

MATLAB

Functions	Definition	Section
abash	Adams-Bashforth of orders 2, 3, and 4	9.6
amoulton	Adams-Moulton method	9.8
bisect	Bisection method	3.1
derive	Differentiation	8.1
euler	Euler's method	9.1
explsq	Least squares fit, exponential	7.3.1
false	False position method	3.2
finitediff	Finite difference methods	10.1
fixed	Fixed point iteration	3.6
gaussel	Gaussian elimination, scaled pivoting	4.3
gauss_quad	Gaussian quadrature	8.4
heat	Parabolic differential equations	12.1.1
heat_crank	Parabolic differential equations	12.1.2
hyperbolic	Hyperbolic differential equations	12.2
hyplsq	Least squares fit, hyperbolic	7.3.2
jacobi	Jacobi iteration	4.5.1
lagrange	Lagrange interpolation polynomial	5.4
laplace	Laplace's equation	12.3
linsq	Least squares fit, linear	7.1
lshoot	Linear shooting method	10.2
lufact	LU decomposition	4.4
midpoint	Midpoint method	9.4
newton	Newton's method	3.4
newton_sys	Newton's method for systems	3.8
newton2	Newton's method, multiple roots	3.7
newtondd	Interpolation, Newton differences	5.2
ngaussel	Gaussian elimination, naive	4.2
polylsq	Least squares fit, polynomial	7.2
rk2_4	Runge-Kutta method, orders 2 and 4	9.4
romberg	Romberg integration	8.3
secant	Secant method	3.5
seidel	Gauss-Seidel iteration	4.5.2
simpson	Simpson's rule	8.2
spl1	Spline, linear	6.1
spl3	Spline, cubic	6.3
sys_rk4	System of differential equations	9.11
trapez	Trapezoidal rule	8.1