

```

BEGIN
  INTEGER I, J, K, L, M, N, P, Q, R, S, T, MON, ANF, E, F, TMP,
  MEND, AQ, ANFQ, PROD, NNAN, EZ, BEV, AUS, CODE, AKTEM,
  VER, U, V, W, BANFQ, NAUF, NEIN, NZA;
  REAL WER, PG, PR, KAP, KAPA, PLAN, C1, GEW, SOZ, PB, GEBIN, H, KPF, LESUM,
  KIND,
  A, B, C, D, G, AWQ, ZWQ, PD, LONST, ROLAK, LAVOK, ENERG, ENT, LME, AME, ARE,
  NARZU;
  BOOLEAN AB;
  CODE := ININT;
  ANF := ININT;
  MEND := ININT;
  E := 18;
  F := 28;
  AUS := ININT;
  AKTEM := 0;
  AB := FALSE;
  OUTIMAGE;
  OUTTEXT("CODENR");
  OUTINT(CODE, 10);
  BEGIN
    INTEGER ARRAY ALTER, POOL(1:E, 1:5), ESP(1:36),
    GRENZ, GREP(1:E), BW(U:E, 1:E),
    ALGRU(1:9), IND(1:36), W0(1:6, 0:E + 2);
    ARRAY HD(1:E, 1:28), ZEIT(1:6, 1:36),
    EIN, AKTEIN(1:100, 1:13),
    FLUK(1:5), INST(1:9, 1:20), UST(1:14), AR(1:30),
    EMERG(1:15, 1:7), NABIL, ARZU,
    ABIL(1:2), ALZU, STERIN, JAHRIN, JAHRAN, TSUM, ALAB(1:9),
    KUMZU, KUMAB(1:E, 1:5), SYC(1:22);

  PROCEDURE NL(N);
    INTEGER N;
  BEGIN
    INTEGER I;
    FOR I := 1 STEP 1 UNTIL N DO OUTIMAGE;
  END;

  PROCEDURE RMATEIN(MAT, AZ, EZ, AS, ES);
    VALUE AZ, EZ, AS, ES;
    INTEGER
    AZ, EZ, AS, ES;
    ARRAY MAT;
  BEGIN
    INTEGER I, J;
    FOR I := AZ STEP 1 UNTIL
      EZ DO FOR J := AS STEP 1 UNTIL ES DO MAT(I, J) := INREAL
  END;

  PROCEDURE MATA(M, X, AZ, NZ, AS, NS, ZEI, HK, W);
    INTEGER AZ, NZ, AS, NS,

```

```

NS, HK, ZEI;
INTEGER ARRAY X;
ARRAY M;
BEGIN
  INTEGER I, J;
  NL(3);
  FOR I := AZ STEP 1 UNTIL NZ DO
  BEGIN
    NL(1);
    FOR J := AS STEP 1 UNTIL NS DO
    BEGIN
      IF W < 0 THEN
        OUTFIX(M(I, J), HK, ZEI) ELSE OUTINT(X(I, J), ZEI);
      IF MOD(J, ENTIER(79 / ZEI)) = 0 THEN NL(1)
    END J
  END I
END MATA;

```

```

PROCEDURE VEKA(V, X, A, E, ZEI, HK, W);
  INTEGER W, A, E, HK, ZEI;
  INTEGER ARRAY X;
  ARRAY V;
BEGIN
  INTEGER I;
  NL(2);
  FOR I := A STEP 1 UNTIL E DO
  BEGIN
    IF W < 0 THEN OUTFIX(V(I), HK, ZEI) ELSE OUTINT(X(I), ZEI);
    IF MOD(I, ENTIER(79 / ZEI)) = 0 THEN
      NL(1)
  END
END VEKA;

```

```

PROCEDURE WOMIN(BER, N);
  INTEGER BER, N;
BEGIN
  INTEGER I, J;
  LW:I := RANDINT(1, 6, U);
  J := WO(I, BER);
  IF J > 0 THEN
  BEGIN
    IF J > N THEN WO(I, BER) := J - N ELSE
    BEGIN
      N := N - J;
      WO(I, BER) := 0;
      GOTO LW
    END
  END ELSE GOTO LW
END WOMIN;

```

```

PROCEDURE REST(G, RESTWERT, BASIS, INDEX);

```

```

NAME G, RESTWERT;
VALUE INDEX;
INTEGER G;
REAL RESTWERT, INDEX, BASIS;
BEGIN
  RESTWERT := RESTWERT + BASIS * INDEX;
  G := ENTIER(RESTWERT);
  IF G > 0 THEN RESTWERT := RESTWERT - G
END RESTREST;

