

HP-41C Triangle Solution Program by John Kennedy
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01 LBL E
02 CF 02
03 CF 05
04 CLRG
05 ADV
06 " INPUT DATA"
07 AVIEW
08 RTN
09 LBL A
10 STO 06
11 STO 16
12 LBL 06
13 " \0DA= " ;AngleA=
14 ARCL 06
15 AVIEW
16 RTN
17 LBL B
18 STO 04
19 STO 14
20 LBL 04
21 " \0DB= " ;AngleB=
22 ARCL 04
23 AVIEW
24 RTN
25 LBL C
26 STO 02
27 STO 12
28 LBL 02
29 " \0DC= " ;AngleC=
30 ARCL 02
31 AVIEW
32 RTN
33 LBL F
34 STO 07
35 STO 17
36 LBL 07
37 " SIDE a= "
38 ARCL 07
39 AVIEW
40 RTN
41 LBL G
42 STO 05
43 STO 15
44 LBL 05
45 " SIDE b= "
46 ARCL 05
47 AVIEW
48 RTN
49 LBL H
50 STO 03
51 STO 13
52 LBL 03
53 " SIDE c= "
54 ARCL 03
55 AVIEW
56 RTN
57 LBL 01
58 " AREA = "
59 ARCL 01
60 AVIEW
61 RTN
62 LBL D
63 XEQ "S" ;Solve Triangle (Line 85)
64 XEQ "S" ;Solve Triangle (Line 85)
65 X=0?
66 GTO "NS" ;No Solution (Line 226)
67 LBL 08
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68 ADV
69 7
70 LBL 09
71 XEQ IND X
72 DSE X
73 GTO 09
74 FC? 02
75 RTN
76 ADV
77 "SECOND TRIANGLE"
78 AVIEW
79 XROM 30,31 ;7P<>S
80 SF 05
81 XEQ "S" ;Solve Triangle (Line 85)
82 XEQ "s" ;Solve Triangle (Line 85)
83 CF 02
84 GTO 08
85 LBL "S" ;Solve Triangle
86 XEQ "AA" ;Solve Angle (Line 143)
87 XEQ "AA" ;Solve Angle (Line 143)
88 XEQ "AA" ;Solve Angle (Line 143)
89 XEQ "Sa" ;Solve Side (Line 104)
90 XEQ "Sa" ;Solve Side (Line 104)
91 XEQ "Sa" ;Solve Side (Line 104)
92 *
93 2
94 /
95 RCL 04
96 SIN
97 *
98 STO 01
99 *
100 *
101 RCL 05
102 *
103 RTN
104 LBL "Sa" ;Solve Side
105 RCL 07
106 X#0?
107 GTO "R" ;Rotate Sides & Angles (Line 214)
108 RCL 06
109 X=0?
110 GTO "R" ;Rotate Sides & Angles (Line 214)
111 RCL 05
112 X=0?
113 GTO 10
114 RCL 04
115 X#0?
116 GTO 11
117 RCL 06
118 RCL 03
119 X=0?
120 GTO "R" ;Rotate Sides & Angles (Line 214)
121 P-R
122 RCL 05
123 -
124 R-P
125 STO 07
126 GTO "R" ;Rotate Sides & Angles (Line 214)
127 LBL 10
128 RCL 03
129 X=0?
130 GTO "R" ;Rotate Sides & Angles (Line 214)
131 RCL 02
132 X=0?
133 GTO "R" ;Rotate Sides & Angles (Line 214)
134 LBL 11
135 RCL 06
136 SIN
137 X<>Y

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138 SIN
139 /
140 *
141 STO 07
142 GTO "R" ;Rotate Sides & Angles (Line 214)
143 LBL "AA" ;Solve Angle
144 RCL 06
145 X#0?
146 GTO "R" ;Rotate Sides & Angles (Line 214)
147 RCL 04
148 RCL 02
149 *
150 X#0?
151 GTO 15
152 RCL 07
153 X=0?
154 GTO "R" ;Rotate Sides & Angles (Line 214)
155 RCL 05
156 X=0?
157 GTO 12
158 RCL 03
159 X=0?
160 GTO 13
161 R-P
162 X^2
163 RCL 07
164 X^2
165 -
166 RCL 05
167 RCL 03
168 *
169 ST+ X
170 /
171 SF 25
172 ACOS
173 FC?C 25
174 GTO "NS" ;No Solution (Line 226)
175 GTO 17
176 LBL 12
177 +
178 RCL 03
179 X=0?
180 GTO "R" ;Rotate Sides & Angles (Line 214)
181 RCL 02
182 GTO 14
183 LBL 13
184 +
185 RCL 04
186 LBL 14
187 X=0?
188 GTO "R" ;Rotate Sides & Angles
189 SIN
190 RDN
191 X<Y?
192 SF 02
193 R^
194 X<>Y
195 /
196 *
197 SF 25
198 ASIN
199 FC?C 25
200 GTO "NS" ;No solution (Line 226)
201 FS? 05
202 GTO 16
203 GTO 17
204 LBL 15
205 RCL 04
206 RCL 02
207 +

