

#	Function	Description	Input	Output	Remarks	Type	Author
1	-INTEGRATOR	Section Header - Shows "Running..." msg	none			MCODE	Ángel Martin
2	FILON	Filon Integration	a,b,n,x in Stack; FNAME in Alpha	integral in X	n, ENTER^, x, R/S -> new result	FOCAL	JM Baillard
3	GCHB1	Gauss-Chebyshev Integrals 1st kind	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
4	GCHB2	Gauss-Chebyshev Integrals 2nd kind	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
5	GH20	Gauss-Hermite 20-point formula	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
6	GH20D	Gauss-Hermite 20-point formula - Double Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
7	GH20T	Gauss-Hermite 20-point formula - Triple Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
8	GH30	Gauss-Hermite 30-point formula	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
9	GH30D	Gauss-Hermite 30-point formula - Double Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
10	GH30T	Gauss-Hermite 30-point formula - Triple Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
11	GK7	Gauss-Kronrod 7-point (& 15-point) formulae	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
12	GL3	Gauss-Legendre 3-point formula	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
13	GL3D	Gauss-Legendre 3-point formula - Double Integrals	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
14	GL3M	Gauss-Legendre 3-point formula - Multiple Integrals	Prompts for Data	integral in X	R/S -> new n, result	FOCAL	JM Baillard
15	GL3T	Gauss-Legendre 3-point formula - Triple Integrals	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
16	GL10	Gauss-Legendre 10-point formula	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
17	GL10D	Gauss-Legendre 10-point formula - Double Integrals	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
18	GL10T	Gauss-Legendre 10-point formula - Triple Integrals	a,b,n in Stack; FNAME in Alpha	integral in X	n, R/S -> new result	FOCAL	JM Baillard
19	GLA10	Gauss-Laguerre 10-point formula	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
20	GLA10D	Gauss-Laguerre 10-point formula - Double Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
21	GLA10T	Gauss-Laguerre 10-point formula - Triple Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
22	GLA15	Gauss-Laguerre 15-point formula	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
23	GLA15D	Gauss-Laguerre 15-point formula - Double Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
24	GLA15T	Gauss-Laguerre 15-point formula - Triple Integrals	FNAME in Alpha	integral in X	Loads data Constants	FOCAL	JM Baillard
25	GW	Weights for Gauss-Legendre 10-point formula	n in X, 0 < n <= 5	value in X	doesn't lift stack	MCODE	JM Baillard
26	GX	Abscissas for Gauss-Legendre 10-point formula	n in X, 0 < n <= 6	value in X	doesn't lift stack	MCODE	JM Baillard
27	-DISCRETE	Section Header - Loads Data Constants	uses Flags 1-5	Constants loaded		MCODE	Ángel Martin
28	3DLS	Tridiagonal Linear Systems	bbb.eee in X	bbb.eee in X	subroutine for NCSI	FOCAL	JM Baillard
29	DIGD	Double Integrals (equally-spaced arguments)	m,n in Y,X; # in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
30	DIGT	Triple Integrals (equally-spaced arguments)	p,m,n in stack; # in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
31	ITGCUB	Integrals (connecting cubic segments)	# in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
32	LAGR	Lagrange Interpolation Formula	bbb.eee in Y; x in X	L(x) in X; bbb.eee in Y	subroutine for LAGRI	FOCAL	JM Baillard
