```
A    D5A.K=P5.K*M5.K
A    M5.K=TABHL(M5T,LE.K,20,70,10)
T    M5T=.82/.01/.007/.004/.002/.0008
R    D5.KL=D5A.K
R    MAT5.KL=(P5.K-D5A.K)/5
NOTE AGE 20-24
L    P6.K=P6.J+(DT)(MAT5.JK-D6.JK-MAT6.JK)
N    P6=P6I
C    P6I=1.5E8
A    D6A.K=P6.K*M6.K
A    M6.K=TABHL(M6T,LE.K,20,70,10)
T    M6T=.02/.01/.01/.006/.003/.001
R    D6.KL=D6A.K
R    MAT6.KL=(P6.K-D6A.K)/5
NOTE AGE 25-29
L    P7.K=P7.J+(DT)(MAT6.JK=D7.JK-MAT7.JK)
N    P7=P7I
C    P7I=1.2E8
A    D7A.K=P7.K*M7.K
A    M7.K=TABHL(M7T,LE.K,20,70,10)
T    M7T=.02/.02/.01/.006/.003/.001
R    D7.KL=D7A.K
R    MAT7.KL=(P7.K-D7A.K)/5
NOTE AGE 30-34
L    P8.K=P8.J+(DT)(MAT7.JK-D8.JK-MAT8.JK)
N    P8=P8I
C    P8I=1.1E8
A    D8A.K=P8.K*M8.K
A    M8.K=TABHL(M8T,LE.K,20,70,10)
T    M8T=.03/.02/.01/.007/.004/.002
R    D8.KL=D8A.K
R    MAT8.KL=(P8.K-D8A.K)/5
NOTE AGE 35-39
L    P9.K=P9.J+(DT)(MAT8.JK-D9.JK-MAT9.JK)
N    P9=P9I
C    P9I=9.6E7
A    D9A.K=P9.K*M9.K
A    M9.K=TABHL(M9T,LE.K,20,70,10)
T    M9T=.03/.02/.01/.007/.004/.002
R    D9.KL=D9A.K
R    MAT9.KL=(P9.K-D9A.K)/5
NOTE AGE 40-44
L    P10.K=P10.J+(DT)(MAT9.JK-D10.JK-MAT10.JK)
N    P10=P10I
C    P10I=8.3E7
A    D10A.K=P10.K*M10.K
A    M10.K=TABHL(M10T,LE.K,20,70,10)
T    M10T=.04/.02/.01/.008/.005/.003
R    D10.KL=D10A.K
R    MAT10.KL=(P10.K-D10A.K)/5
NOTE AGE 45-49
L    P11.K=P11.J+(DT)(MAT10.JK-D11.JK-MAT11.JK)
N    P11=P11I
C    P11I=6.8E7
A    D11A.K=P11.K*M11.K
A    M11.K=TABHL(M11T,LE.K,20,70,10)
T    M11T=.04/.03/.02/.01/.006/.004
R    D11.KL=D11A.K
R    MAT11.KL=(P11.K-D11A.K)/5
NOTE AGE 50-54
L    P12.K=P12.J+(DT)(MAT11.JK-D12.JK-MAT12.JK)
N    P12=P12I
C    P12I=5.6E7
A    D12A.K=P12.K*M12.K
A    M12.K=TABHL(M12T,LE.K,20,70,10)
T    M12T=.05/.03/.02/.01/.009/.006
R    D12.KL=D12A.K
R    MAT12.KL=(P12.K-D12A.K)/5
NOTE AGE 55-59
L    P13.K=P13.J+(DT)(MAT12.JK-D13.JK-MAT13.JK)
N    P13=P13I
C    P13I=4.5E7
A    D13A.K=P13.K*M13.K
A    M13.K=TABHL(M13T,LE.K,20,70,10)
T    M13T=.06/.04/.03/.02/.01/.009
R    D13.KL=D13A.K
R    MAT13.KL=(P13.K-D13A.K)/5
NOTE AGE 60-64
L    P14.K=P14.J+(DT)(MAT13.JK-D14.JK-MAT14.JK)
```

```
N    P14=P14I
C    P14I=3.3E7
A    D14A.K=P14.K*M14.K
A    M14.K=TABHL(M14T,LE.K,20,70,10)
T    M14T=.07/.05/.04/.03/.02/.01
R    D14.KL=D14A.K
R    MAT14.KL=(P14.K-D14A.K)/5
NOTE AGE 65+