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208 LBL 16
209 COS
210 CHS
211 ACOS
212 LBL 17
213 STO 06
214 LBL "R" ;Rotate Sides & Angles
215 RCL 02
216 X<> 04
217 ENTER
218 X<> 06
219 STO 02
220 RCL 03
221 X<> 05
222 ENTER
223 X<> 07
224 STO 03
225 RTN
226 LBL "NS" ;No Solution
227 "NO SOLUTION"
228 AVIEW
229 RTN

01C5CF6AA902A9058A8FFB20494E50555420444154417E85CF
6636911007F620200D413D209B067E85CF67343E05F620200D
423D209B047E85CF68323C03F620200D433D209B027E85CF6B
37911108F9205349444520613D209B077E85CF6C353F06F920
5349444520623D209B057E85CF6D333D04F920534944452063
3D209B037E8502F82041524541203D209B017E85CF691EF153
1EF153671DF24E53098F170AAEF39773BA00AD02858FFF5345
434F4E4420545249414E474C457EA79FA8051EF1531EF153A9
02B900C000F200531EF241411EF241411EF241411EF253611E
F253611EF25361421243245942314242254285C000F3005361
27631DF15226671DF1522567BB002463BC002623671DF1524E
25414F371DF1520B23671DF15222671DF1520C265971594342
371DF152C000F300414126631DF15224224263D0000F27671D
F1522567BD002367BE004F51275141252342927343A8195DAB
191DF24E53D000110D4023671DF15222BF000E40240F671DF1
52597544A80274714342A8195CAB191DF24E53AC05D00010D0
0011CF0F242240CF105A545DCF1136C000F2005222CE0483CE
063223CE0583CE073385C000F3004E53FB4E4F20534F4C5554
494F4E7E85DE

453 BYTES

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Program Registers Needed: 65

Row 1 (1 - 6)



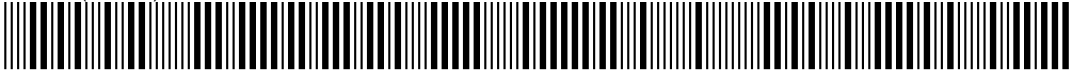
Row 2 (6 - 11)



Row 3 (11 - 16)



Row 4 (17 - 22)



Row 5 (22 - 29)



Row 6 (29 - 37)



Row 7 (37 - 40)



Row 8 (41 - 45)



Row 9 (45 - 53)



Row 10 (53 - 57)



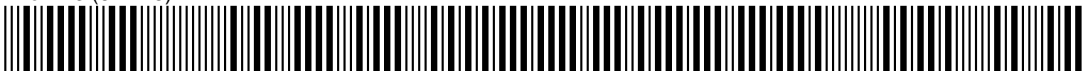
Row 11 (58 - 61)



Row 12 (62 - 66)



Row 13 (67 - 75)



Row 14 (76 - 77)



Row 15 (77 - 82)



Row 16 (82 - 86)



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Row 17 (86 - 89)



Row 18 (89 - 95)



Row 19 (96 - 104)



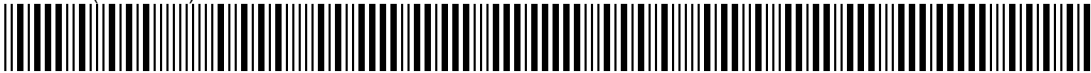
Row 20 (104 - 112)



Row 21 (113 - 121)



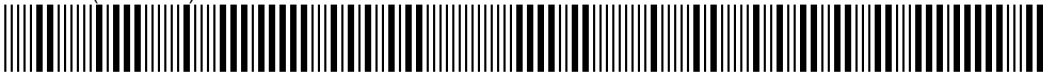
Row 22 (122 - 130)



Row 23 (131 - 141)



Row 24 (142 - 146)



Row 25 (146 - 154)



Row 26 (155 - 165)



Row 27 (166 - 174)



Row 28 (174 - 181)



Row 29 (182 - 191)



Row 30 (192 - 200)



Row 31 (200 - 205)



Row 32 (206 - 214)

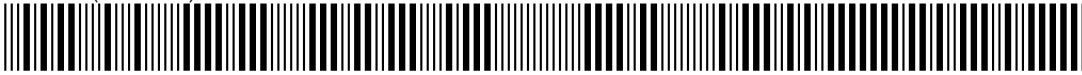


Row 33 (214 - 222)



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Row 34 (223 - 227)



Row 35 (227 - 229)

