, Runge–Kutta method, until function of solution is **zero**, integration over range with intermediate output (simple driver)	D02BJF
ODEs, IVP, Adams method, until function of solution is **zero**, intermediate output (simple driver)	D02CJF
ODEs, stiff IVP, BDF method, until function of solution is **zero**, intermediate output (simple driver)	D02EJF
Zero of continuous function, Bus and Dekker algorithm,...	C05AGF
Zero of continuous function by continuation method,...	C05AXF
Zero of continuous function, continuation method,...	C05AJF

	Zero of continuous function in given interval, Bus and Dekker...	C05ADF
Binary search for interval containing	**zero** of continuous function (reverse communication)	C05AVF
Gather and set to	**zero** real sparse vector	F06EVF
...Runge–Kutta–Merson method, until function of solution is	**zero** (simple driver)	D02BHF
Correlation-like coefficients (about	**zero**), subset of variables, casewise treatment of missing values	G02BLF
Correlation-like coefficients (about	**zero**), subset of variables, no missing values	G02BKF
Correlation-like coefficients (about	**zero**), subset of variables, pairwise treatment of missing values	G02BMF
Calculates the	**zeros** of a vector autoregressive (or moving average) operator	G13DXF
All	**zeros** of complex polynomial, modified Laguerre method	C02AFF
All	**zeros** of complex quadratic	C02AHF
All	**zeros** of real polynomial, modified Laguerre method	C02AGF
All	**zeros** of real quadratic	C02AJF