```

```

PROCEDURE MATAUS(MR, MI, AZ, NZ, AS, NS, Z, INN);
  VALUE AS, AZ, NS, NZ, Z, INN;
  INTEGER AS, AZ, NS, Z, NZ;
  BOOLEAN INN;
  INTEGER ARRAY MI;
  ARRAY MR;
BEGIN
  INTEGER I, J, K, L, M, N;
  NL(5);
  K := ENTIER(120 / Z + 0.5);
  IF NS < K THEN N := NS ELSE N := K;
  M := AS;
  L1:
  FOR I := AZ STEP 1 UNTIL NZ DO
  BEGIN
    OUTIMAGE;
    OUTINT(I, 5);
    OUTTEXT("I");
    FOR J := M STEP 1 UNTIL N DO
    BEGIN
      IF INN THEN OUTINT
        (MI(I, J), Z) ELSE OUTFIX(MR(I, J), 3, Z)
    END
    END I;
    IF N < NS THEN
    BEGIN
      NL(5);
      N := N + K;
      M := M + K;
      IF N > NS THEN N := NS;
      GOTO L1
    END
  END MATAUS;

```

```

PROCEDURE GRUNDAUS;
BEGIN
  NL(5);
  OUTIMAGE;
  OUTINT(MON, 5);
  OUTIMAGE;
  MATAUS(HD, W0, 1, E, 1, 28, 15, FALSE );
  MATAUS(INST, W0, 1, 7, 1, 17, 15, FALSE );

```

```
MATAUS(INST, W0, 1, 6, 0, E + 2, 8, TRUE );
MATAUS(HD, ALTER, 1, E, 1, 5, 5, TRUE );
END GRUNDAUS;
```

```
PROCEDURE UMSETZ(VON, ZU, N);
  INTEGER VON, ZU, N;
BEGIN
  INTEGER I, J, K, H;
  REAL KAP;
  K := HD(VON, 2) + HD(VON, 3);
  IF N > K THEN H := K;
  IF K > 0 THEN
    KAP := HD(VON, 14) / K;
  FOR I := 1 STEP 1 UNTIL H DO
    BEGIN
      L:J := RANDINT(1, 5, U);
      IF ALTER(VON, J) > 0 THEN
        BEGIN
          ALTER(VON, J) := ALTER(VON, J) - 1;
          ALTER(ZU, J) := ALTER(ZU, J) + 1;
          HD(VON, 2) := HD(VON, 2) - 1;
          HD(ZU, 3) := HD(ZU, 3) + 1;
          L2:K := RANDINT(1, 6, U);
          IF W0(K, VON) > 0 THEN
            BEGIN
              W0(K, VON) := W0(K, VON) - 1;
              W0(K, ZU) := W0(K, ZU) + 1
            END
          ELSE GOTO L2;
          HD(VON, 14) := HD(VON, 14) - KAP;
          HD(ZU, 14) := HD(ZU, 14) + KAP
        END
      ELSE GOTO L;
    END
  END UMSETZ;
```

```
PROCEDURE GRUNDEIN;
BEGIN
  INTEGER I, J;
  RMATEIN(HD, 1, E, 1, F);
  RMATEIN(INST, 1, 7, 1, 17);
  FOR I := 1 STEP 1 UNTIL E DO FOR J := 1 STEP 1 UNTIL 5 DO
    ALTER(I, J) := ININT;
  FOR I := 1 STEP 1 UNTIL E DO FOR J := 1 STEP 1 UNTIL 5 DO
    POOL(I, J) := ININT;
  RMATEIN(ZEIT, 1, 6, 1, 36);
  FOR I := 1 STEP 1 UNTIL 22 DO SYC(I) := INREAL;
  FOR I := 1 STEP 1 UNTIL 9 DO STERIN(I) := INREAL;
  FOR I := 1 STEP 1 UNTIL 9 DO JAHRIN(I) := INREAL;
  FOR I := 1 STEP 1 UNTIL 9 DO ALGRU(I) := ININT;
  FOR I := 1 STEP 1 UNTIL 14 DO UST(I) := INREAL;
  FOR I := 1 STEP 1 UNTIL 5 DO FLUK(I) := INREAL;
```

```

FOR I := 1 STEP 1 UNTIL 6 DO
FOR J := 0 STEP 1 UNTIL E + 1 DO WO(I, J) := ININT;
RMATEIN(KUMZU, 1, E, 1, 5);
RMATEIN(KUMAB, 1, E, 1, 5);
FOR I := 1 STEP 1 UNTIL 9 DO ALAB(I) := INREAL;
FOR I := 1 STEP 1 UNTIL E DO FOR J := 1 STEP 1 UNTIL E DO BW(I, J) := ININT;
NEIN := ININT;
RMATEIN(EIN, 1, NEIN, 1, 11);
END GRUNDEIN;

