

Programa “Método dos Deslocamentos”

U.C.: TEST2

Calculadora: TI-84 Plus

Procedimento: PRGM – NEW – NAME: TEMDM – ENTER

:Disp “POR.,SAP,GRELHA” (executa qualquer uma destas 3 opções)

:Disp “EA OU GJ”

:Input E

:Disp “EI”

:Input J

:Disp “ANGULO”

:Input O

:Disp “COMPRIMENTO”

:Input L

:E/L → P

:12*J/(L³) → R

:sin(O) → S

:cos(O) → X

: [[X,S,0,0,0,0][-S,X,0,0,0,0][0,0,1,0,0,0][0,0,0,X,S,0][0,0,0,-S,X,0][0,0,0,0,0,1]] → ~~B~~

: [[P,0,0,-P,0,0][0,R,R*L/2,0,-R,R*L/2][0,R*L/2,R*L*L/3,0,-R*L/2,R*L*L/6][-P,0,0,P,0,0][0,-R,-R*L/2,0,R,-R*L/2][0,R*L/2,R*L*L/6,0,-R*L/2,R*L*L/3]] → ~~A~~

: [B]^T*[C] → [E]

: [B]^T*[A]*[B] → [D]

:Disp “PORTICO FEITO” (Nota: antes de executar, a matriz C deve ter os valores de F0 nela inserida e deve ser 6*1)

:Pause (Para executar SAP: pressionar ENTER)

: [[X,S,0,0][0,0,X,S]] → [B]

: [[P,-P][-P.P]] → [A]

: $[B]^T[F] \rightarrow [E]$ (Nota: antes de executar, a matriz F deve ter os valores de F0 nela inserida e deve ser 2×1)

: $[B]^T[A]*[B] \rightarrow [D]$

:Disp "SAP FEITO" (Para executar GRELHA: pressionar ENTER)

: $[1,0,0,0,0,0][0,X,S,0,0,0][0,-S,X,0,0,0][0,0,0,1,0,0][0,0,0,0,X,S][0,0,0,0,-S,X] \rightarrow [B]$

: $[R,0,-R*L/2,-R,0,-R*L/2][0,P,0,0,-P,0][-R*L/2,0,R*L*L/3,R*L/2,0,R*L*L/6][-R,0,R*L/2,R,0,R*L/2][0,-P,0,0,P,0][-R*L/2,0,R*L*L/6,R*L/2,0,R*L*L/3] \rightarrow [A]$

: $[B]^T[G] \rightarrow [E]$

: $[B]^T[A]*[B] \rightarrow [D]$

:Disp "GRELHA FEITA" (Nota: antes de executar, a matriz G deve ter os valores de F0 nela inserida e deve ser 6×1)

:Pause

:Disp "MATRIZ D: RIGIDEZ"

:Disp "MATRIZ E: F0"