L    P15.K=P15.J+(DT)(MAT14.JK-D15.JK)
N    P15=P15I
C    P15I=4.8E7
A    D15.KL=P15.K*M15.K
R    M15.K=TABHL(M15T,LE.K,20,70,10)
T    M15T=.13/.11/.09/.07/.06/.05
NOTE
NOTE AUXILLARY EQUATIONS
NOTE
A    D.K=D1.JK+D2.JK+D3.JK+D4.JK+D5.JK+D6.JK+D7.JK+D8.JK+D9.JK+D10.JK+
X    D11.JK+D12.JK+D13.JK+D14.JK+D15.JK
A    POP.K=P1.K+P2.K+P3.K+P4.K+P5.K+P6.K+P7.K+P8.K+P9.K+P10.K+P11.K+
X    P12.K+P13.K+P14.K+P15.K
A    PC.K=(P1.K+P2.K+P3.K+P4.K)/POP.K
A    PF.K=(P5.K+P6.K+P7.K+P8.K+P9.K+P10.K)/POP.K
A    PW.K=(P11.K+P12.K+P13.K+P14.K)/POP.K
A    PE.K=P15.K/POP.K
NOTE
NOTE DEATH RATE EQUATIONS
NOTE
S    CDR.K=1000*D.K/POP.K
A    LE.K=LEN*LMF.K*LMHS.K*LMP.K*LMC.K
C    LEN=28
A    LMF.K=TABHL(LMFT,FPC.K/SFPC,0,5,1)
T    LMFT=0/1/1.2/1.3/1.35/1.4
C    SFPC=230
A    HSAPC.K=TABHL(HSAPCT,SOPC.K,0,2000,250)
T    HSAPCT=0/20/50/95/140/175/200/220/230
A    EHSPC.K=SMOOTH(HSAPC.K,HSID)
C    HSID=20
A    LMHS.K=CLIP(LMHS2.K,LMHS1.K,TIME.K,IPHST)
C    IPHST=40
A    LMHS1.K=TABHL(LMHS1T,EHSPC.K,0,100,20)
T    LMHS1T=1/1.1/1.4/1.6/1.7/1.8
A    LMHS2.K=TABHL(LMHS2T,EHSPC.K,0,100,20)
T    LMHS2T=1/1.4/1.6/1.9/1.95/2.0
A    FPU.K=TABHL(FPUT,POP.K,0,16E9,2E9)
T    FPUT=0/.2/.4/.5/.58/.65/.72/.78/.80
A    CMI.K=TABHL(CMIT,IOPC.K,0,1600,200)
T    CMIT=.5/.05/-.1/-.08/-.02/.05/.1/.15/.2
A    LMC.K=1-(CMI.K*FPU.K)
A    LMP.K=TABHL(LMPT,PPOLX.K,0,100,10)
T    LMPT=1.0/.99/.97/.95/.90/.85/.75/.65/.55/.40/.20
NOTE
NOTE BIRTH RATE EQUATIONS
NOTE
A    EXTRA.K=P5.K*.06+P6.K*.25+P7.K*.28+P8.K*.21+P9.K*.13+P10.K*.07
A    B.KL=CLIP(D.K,((TF.K/10)*EXTRA.K),TIME.K,PET)
C    PET=4000
S    CBR.K=1000*B.K/POP.K
A    TF.K=MIN(MTF.K,(MTF.K*(1-FCE.K)+UTF.K*FCE.K))
A    MTF.K=MTFN*FM.K
C    MTFN=12
A    FM.K=TABHL(FMT,LE.K,0,80,10)
T    FMT=0/.2/.4/.6/.8/.9/1/1.05/1.1
A    UTF.K=DCFS.K*CMPLE.K
A    CMPLE.K=TABHL(CMPLET,PLE.K,0,80,10)
T    CMPLET=3/2.1/1.6/1.4/1.3/1.2/1.1/1.05/1
A    PLE.K=DLINF3(LE.K,LPD)
C    LPD=20
A    DCFS.K=CLIP(2,DCFSN*FRSN.K*SFSN.K,TIME.K,ZPGT)
C    ZPGT=4000
C    DCFSN=4
A    SFSN.K=TABHL(SFSNT,DIOPC.K,0,800,200)
T    SFSNT=1.25/1/.9/.8/.75
A    DIOPC.K=DLINF3(IOPC.K,SAD)
C    SAD=20
A    FRSN.K=TABHL(FRSNT,FIE.K,-.2,-.2,.1)
T    FRSNT=.5/.6/.7/.85/1
N    FRSN=.82
A    FIE.K=(IOPC.K-AIOPC.K)/AIOPC.K
A    AIOPC.K=SMOOTH(IOPC.K,IEAT)
```