```

```

COMMENT ANFANGSEINGABE;
FOR I := 1 STEP 1 UNTIL 36 DO ESP(I) := -100;
GRUNDEIN;
U := ENTIER(SYC(15));
I := ININT;
FOR J := 1 STEP 1 UNTIL I DO ESP(J) := ININT;
EZ := 1;
JAHRAN(1) := 0;
FOR I := 2 STEP 1 UNTIL 9 DO JAHRAN(I) := JAHRAN(I - 1) + JAHRAN(I - 1);
FOR MON := ANF STEP 1 UNTIL MEND DO
BEGIN
NZA := 0;
NL(1);
OUTTEXT("EINGRIFFE ");
FOR I := 1 STEP 1 UNTIL NEIN DO
BEGIN
IF ENTIER(EIN(I, 1)) <= MON AND ENTIER(EIN(I, 2)) >= MON AND MOD(MON,
ENTIER(EIN(I, 3))) = 0 THEN
BEGIN
NZA := NZA + 1;
OUTTEXT("D");
OUTINT(I, 3);
FOR J := 1 STEP 1 UNTIL 8 DO
AKTEIN(NZA, J) := EIN(I, J + 3)
END
END I;
IF MON = ESP(EZ) THEN
BEGIN
LL: K := ININT;
IF K = 10 THEN GOTO LLL;
IF K <= 3 OR K = 6 OR K = 11 THEN L := 3;
IF K = 4 OR K = 5 THEN L := 2;
IF K = 7 THEN L := 7;
IF K = 9 THEN L := 6;
IF K = 8 THEN L := 12;
NZA := NZA + 1;
OUTTEXT("M");
OUTINT(K, 3);
AKTEIN(NZA, 1) := K;
FOR J := 2 STEP 1 UNTIL L + 1 DO
AKTEIN(NZA, J) := INREAL;
GOTO LL;

```

```

LLL: END MONESP;
IF NZA > 0 THEN
BEGIN
  INTEGER ZI, ZA;

  REAL PROCEDURE NAEZI;
  BEGIN
    ZI := ZI + 1;
    NAEZI := AKTEIN(ZA, ZI)
  END;

  PROCEDURE MAEND(WERT);
  ARRAY WERT;
  BEGIN
    INTEGER I, J;
    I := ENTIER(NAEZI);
    J := ENTIER(NAEZI);
    IF J > 100 THEN WERT(I, J - 100) := NAEZI ELSE WERT(I, J) := WERT(I,
J) + NAEZI
  END;

  PROCEDURE VAEND(VEK);
  ARRAY VEK;
  BEGIN
    INTEGER I;
    I := ENTIER(NAEZI);
    IF I > 100 THEN VEK(I - 100) := NAEZI ELSE
      VEK(I) := VEK(I) + NAEZI
  END;

FOR ZA := 1 STEP 1 UNTIL NZA DO
BEGIN
  SWITCH VERTEILER := V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11;
  ZI := 0;
  I := ENTIER(NAEZI);
  GOTO VERTEILER(I);
  V1:MAEND(HD);
  GOTO V10;
  V2:MAEND(INST);
  GOTO V10;
  V3:J := ENTIER(NAEZI);
  K := ENTIER(NAEZI);
  IF K > 99 THEN
    W0(J, K - 100) := ENTIER(NAEZI)
  ELSE W0(J, K) := W0(J, K) + ENTIER(NAEZI);
  GOTO V10;
  V4:VAEND(SYC);
  GOTO V10;
  V5:VAEND(UST);
  GOTO V10;

```

```

V6: MAEND(EMERG);
GOTO V10;
V7: J := ENTIER(NAEZI);
FOR K := 1, 2, 3, 4, 6, 7 DO
EMERG(J, K) := NAEZI;
EMERG(J, 5) :=
IF EMERG(J, 2) > 1 THEN INST(EMERG(J, 3),
EMERG(J, 4)) ELSE HD(EMERG(J, 3),
EMERG(J, 4));
IF AKTEM < J THEN AKTEM := J;
GOTO V10;
V8:J := ENTIER(NAEZI);
IF NEIN < J THEN NEIN := J;
FOR K := 1 STEP 1 UNTIL 11 DO EIN(J, K) := NAEZI;
GOTO V10;
V11:J := ENTIER(NAEZI);
K := ENTIER(NAEZI);
UMSETZ(J, K, ENTIER(NAEZI));
GOTO V10;
V9:J := ABS(ENTIER(AKTEIN(ZA, 2)));
K := ENTIER(AKTEIN(ZA, 3));
L := ENTIER(AKTEIN(ZA, 4));
IF J < 1.5 THEN A := HD(K, L) ELSE
BEGIN
    IF J > 2.5 THEN A := W0(K, L) ELSE
        A := INST(K, L)
    END;
    IF (A > AKTEIN(ZA, 5) AND AKTEIN(ZA, 2) > 0)
    OR (A < AKTEIN(ZA, 5) AND AKTEIN(ZA, 2) < 0)
    THEN EIN(AKTEIN(ZA, 6), 2) := AKTEIN(ZA, 7);
V10: END ZA;
IF MON = ESP(EZ) THEN EZ := EZ + 1
END EINGRIFF;
HD(16, 1) := (HD(11, 2) + HD(18, 2)) * 4;
KAPA := ZEIT(1, 10);
PLAN := ZEIT(5, 2);
PG := ZEIT(3, 11);
WER := ZEIT(2, 3);
PB := ZEIT(4, 2);

