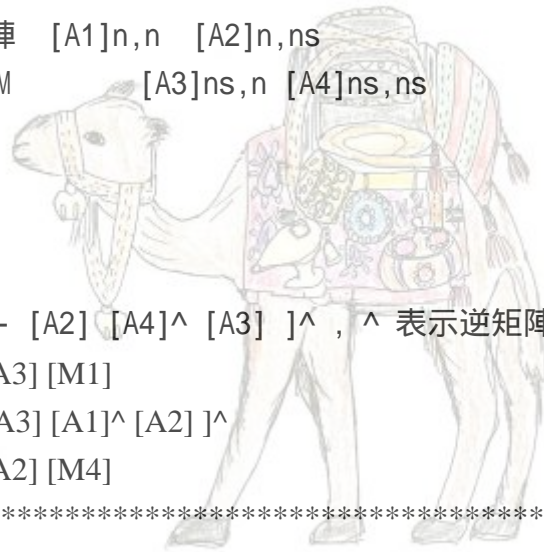
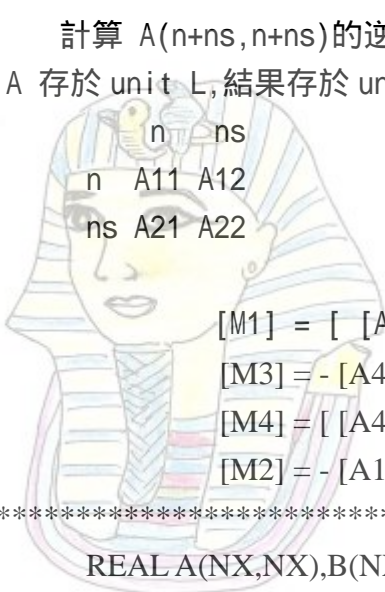


SUBROUTINE MIR2(A,B,Nx,N,NS,L,M)

```

C*****
C 計算 A(n+ns,n+ns)的逆矩陣 [A1]n,n [A2]n,ns *
C A 存於 unit L,結果存於 unit M [A3]ns,n [A4]ns,ns *
C n ns *
C n A11 A12 *
C ns A21 A22 *
C *
C [M1] = [ [A1] - [A2] [A4]^ [A3] ]^ , ^ 表示逆矩陣 *
C [M3] = - [A4]^ [A3] [M1] *
C [M4] = [ [A4] - [A3] [A1]^ [A2] ]^ *
C [M2] = - [A1]^ [A2] [M4] *
C*****
REAL A(NX,NX),B(NX,NX)

