

Factorials

NUMBER				

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      F A C T O R I A L S
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Calculation of factorials ( < 408! )
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// ##### NUMBER #####
LBL A
CMS OP 59 STO 00 + 1 = STO 99 7 3 0 0 0 0 0 0 0 0 0 0 0 0 OP 04 RCL 00 OP 06
X/T 4 0 8 X/T GE E'
9 9 9 9 9 9 9 9 9 9 9 STO 91 1 STO 01 STO 95
RCL 00 X/T 0 EQ TAN
LBL X2 0 STO 94 1 STO 90
LBL COS RC* 90 * ( RCL 99 - RCL 00 ) = + RCL 94 = ST* 90 X/T RCL 91 INV GE YX
0 STO 94 1 SUM 90 RCL 90 X/T RCL 95 GE COS
DSZ 00 X2

// ##### PRINT THE RESULT #####
LBL TAN RC* 95
LBL SQR OP 00
RCL 91 + 1 = INV PR* 95
SBR LOG
OP 02
SBR LOG
OP 03
OP 05
DSZ 95 TAN
ADV RCL 99 - 1 = R/S
LBL YX X/T STO 92 / ( RCL 91 + 1 ) = STO 93 INT STO 94 INV SUM 93 RCL 93 * (
RCL 91 + 1 ) = ST* 90 1 SUM 90 RCL 90 X/T RCL 95 GE DEG
X/T STO 95
LBL DEG GTO COS
RTN
LBL LOG
0 STO 93
5 STO 90
LBL LNX
1 0 0 PRD 93
RC* 95 * 1 0 = ST* 95 INT STO 92 INV SM* 95
/ 7 = INT * 2 = + RCL 92 + 1 =
SUM 93
DSZ 90 LNX
RCL 93
RTN

// ##### IMPOSSIBLE #####
LBL E' OP 00 2 4 3 0 OP 02 3 3 3 2 3 6 3 6 2 4 OP 03 1 4 2 7 1 7 0 0 7 3 OP
04 OP 05 RCL 00 R/S

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L A B E L S
001 11 A
061 33 X2
069 39 COS
110 30 TAN
114 34 SQR
146 45 YX
192 60 DEG
197 28 LOG
205 23 LNX
247 10 E'

Adr	Branch.
COS	104 77 GE
COS	193 61 GTO
DEG	186 77 GE
E'	035 77 GE
LNX	240 97 DSZ
LOG	125 71 SBR
LOG	129 71 SBR
TAN	058 67 EQ
TAN	135 97 DSZ
X2	106 97 DSZ
YX	091 77 GE

Reg.	Instr.
00	005 42 STO 026 43 RCL 054 43 RCL 077 43 RCL 282 43 RCL
01	050 42 STO
90	066 42 STO 070 73 RC* 085 72 ST* 097 44 SUM 099 43 RCL 176 72 ST* 179 44 SUM 181 43 RCL 202 42 STO
91	047 42 STO 088 43 RCL 117 43 RCL 152 43 RCL 170 43 RCL
92	148 42 STO 220 42 STO 233 43 RCL
93	158 42 STO 164 44 SUM 166 43 RCL 199 42 STO 209 49 PRD 238 44 SUM 243 43 RCL
94	063 42 STO 082 43 RCL 094 42 STO 161 42 STO
95	052 42 STO 102 43 RCL 111 73 RC* 123 64 PD* 184 43 RCL 189 42 STO 211 73 RC* 217 72 ST* 223 74 SM*
99	010 42 STO

074	43	RCL
139	43	RCL