```

```

COMMENT BEVOELKERUNGSMODELL;
GRENZ(1) := HD(1, 2) + HD(1, 3);
GREP(1) := HD(1, 17);
FOR I := 2 STEP 1 UNTIL E DO
BEGIN
    GRENZ(I) := GRENZ(I - 1) + HD(I, 2) + HD(I, 3);
    GREP(I) := GREP(I - 1) + HD(I, 17)
END I;
OUTIMAGE;
OUTINT(MON, 6);
INST(7, 3) := GRENZ(E);
INST(7, 5) := GREP(E);
BEV := Q;

```

```

FOR I := 1 STEP 1 UNTIL 9 DO
BEGIN
  OUTINT(ALGRU(I), 5);
  REST(J, ALAB(I), ALGRU(I),
    SYC(8) * 0.0833 * STERIN(I));
  ALGRU(I) := ALGRU(I) - J;
  BEV := BEV + ALGRU(I);
  REST(K, TSUM(I), J, 0.5);
  OUTINT(J, 5);
  IF I > 3 AND I < 9 THEN
  BEGIN
    FOR J := 1 STEP 1 UNTIL K DO
    BEGIN
      LTOT:L := RANDINT(1, GRENZ(E), U);
      FOR M := 1 STEP 1 UNTIL E DO
      BEGIN
        IF L <= GRENZ(M) THEN
        BEGIN
          IF ALTER(M, I - 3) > 0 THEN
          BEGIN
            ALTER(M, I - 3)
            := ALTER(M, I - 3) - 1;
            WOMIN(M, 1);
            IF HD(M, 2) >= 1 THEN
              HD(M, 2) := HD(M, 2) - 1 ELSE HD(M, 3) := HD(M, 3) - 1;
            GOTO LE2
          END ELSE GOTO LTOT
        END LGR
      END M;
      LE2: END J
    END IGR3KL9;
    IF I > 8 THEN
    BEGIN
      FOR J := 1 STEP 1 UNTIL K DO
      BEGIN
        LPES:L := RANDINT(1, GREP(E), U);
        FOR M := 1 STEP 1 UNTIL E DO
        BEGIN
          IF L <= GREP(M) THEN
          BEGIN
            IF HD(M, 17) >= 1 THEN
            BEGIN
              HD(M, 17) := HD(M, 17) - 1;
              WOMIN(M, 1);
              GOTO LE1
            END ELSE GOTO
            LPES
          END LGR
        END M;
        LE1: END J
      END IGR8
    END IIIIIIIIIII;
    FOR I := 9 STEP - 1 UNTIL 2 DO
    BEGIN

```

```

REST(K, ALZU(I), ALGRU(I - 1), 1 / (JAHRIN(I - 1) * 12));
IF K > 0 THEN
BEGIN
  ALGRU(I) := ALGRU(I) + K;
  ALGRU(I - 1) := ALGRU(I - 1) - K;
  IF I = 4 THEN
    BEGIN
      REST(T, LESUM, K, 0.8);
      ALGRU(I) := ALGRU(I) - K + T
    END I4;
  IF I > 5 THEN
    BEGIN
      GRENZ(1) := ALTER(1, I - 4);
      FOR J := 2 STEP 1 UNTIL E DO GRENZ(J) := GRENZ(J - 1) + ALTER(J, I -
4);
      REST(R, ARE, K, 0.5);
      FOR J := 1 STEP 1 UNTIL R DO
        BEGIN
          LALT:L := RANDINT(1, GRENZ(E), U);
          FOR M := 1 STEP 1 UNTIL E DO
            BEGIN
              IF L <= GRENZ(M) THEN
                BEGIN
                  ALTER(M, I - 4) := ALTER(M, I - 4) - 1;
                  IF I < 9 THEN ALTER(M, I - 3) := ALTER(M, I - 3) + 1 ELSE
                    BEGIN
                      HD(M, 2) := HD(M, 2) - 1;
                      HD(M, 17) := HD(M, 17) + 1
                    END;
                  GOTO LE3
                END NG
              END M;
            END IGR4;
          END KGR0
        END IIII;
      REST(K, KIND, INST(7, 3), SYC(9) * 0.083333);
      OUTINT(K, 5);
      ALGRU(1) := ALGRU(1) + K;
      FOR I := 1 STEP 1 UNTIL 3 DO Q := Q + ALGRU(I);
      INST(7, 1) := BEV;
      INST(7, 2) := Q;
      INST(7, 4) := KPF := Q / INST(7, 3);
    END
  END
END