```

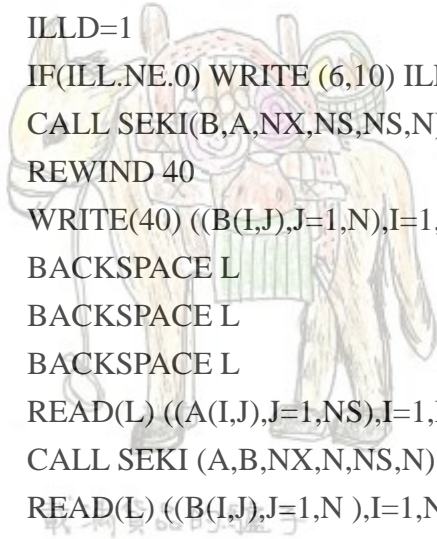


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```

REWIND L
READ(L) ((A(I,J),J=1,N),I=1,N)
READ(L) ((A(I,J),J=1,NS),I=1,N) 羅河之旅
READ(L) ((A(I,J),J=1,N),I=1,NS)
READ(L) ((B(I,J),J=1,NS),I=1,NS)
CALL MINVS(B,NX,NS,1E-7,ILL)
ILLD=1
IF(ILL.NE.0) WRITE (6,10) ILLD,ILL
CALL SEKI(B,A,NX,NS,NS,N)
REWIND 40
WRITE(40) ((B(I,J),J=1,N),I=1,NS)
BACKSPACE L
BACKSPACE L
BACKSPACE L
READ(L) ((A(I,J),J=1,NS),I=1,N)
CALL SEKI (A,B,NX,N,NS,N)
READ(L) ((B(I,J),J=1,N),I=1,NS)
READ(L) ((B(I,J),J=1,NS),I=1,NS)
REWIND L
READ(L) ((B(I,J),J=1,N),I=1,N)
CALL SA (B,A,NX,N,N)
CALL MINVS (A,NX,N,1E-7,ILL)

```



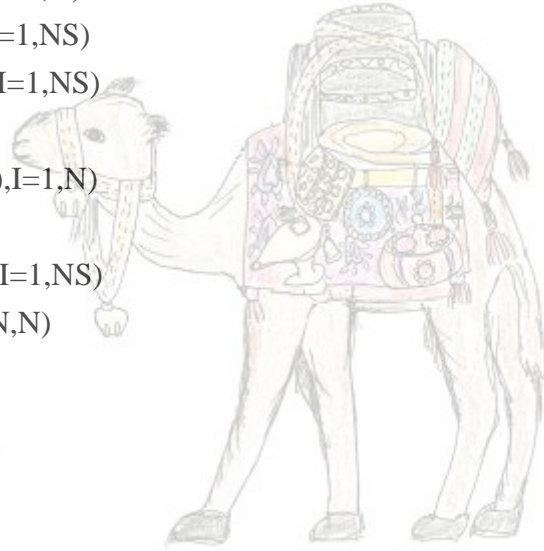
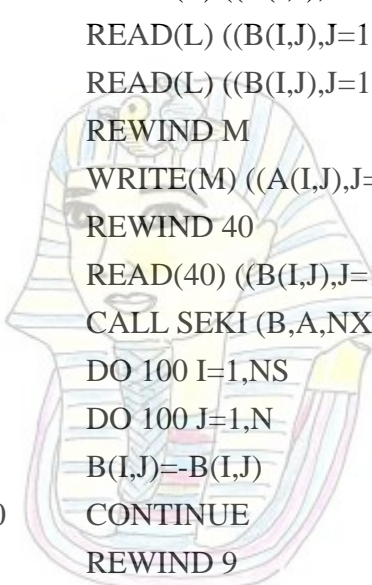
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100

```

ILLD=2
IF(ILL.NE.0) WRITE (6,10) ILLD,ILL
READ(L) ((B(I,J),J=1,NS),I=1,N)
READ(L) ((B(I,J),J=1,N ),I=1,NS)
READ(L) ((B(I,J),J=1,NS),I=1,NS)
REWIND M
WRITE(M) ((A(I,J),J=1,N ),I=1,N)
REWIND 40
READ(40) ((B(I,J),J=1,N ),I=1,NS)
CALL SEKI (B,A,NX,NS,N,N)
DO 100 I=1,NS
DO 100 J=1,N
B(I,J)=-B(I,J)
CONTINUE
REWIND 9

```



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```

WRITE(9) ((B(I,J),J=1,N ),I=1,NS)
REWIND L
READ(L) ((A(I,J),J=1,N ),I=1,N)
CALL MINVS (A,NX,N,1E-7,ILL)

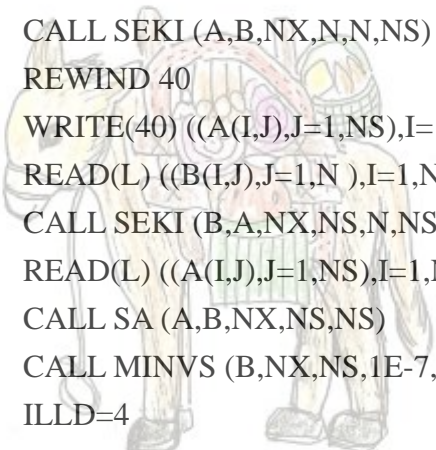
```

羅河之旅

```

ILLD=3
IF(ILL.NE.0) WRITE(*,10) ILLD,ILL
READ(L) ((B(I,J),J=1,NS),I=1,N )
CALL SEKI (A,B,NX,N,N,NS)
REWIND 40
WRITE(40) ((A(I,J),J=1,NS),I=1,N)
READ(L) ((B(I,J),J=1,N ),I=1,NS)
CALL SEKI (B,A,NX,NS,N,NS)
READ(L) ((A(I,J),J=1,NS),I=1,NS)
CALL SA (A,B,NX,NS,NS)
CALL MINVS (B,NX,NS,1E-7,ILL)
ILLD=4

