

HP-41C Polyprotic Acid Program by Stephen L. Morgan  
PPC Calculator Journal Volume 8 N6 P44 Aug-Dec 1981

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01 LBL "POLY" ;Polyprotic Acid Program
02 LBL A      ;Enter/print acid dissociation/equilibrium constant(s) K
03 CLRG
04 1.008
05 STO 09
06 RDN
07 LBL 00
08 STO IND 09
09 "K"
10 FIX 0
11 CF 29
12 ARCL 09
13 SF 29
14 ">="      ;Append 1 equal sign
15 SCI 02
16 ARCL X
17 AVIEW
18 STOP
19 CLA
20 ISG 09
21 GTO 00
22 0
23 /
24 LBL B      ;Enter/print H+ as pH value(s)
25 ADV
26 FIX 2
27 "PH="
28 ARCL X
29 AVIEW
30 CHS
31 10^X
32 STO 00
33 SCI 02
34 "<H+>="
35 ARCL X
36 AVIEW
37 ADV
38 RTN
39 LBL C      ;Enter/print H+ as moles/liter value(s)
40 STO 00
41 ADV
42 SCI 02
43 "<H+>="
44 ARCL X
45 AVIEW
46 LOG
47 CHS
48 FIX 2
49 "PH="
50 ARCL X
51 AVIEW
52 ADV
53 RTN
54 LBL D      ;Calculate/print fractional alpha value(s)
55 RCL 00
56 RCL 09
57 INT
58 STO 09
59 Y^X
60 STO 10
61 STO 19
62 RCL 09
63 10
64 +
65 1 E3
66 /
67 11
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68 +
69 STO 20
70 1
71 STO 21
72 STO 22
73 LBL 01
74 RCL 00
75 RCL 09
76 RCL 21
77 -
78 Y^X
79 LBL 02
80 RCL IND 21
81 *
82 DSE 21
83 GTO 02
84 STO IND 20
85 ST+ 19
86 1
87 ST+ 22
88 RCL 22
89 STO 21
90 ISG 20
91 GTO 01
92 RCL 09
93 10
94 +
95 1 E3
96 /
97 10
98 +
99 STO 21
100 0
101 STO 22
102 LBL 03
103 RCL IND 21
104 RCL 19
105 /
106 "a"           ;Lower case 'a' = alpha
107 RCL 22
108 FIX 0
109 CF 29
110 ARCL X
111 SF 29
112 >=" "         ;Append 1 equal sign
113 RDN
114 FIX 3
115 ARCL X
116 AVIEW
117 PSE
118 1
119 ST+ 22
120 ISG 21
121 GTO 03
122 CLD
123 CLX
124 ADV
125 END

00DAC000F500504F4C59CF668A111A1010183975019189F14B
9C00A91D9B09A81DF27F3D9D029B737E84879609B1001043CF
678F9C02F350483D9B737E5457309D02F53C482B3E3D9B737E
8F85CF68308F9D02F53C482B3E3D9B737E56549C02F350483D
9B737E8F85CF6920296839533A911329111040111B13431111
409114119115911602202990154153039095429715B3009194
9213119216901691159614B20029111040111B134311104091
15109116049095901343F16190169C00A91D9B73A81DF27F3D
759C039B737E891192169615B4007F778FC0000DAF

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218 BYTES

# HP-41C Polyprotic Acid by Stephen L. Morgan PPC V8 N6 P44 Aug-Dec 1981

Program Registers Needed: 32

Row 1 (1 - 4)



Row 2 (4 - 11)



Row 3 (11 - 17)



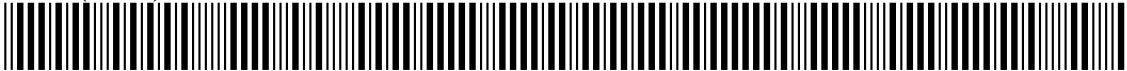
Row 4 (18 - 26)



Row 5 (27 - 34)



Row 6 (34 - 40)



Row 7 (41 - 46)



Row 8 (47 - 54)



Row 9 (54 - 64)



Row 10 (65 - 72)



Row 11 (72 - 82)



Row 12 (82 - 89)



Row 13 (89 - 96)



Row 14 (97 - 104)



Row 15 (105 - 111)



Row 16 (112 - 119)



Row 17 (120 - 125)