```

COMMENT LEHRLINGSWECHSEL;

```

IND(1) := 7;
IND(2) := 17;
IND(3) := 5;
IND(4) := 16;
FOR I := 1, 2 DO
BEGIN
  M := IND(I + 2);
  L := IND(I);

```

```

REST(K, ABIL(I), HD(L, 2), 0.027777);
REST(P, ARZU(I), K, 0.6);
REST(Q, NABIL(I), HD(L, 3), 0.027777);
REST(R, NARZU, Q, 0.5);
A := HD(L, 14) / (HD(L, 2) + HD(L, 3));
HD(M, 14) := HD(M, 14) + K * A;
HD(L, 14) := HD(L, 14) - (K + Q) * A;
HD(6, 14) := HD(6, 14) + Q * A;
HD(L, 2) := HD(L, 2) - K;
HD(M, 3) := HD(M, 3) + P;
ALTER(M, 2) :=
ALTER(M, 2) + P;
HD(L, 3) := HD(L, 3) - Q;
HD(6, 3) := HD(6, 3) + R;
ALTER(6, 2) :=
ALTER(6, 2) + R;
K := K + Q;
ALTER(L, 1) := ALTER(L, 1) - K;
IF W0(1, L) > K THEN W0(1, L) :=
W0(1, L) - K ELSE
BEGIN
  W0(6, L) := W0(6, L) - (K - W0(1, L));
  W0(1, L) := 0
END
END;
IND(7) := HD(7, 1) - HD(7, 2);
IND(17) := HD(17, 1) - HD(17, 2);
M := IF HD(5, 9) > HD(16, 9) THEN 7 ELSE 17;
N := IF M = 7 THEN 17 ELSE 7;
P := IF T < IND(M) THEN T ELSE IND(M);
IND(M + 1) := IF P = T THEN P - ENTIER(0.1 * P) ELSE P;
IND(N + 1) := T - IND(M + 1);
P := 0;
FOR I := M, N DO
BEGIN
  HD(I, 2) := HD(I, 2) + IND(I + 1);
  P := P + IND(I + 1);
  ALTER(I, 1) :=
    ALTER(I, 1) + IND(I + 1)
END;
IF T > P THEN
BEGIN
  FOR I := 17, 7 DO
  BEGIN
    R := ENTIER(0.5 * (T - P) + 0.5);
    HD(I, 3) := HD(I, 3) + R;
    ALTER(I, 1) := ALTER(I, 1) + R
  END
END;
M := 0;
FOR I := 1 STEP 1 UNTIL E DO
BEGIN
  A := 0;
  K := L := 0;

```

```

M := M + HD(I, 2) + HD(I, 3);
FOR J := 1 STEP 1 UNTIL 5 DO
BEGIN
  A := A + ALTER(I, J) *
    (JAHRAN(J + 3) + JAHRIN(J + 3) / 2);
  L := L + W0(J, I);
  K := K + ALTER(I, J);
END J;
W0(6, I) := HD(I, 2) + HD(I, 3) + HD(I, 17) - L;
IF K > 0 THEN HD(I, 6) := (A / K) / 8.57143 ELSE HD(I, 6) := 0
END;

```

```

COMMENT WOHNUNGSBERECHNUNG;
FOR I := 1 STEP 1 UNTIL 5 DO
BEGIN
  K := 0;
  FOR J := 1 STEP 1 UNTIL E DO K := K + W0(I, J);
  L := W0(I, 0) - K;
  IF L > 0 THEN
  BEGIN
    A := W0(I, E + 1);
    FOR K := 1 STEP 1 UNTIL E DO
    BEGIN
      IF A < 0.25 * HD(K, 12) AND A > 0.1 * HD(K, 12)
      THEN
      BEGIN
        J := W0(6, K);
        IF L > W0(6, K) THEN
        BEGIN
          W0(I, K) := W0(I, K) + J;
          L := L - J;
          W0(6, K) := 0
        END ELSE
        BEGIN
          W0(6, K) := J - L;
          W0(I, K) := W0(I, K) + L;
          GOTO L1
        END
      END ALESS
    END K
  END LGROE;
L1: END I;
A := 0;
FOR I := 5 STEP 1 UNTIL 8 DO A := A + ALGRU(I);
INST(7, 11) := A / INST(7, 3) + KPF;
INST(7, 12) := ALGRU(9) / INST(7, 5);
INST(6, 1) := 1 / UST(8) * SYC(17) + 1 / UST(9) * SYC(18);
INST(2, 16) := INST(2, 5);
FOR I := 6, 8, 3, 17, 15 DO INST(2, I) := 0;
LONST := ENERG := ENT := AME := LME := 0;
INST(3, 10) := 0;