```



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```

IF(ILL.NE.0) WRITE(*,10) ILLD,ILL
WRITE(9) ((B(I,J),J=1,NS),I=1,NS)
REWIND 40
READ(40) ((A(I,J),J=1,NS),I=1,N)
CALL SEKI (A,B,NX,N,NS,NS)
DO 101 I=1,N
DO 101 J=1,NS

```

```

A(I,J)=-A(I,J)
101 CONTINUE
WRITE(M)((A(I,J),J=1,NS),I=1,N)
REWIND 9
READ(9)((A(I,J),J=1,N),I=1,NS)
WRITE(M)((A(I,J),J=1,N),I=1,NS)
READ(9)((A(I,J),J=1,NS),I=1,NS)
WRITE(M)((A(I,J),J=1,NS),I=1,NS)
10 FORMAT(1X,'ILL(',I1,')=' ,I7)
RETURN
END

```

C*****

```

SUBROUTINE SEKI(A,B,M,NA,NK,NB)
REAL A(M,M),B(M,M),C(3000)
DO 100 I=1,NA
DO 101 K=1,NK
C(K)=A(I,K)

```

```

101 CONTINUE
DO 100 J=1,NB
R=0.
DO 102 K=1,NK
R=R+C(K)*B(K,J)
102 CONTINUE
A(I,J)=R
100 CONTINUE
RETURN
END

```

```

SUBROUTINE MINVS(A,KO,N,EPS,ILL)

