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      ∇LINREG[ ]∇
[0] LINREG
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[6]A DATE: JANUARY 27, 2002
[7]A LANGUAGE: APL
[8]A DESCRIPTION: THIS PROGRAM PERFORMS A
[9]A LINEAR REGRESSION ANALYSIS
[10] 'LINREG - PERFORM LINEAR REGRESSION'
[11] ' (ENTER X=-9999 TO END.)'
[12]A INITIALIZE SUMS
[13] N←0
[14] SUMX←0
[15] SUMX2←0
[16] SUMXY←0
[17] SUMY←0
[18] SUMY2←0
[19]A LOOP TO READ IN DATA
[20]L1:'ENTER X: '
[21] X←□
[22] →(X=-9999)/L2
[23] 'ENTER Y: '
[24] Y←□
[25] N←N+1
[26] SUMX←SUMX+X
[27] SUMX2←SUMX2+(X×X)
[28] SUMXY←SUMXY+(X×Y)
[29] SUMY←SUMY+Y
[30] SUMY2←SUMY2+(Y×Y)
[31] →L1
[32]A PERFORM LINEAR REGRESSION
[33]L2:DEN←(N×SUMX2)-SUMX*2
[34] M←((N×SUMXY)-(SUMX×SUMY))÷DEN
[35] B←((SUMY×SUMX2)-(SUMX×SUMXY))÷DEN
[36] DEN←((SUMX2-(SUMX*2)÷N)×(SUMY2-(SUMY*2)÷N))*0.5
[37] R←(SUMXY-(SUMX×SUMY÷N))÷DEN
[38] 'SLOPE M = ' M
[39] 'Y-INTERCEPT B = ' B
[40] 'CORRELATION R = ' R
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