```

```

COMMENT LOHNERWARTUNGEN;
FOR J := 1 STEP 1 UNTIL 5 DO W0(J, E + 2) := 0;
C1 := 0;
FOR I := 1 STEP 1 UNTIL E DO
BEGIN
  A := 0;
  K := 0;
  HD(I, 25) := 0;
  FOR J := 1 STEP 1 UNTIL 5 DO
  BEGIN
    A := A + W0(J, I) * W0(J, E + 1);
    K := K + W0(J, I);
    W0(J, E + 2) := W0 (J, E + 2) + W0(J, I)
  END;
  HD(I, 15) := IF K < 1 THEN 0 ELSE A / K;
  INST(2, 3) := INST(2, 3) + A;

```

```

COMMENT BERECHNUNG DER LOHNSTEUER DER AUSGABEN USW;
C := HD(I, 24) - (HD(I, 24) - 1) * SYC(7);
A := (1 / UST(8)) * SYC(17);
B := (1 / UST(9)) * SYC(18);
HD(I, 12) := HD(I, 15) + (A + B) * HD(I, 24) * INST(7, 11);
A := A * C;
B := B * C;
AR(2) := HD(I, 9);
AR(3) := HD(I, 20);
AR(17) := HD(I, 19);
INST(2, 15) := INST(2, 15) + HD(I, 3) * AR(3);
AR(4) := 1;
AR(5) := IF 0.75 * C >= 1 THEN 0.75 ELSE 1 / C;
AR(19) := IF 0.5 * C >= 1 THEN 0.5 ELSE 1 / C;
AR(6) := AR(7) := INST(7, 11);
AR(21) := INST(7, 12);
FOR K := 2, 3, 17 DO
BEGIN
  C := AR(K + 2);
  M := HD(I, K);
  H := IF I = 7 OR I = 17
  THEN 1 ELSE AR(K + 4);
  LME := LME + C * H * A * M;
  AME := AME + C * H * B * M;
  IF AR(K) > SYC(2) THEN
  BEGIN
    D := SYC(5) * ((AR(K) - SYC(2)) / SYC(3));
    G := SYC(1) + D;
    IF G > SYC(4) THEN G := SYC(4);
    G := G * AR(K);
    LONST := LONST + M * G
  END ELSE G := 0;
  IF K = 2 THEN HD(I, 16) := G;
  D := C * A * H + C * H * B + HD(I, 15) + G;

```

```

COMMENT DI ST DIE SUMME DER AUSGABEN;
D := AR(K) - D;
L := IF K > 3 THEN 18 ELSE 14;
HD(I, L) := HD(I, L) + D * M;
HD(I, 25) := IF D < 0 THEN HD(I, 25) + K ELSE HD(I, 25);
ENERG := ENERG + SQRT(HD(I, 24)) * M * UST(2);
ENT := ENT + (C ** 0.4) * M * UST(4);
END KKKKKKKKKKKK;
FOR J := 14, 18 DO
BEGIN
  A := HD(I, J);
  K := IF A < 0 THEN 6 ELSE 7;
  A := A * SYC(K) / 12;
  INST(3, 10) := INST(3, 10) - A;
  HD(I, J) := HD(I, J) + A;
  C1 := C1 + HD(I, J)
END J;
IF HD(I, 8) < 1 THEN HD(I, 8) := HD(I, 10);
A := HD(I, 9);
B := HD(I, 8);
C := HD(I, 12) + HD(I, 16);
D := A / HD(5, 9);
G := HD(I, 11);
IF A > C THEN
BEGIN
  IF A > B THEN HD(I, 8) := B + 0.1 * (A - B)
  ELSE HD(I, 8) := B - 0.05 * (B - A);
  HD(I, 24) := HD(I, 24) + 0.05 * HD(I, 24);
END ELSE
BEGIN
  HD(I, 24) := HD(I, 24) - 0.09 * HD(I, 24);
  IF HD(I, 24) < 1
  THEN HD(I, 24) := 1;
  IF D < G THEN
BEGIN
    H := G * HD(5, 9);
    IF B < H THEN HD(I, 8) := B + 0.2 * (H - B);
    HD(I, 11) :=
      G - 0.02 * G
    END ELSE HD(I, 11) := G + 0.02 * G
  END;
  IF I <= 7 OR (I >= 14 AND I <= 15) THEN
BEGIN
  IF I < 8 THEN GEW := INST(1, 14) ELSE GEW := INST(3, 14);
  IF GEW > 0 THEN HD(I, 8) := HD(I, 8) + .01 * HD(I, 9)
END;
END LOHNERWARTUNG;
ROLAK := 0;
Q := 0;
G := IF SYC(11) > 7 THEN 7 ELSE SYC(11);
SYC(11) := SYC(11) - 0.1 * SYC(11);
AR(8) := 3;
AR(9) := 1.5;
AR(10) := 0.3;