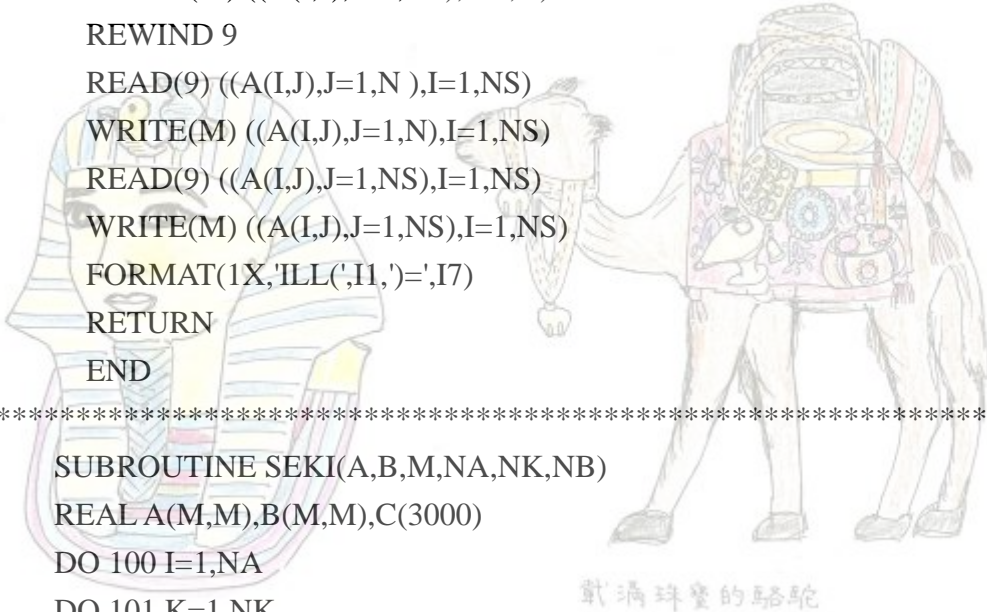
```

C*****

```

REAL A(KO,KO)
INTEGER X(3000)
LOGICAL B
ILL=0
IF((KO.GE.N).AND.(N.GE.2).AND.(N.LE.3000).AND.(EPS.GT.0.0))
/ GO TO 1
ILL=30000
RETURN

```

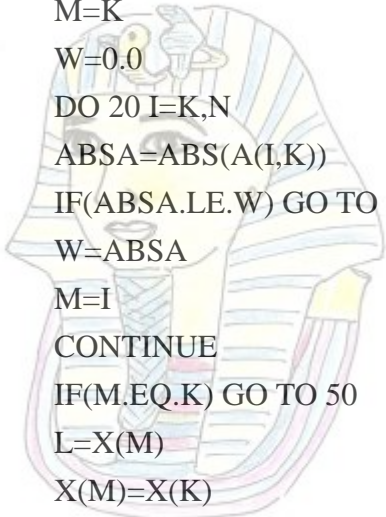


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```

1    DO 10 I=1,N
    X(I)=I
10   CONTINUE
    DO 110 K=1,N
    M=K
    W=0.0
    DO 20 I=K,N
    ABSA=ABS(A(I,K))
    IF(ABSA.LE.W) GO TO 20
    W=ABSA
    M=I
20   CONTINUE
    IF(M.EQ.K) GO TO 50
    L=X(M)
    X(M)=X(K)
    X(K)=L
    DO 40 J=1,N
    W=A(K,J)
    A(K,J)=A(M,J)
    A(M,J)=W
40   CONTINUE
50   IF(ABS(A(K,K)).GE.EPS) GO TO 60
    ILL=K
    RETURN
60   P=1.0/A(K,K)
    DO 70 J=1,N
    A(K,J)=A(K,J)*P
70   CONTINUE
    DO 100 I=1,N
    T=-A(I,K)
    B=(I.NE.K).AND.(T.NE.0.0)
    IF(.NOT.B) GO TO 100
    DO 90 J=1,N
    A(I,J)=A(I,J)+A(K,J)*T
90   CONTINUE
100  A(I,K)=P*T
    A(K,K)=P
110  CONTINUE

```



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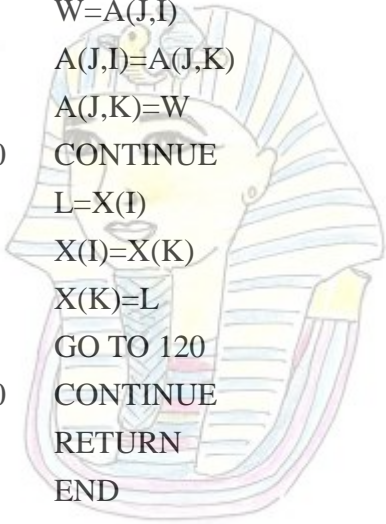


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```

DO 140 I=1,N
120 IF(X(I).EQ.I) GO TO 140
    K=X(I)
    DO 130 J=1,N
        W=A(J,I)
        A(J,I)=A(J,K)
        A(J,K)=W
130 CONTINUE
        L=X(I)
        X(I)=X(K)
        X(K)=L
        GO TO 120
140 CONTINUE
RETURN
END

```



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SUBROUTINE WA(A,B,NA,N,NS)

C*****

```

C [A]n,ns + [B]n,ns ==> [B]n,ns 羅河之旅

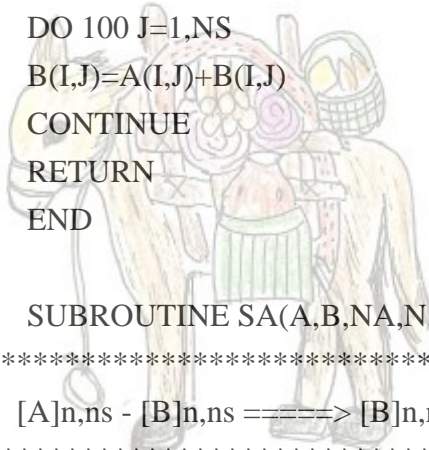
```

C*****

```

REAL A(NA,NA),B(NA,NA)
DO 100 I=1,N
DO 100 J=1,NS
B(I,J)=A(I,J)+B(I,J)
100 CONTINUE
RETURN
END

```



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SUBROUTINE SA(A,B,NA,N,NS)

C*****

```

C [A]n,ns - [B]n,ns ==> [B]n,ns

```

C*****

```

REAL A(NA,NA),B(NA,NA)
DO 100 I=1,N
DO 100 J=1,NS
B(I,J)=A(I,J)-B(I,J)
100 CONTINUE
RETURN

```

END



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