

```
01 LBL "LIX"   ;Linear Exponential Curve Fitting
02 LBL a       ;Clear for new data entry
03 CLX
04 CLRGR
05 FIX 4
06 "  X^Y?--A"
07 PROMPT      ;Enter X and Y, Press A
08 LBL C       ;Delete erroneous pairs
09 XEQ 00
10 S-          ;Sigma-
11 STOP
12 LBL A       ;Accumulate pairs
13 XEQ 00
14 S+          ;Sigma+
15 STOP
16 LBL 00
17 X<>Y
18 ENTER
19 RDN
20 /
21 LOG
22 X<>Y
23 RDN
24 ENTER
25 X^2
26 ST+ 01
27 RDN
28 X<>Y
29 RTN
30 LBL B       ;Display regression constants (R^2, A, B)
31 RCL 15
32 RCL 11
33 RCL 13
34 *
35 RCL 16
36 /
37 -
38 RCL 12
39 RCL 11
40 X^2
41 RCL 16
42 /
43 -
44 /
45 STO 10
46 RCL 11
47 *
48 CHS
49 RCL 13
50 +
51 RCL 16
52 /
53 STO 08
54 RCL 10
55 X<>Y
56 RDN
57 *
58 RCL 01
59 RCL 13
60 X^2
61 RCL 16
62 /
63 -
64 /
65 STO 06
66 "  R2="    ;R-squared (goodness of fit)
67 ARCL X
```

```

68 AVIEW
69 STOP
70 RCL 08
71 10^X
72 STO 07
73 " a=" ;Constant A
74 ARCL X
75 AVIEW
76 STOP
77 RCL 10
78 CHS
79 10^X
80 STO 09
81 " b=" ;Constant B
82 ARCL X
83 AVIEW
84 STOP
85 LBL D ;Display X Maximum, Y Maximum
86 RCL 09
87 LN
88 1/X
89 FIX 2
90 STO 05
91 " XMAX="
92 ARCL X
93 AVIEW
94 STOP
95 SF 01
96 XEQ E
97 LBL 04
98 CF 01
99 STO 04
100 " YMAX="
101 ARCL X
102 AVIEW
103 STOP
104 LBL E ;Enter X, calculate estimated Y
105 ENTER
106 ENTER
107 RCL 07
108 *
109 X<>Y
110 RCL 09
111 X<>Y
112 Y^X
113 /
114 FS? 01
115 GTO 04
116 " Y="
117 ARCL X
118 AVIEW
119 END

```

```

00C5C000F4004C4958CF7B778A9C04FA202020585E593F2D2D
418ECF68E000004884CF66E000004784017183754356717583
519201757185CF672F2B2D42901043412C2B5190104341433A
2B42542D40901043382A717542212D51901043414336F52020
52323D9B737E84285737F42020613D9B737E842A545739F420
20623D9B737E84CF692950609C0235F72020584D41583D9B73
7E84A801E0006A05A90134F72020594D41583D9B737E84CF6A
838327427129715343AC01B500F42020593D9B737EC0000D7F

```

197 BYTES

HP-41C Lin-Exp Curve Fit by Franco & Simons PPC V9 N7 P15 Oct-Nov 1982

Program Registers Needed: 29

Row 1 (1 - 5)



Row 2 (6 - 8)



Row 3 (8 - 15)



Row 4 (16 - 27)



Row 5 (28 - 38)



Row 6 (39 - 50)



Row 7 (51 - 61)



Row 8 (62 - 68)



Row 9 (69 - 76)



Row 10 (77 - 84)



Row 11 (85 - 91)



Row 12 (91 - 97)



Row 13 (98 - 101)



Row 14 (102 - 113)



Row 15 (114 - 119)



Row 16 (119)