```

```

AR(11) := 1;
AR(12) := 2;
AR(13) := 1.5;
AR(18) := 0.2;
G := G / 7;
FOR I := 8, 9, 10, 11, 12, 13, 18 DO
  G := G + (HD(I, 4) / HD(I, 5)) * AR(I);
  G := (G / 10.5) * 7;
INST(4, 1) := G;
INST(4, 2) := SYC(11);
FOR I := 1 STEP 1 UNTIL E DO
BEGIN
  A := (HD(I, 9) - HD(I, 8)) / (INST(6, 1) * 10);
  IF A < - 1.4 THEN A := -1.4;
  B := 2.466 * LN(A + 1.5) - 1;
  HD(I, 7) := IF A < 0.5 THEN B ELSE 0.7095 + 0.2 * (A - .5);
  IF HD(I, 7) < - 1 THEN HD(I, 7) := -1;
  IF HD(I, 7) > 1 THEN HD(I, 7) := 1;

```

```

COMMENT BERECHNUNG ARBEITSPLATZFLUKTUATION UND ERFAHRUNG;
B := HD(I, 2) + HD(I, 3);
IF B = 0 THEN A := HD(I, 23) := 0 ELSE
  A := HD(I, 23) := (G * 3 + 7 - (W0(6, I) / B) * 7 + (7 - (HD(I, 3) / B)
* 7) * 4 + 7 - HD(I, 13) / 80) * 7 / 9;
C := 0.02 - (A / 7) * 0.01;
D := 0.01 + (A / 7) * 0.01;
Q := Q + HD(I, 2);
ROLAK := ROLAK + A * HD(I, 2);
A := (HD(I, 9) - HD(I, 10)) / INST(6, 1);
IF A > 65 OR A < - 65 THEN A := 65 * SIGN(A);
ZWQ := IF A > 0.1 THEN SQRT(A) ELSE 0.2;
AWQ := IF A < - 0.1 THEN SQRT(-A) ELSE 0.2;
IF HD(I, 7) > 0 THEN AWQ := AWQ - (0.5 * AWQ * HD(I, 7));
IF HD(I, 7) < 0 THEN AWQ := AWQ + AWQ * ABS(HD(I, 7));
K := 0;
AWQ := AWQ * C * HD(I, 2);
FOR J := 1 STEP 1 UNTIL 5 DO
BEGIN
  T := ALTER(I, J);
  IF T > 0 THEN
    BEGIN
      REST(L, KUMAB(I, J), AWQ, FLUK(J));
      IF L > 0 THEN
        BEGIN
          L := IF T > L THEN L ELSE T;
          IF ALGRU(J + 3) >= 2 * L THEN
            BEGIN
              ALGRU(J + 3) := ALGRU(J + 3) - 2 * L;
              M := RANDINT(1, 3, U);
              ALGRU(M) := ALGRU(M) - KPF;
              K := K + L;
              ALTER(I, J) := ALTER(I, J) - L;
              T := HD(I, 2) + HD(I, 3);
            
```

```

        IF T > 0 THEN
            HD(I, 14) := HD(I, 14) - L * HD(I, 14) / T;
            WOMIN(I, L);
        END
    END
END;
HD(I, 2) := HD(I, 2) - K;
HD(I, 21) := K;
K := 0;
M := HD(I, 1) - HD(I, 2);
IF M > 0 THEN
BEGIN
    T := HD(I, 3);
    IF T < M THEN
        BEGIN
            M := M - T;
            HD(I, 2) := HD(I, 2) + T;
            HD(I, 3) := 0;
        END ELSE
        BEGIN
            HD(I, 3) := T - M;
            HD(I, 2) := HD(I, 2) + M;
            M := 0
        END;
    FOR J := 1 STEP 1 UNTIL 5 DO
    BEGIN
        L := RANDINT( -10, 10, U);
        T := ENTIER(POOL(I, J) + L * 0.01 * POOL(I, J));
        REST(L, KUMZU(I, J), T, FLUK(J) * ZWQ * D);
        IF L > M - K THEN L := M - K;
        IF L > 0 THEN
            BEGIN
                ALTER(I, J) := ALTER(I, J) + L;
                K := K + L;
                ALGRU(J + 3) := ALGRU(J + 3) + L * 2;
                T := RANDINT(1, 3, U);
                ALGRU(T) := ALGRU(T) + 2;
                T := HD(I, 2) + HD(I, 3);
                IF T > 0 THEN
                    HD(I, 14) := HD(I, 14) + L * HD(I, 14) / T;
            END
        END
    END ELSE
    BEGIN
        HD(I, 3) := HD(I, 3) - M;
        HD(I, 2) := HD(I, 2) + M
    END;
    HD(I, 2) := HD(I, 2) + K;
    HD(I, 22) := K;
    WO(6, I) := WO(6, I) + K;
END I - SCHLEIFE;
ROLAK := INST(5, 1) := ROLAK / Q;

