

SUBROUTINE ENERGY_2DA(PM,PE,PTT,PPV,X,Z,S,F,FFB,NP,N1,N2,N3,N4,ID)

- ! 水面上有 1 個結構物
- ! ID: 邊界面數
- ! NP: 全部元素數
- ! N1: 假想邊界面元素數
- ! N2: 結構物右邊靜水面元素數
- ! N3: 結構物元素數
- ! N4: 結構物左邊靜水面元素數



REAL X(NP),Z(NP),F(NP),FFB(NP),S(NP)

C=.57735

gr=9.81

SMAX=S(1)

DO I=1,NP-ID

IF(S(I).GT.SMAX) SMAX=S(I)

END DO

2011 埃及尼羅河之旅



載滿珠寶的駱駝

ISURFACE=0

INDEX=0

PM=0

PTT=0

PV=0

DO 201 J=1,NP-1

J1=J+1

IF(J.LE.N1) ISURFACE=1

IF(J.GT.N1+N2+N3+N4) ISURFACE=1

IF(J.GT.N1+N2.AND.J.LE.N1+N2+N3) ISURFACE=1



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XJ=X(J)

ZJ=Z(J)

XJ1=X(J1)

ZJ1=Z(J1)

IF(XJ.EQ.XJ1.AND.ZJ.EQ.ZJ) INDEX=INDEX+1

R=SQRT((XJ1-XJ)**2+(ZJ1-ZJ)**2)

IF(R.GT.SMAX) INDEX=INDEX+1

SJ=S(J-INDEX)

FF=F(J)

FB=FFB(J)

FF1=F(J1)

FB1=FFB(J1)

U1=((1+C)**2+(1-C)**2)*FF*FB

U2=2*(1-C**2)*(FF*FB1+FF1*FB)

U3=((1-C)**2+(1+C)**2)*FF1*FB1

PTT=PTT+(U1+U2+U3)*SJ/16.

IF(ISURFACE.EQ.1) GOTO 201 [尼羅河之旅](#)

PM=PM+(ZJ1+ZJ)*ABS(XJ1-XJ)/2

PV=PV+.5*GR*(ZJ1*ABS(ZJ1)+ZJ*ABS(ZJ))*ABS(XJ1-XJ)/2

201 CONTINUE

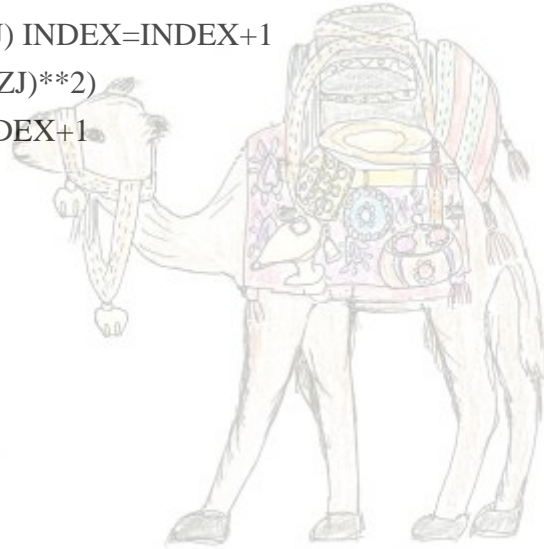
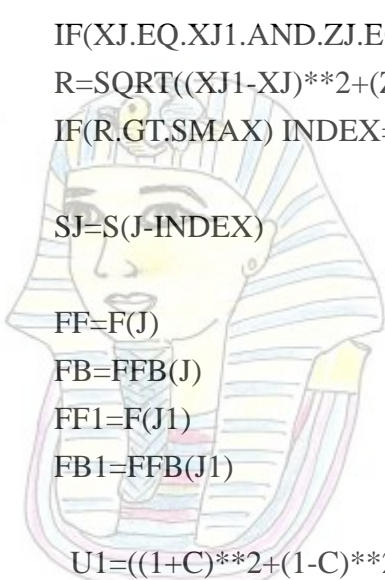
PE=ABS(PTT)+ABS(PV)

PtT=(ABS(PTT)/PE)*100

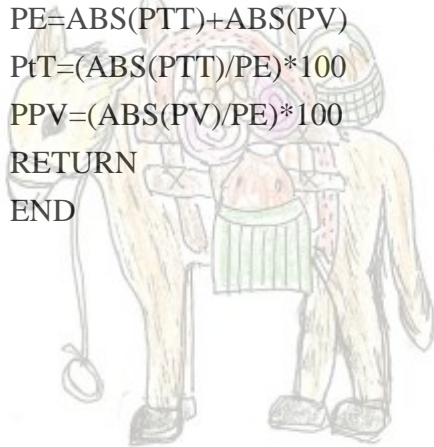
PPV=(ABS(PV)/PE)*100

RETURN

END



載滿珠寶的駱駝



載滿貨品的驢子



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