33	LAGRI	Integral of the Lagrange Polynomial	# in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
34	NCSI	Natural Cubic Spline Integration	# in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
35	SIMP	Simpson rule (unequally-spaced arguments too)	# in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
36	TRAP	Trapezoidal rule (unequally-spaced arguments too)	# in R00; Data in Regs		use RGDATA for input	FOCAL	JM Baillard
37	-ELLIPTIC	Section Header - Function Launcher	Prompts for FNC	Launches Function	RF, RG, RJ, RFZ, RZ, ELIPF	MCODE	Ángel Martin
38	CEI	Complete Elliptic Integrals (1st & 2nd kinds)	m in X	E(m) in x; K(m) in Y	0 <= m < 1	FOCAL	JM Baillard
39	ELI	Incomplete Elliptic Integrals (1st & 2nd kinds)	m in Y, v in X	F(v m) in X; E(v m) in Y		FOCAL	JM Baillard
40	ELIPP	Elliptic Integral of the 1st kind	m in Y, x in X	F(x m) in X		MCODE	Ángel Martin
41	LEI1	Legendre Elliptic Integral of the 1st kind	m in Y, x in X	F(x m) in X		FOCAL	JM Baillard
42	LEI2	Legendre Elliptic Integral of the 2nd kind	m in Y, x in X	E(x m) in X		FOCAL	JM Baillard

#	Function	Description	Input	Output	Remarks	Type	Author
43	<i>LEI3</i>	Legendre Elliptic Integral of the 3rd kind	n,m,x in Y,Y,X	P(x m n) in X		FOCAL	JM Baillard
44	<i>RF</i>	Carlson Elliptic Integral (1st kind)	arguments in X,Y,Z	RF(x,y,z)		MCODE	JM Baillard
45	<i>RFZ</i>	Carlson Elliptic Integral (1st kind) - complex arg	X,re(Y) in Y, im(Y) in Z	RF(x,y+i.z,y-i.z)		MCODE	JM Baillard
46	<i>RG</i>	Symmetric Carlson Elliptic Integral of the 2nd kind	arguments in X,Y,Z	RG(x,y,z)		FOCAL	JM Baillard
47	<i>RJ</i>	Carlson Elliptic Integral (3rd kind)	arguments in X,Y,Z,p>0 in T	RJ(x,y,z,p)		MCODE	JM Baillard
48	<i>RJZ</i>	Carlson Elliptic Integral (3rd kind) - complex arg	X,re(Y) in Y, im(Y) in Z,p>0 in T	RJ(x,y+i.z,y-i.z,p)		MCODE	JM Baillard
49	-ROMBERG	<i>Section Header - Stores Z,Y,X in Regs R01-R03</i>	<i>Data in Stack</i>	<i>Data stored</i>		MCODE	Ángel Martin
50	<i>CURVE</i>	Arc length of a curve	a,b in Y,X; FNAME in Alpha	Arc length in X		FOCAL	JM Baillard
51	<i>IG</i>	Romberg Integration - midpoint formula	a,b in Y,X; FNAME in Alpha	integral in X		FOCAL	JM Baillard
52	<i>IG3</i>	Romberg Integration - midpoint formula - step tripl.	a,b in Y,X; FNAME in Alpha	integral in X		FOCAL	JM Baillard
53	<i>IGD</i>	Midpoint formula - Double Integrals	a,b in Y,X; FNAME in Alpha	integral in X		FOCAL	JM Baillard
54	<i>IGT</i>	Midpoint formula - Triple Integrals	a,b in Y,X; FNAME in Alpha	integral in X		FOCAL	JM Baillard
55	<i>ROM</i>	A subroutine called by many programs in this section	<i>subroutine use</i>	<i>subroutine use</i>		FOCAL	JM Baillard
56	<i>SREVL</i>	Area of a surface of revolution	a,b in Y,X; FNAME in Alpha	Surface area in X		FOCAL	JM Baillard
57	-HP & PPC	<i>Section Header - Prompts "/-NAME?"</i>	<i>Text in Alpha</i>	<i>Stops w/ Alpha ON</i>		MCODE	Ángel Martin
58	<i>DIFEQ</i>	Differential Equations	Prompts for Data	Solves for x	From Advantage Pac	FOCAL	HP Co.
59	<i>IGAB</i>	Integral from a to b	Prompts for Data	integral in X	Loads data Constants	FOCAL	HP Co.
60	<i>IGAI</i>	Integral from a to infinity	Prompts for Data	integral in X	Loads data Constants	FOCAL	HP Co.
61	<i>ITG</i>	Numeric Integration	a,b,n in Stack; FNAME in Alpha	integral in X		FOCAL	??
62	<i>PPCIG</i>	PPC ROM Integrator	a,b in Y,X; FNAME in Alpha	integral in X		FOCAL	PPC Members
63	<i>PPCSV</i>	PPC ROM Solver	a,b in Y,X; FNAME in Alpha	root in X		FOCAL	PPC Members
64	<i>RGDATA</i>	Data Entry for Discrete cases	Prompts for each data point	Data stored in Regs	<i>use to input data points</i>	FOCAL	Angel Martin