```

```

COMMENT INTERNE FLUKTUATION;
FOR I := 1 STEP 1 UNTIL E DO
BEGIN
  J := HD(I, 1) - HD(I, 2);
  IF J > 0 THEN
    BEGIN
      FOR K := 1 STEP 1 UNTIL E DO
      BEGIN
        IF BW(I, K) > 0.5 THEN
        BEGIN
          A := IF HD(I, 9) > HD(K, 20) THEN 0.3 ELSE 0.1;
          L := ENTIER(A * HD(K, 3));
          IF L > J THEN L := J;
          UMSETZ(K, I, L);
          J := J - L
        END;
        IF BW(I, K) = 2 THEN
        BEGIN
          A := IF HD(I, 9) > HD(K, 9) THEN 0.2 ELSE 0.01;
          L := ENTIER(A * HD(K, 2));
          IF L > J THEN L := J;
          UMSETZ(K, I, L);
          J := J - L
        END
      END
    END
  END I;
  FOR I := 1 STEP 1 UNTIL 18 DO
  BEGIN
    HD(I, 27) := HD(I, 26) / (HD(I, 1) * HD(I, 28));
    HD(I, 26) := HD(I, 26) - ((1 / 240) * HD(I, 1) * HD(I, 28));
    IF HD(I, 26) < 0 THEN HD(I, 26) := 0;
    IF HD(I, 27) > 2 THEN HD(I, 27) := 2
  END;

```

```

COMMENT BERECHNUNG DER BETRIEBSOPTIMA UND EFFEKTIVITAETEN;
HD(5, 5) := HD(5, 2);
HD(6, 5) := HD(5, 5) * 0.2;
HD(7, 5) := HD(7, 2);
HD(8, 5) := BEV / 1333;
HD(9, 5) := (ALGRU(2) + ALGRU(3) + 0.3333 * ALGRU(1)) / SYC(14);
HD(10, 5) := BEV / 100;
HD(11, 5) := BEV / 500;
HD(12, 5) := BEV / 333;
HD(13, 5) := BEV / 65;
HD(14, 5) := HD(15, 2) / 6;
HD(15, 5) := INST(3, 13) / 9113920;
IF HD(15, 5) < 1 THEN HD(15, 5) := 1;
HD(16, 5) := HD(11, 2) * 4 + HD(18, 2) * 3;
HD(17, 5) := HD(17, 2);
HD(18, 5) := BEV / 800;
PD := HD(5, 2);

```

```

HD(1, 5) := PD * 0.03;
HD(2, 5) := PD * 0.05;
HD(3, 5) := PD * 0.025;
NNAN := 0;
FOR I := 1 STEP 1 UNTIL 7 DO NNAN := NNAN + HD(I, 2);
HD(4, 5) := NNAN * 0.03;
FOR I := 1 STEP 1 UNTIL E DO
BEGIN
  HD(I, 5) := HD(I, 5) * 40;
  IF HD(I, 2) >= 1 THEN
    BEGIN
      A := (HD(I, 2) * 40) / HD(I, 5);
      IF A <= 1 THEN HD(I, 4) :=
        (A ** 2) ELSE
      BEGIN
        IF A <= 3 THEN HD(I, 4) := SQRT(1 -
          (A - 1) / 2.5)
        ELSE HD(I, 4) := 0.44
      END
    END ELSE HD(I, 4) := 0;
  HD(I, 4) := IF HD(I, 13) <= 100 + HD(I, 7) * 25 THEN
    HD(I, 4) * SQRT(1 - HD(I, 13) / (100 + HD(I, 7) * 25)) * HD(I, 2) * HD(I,
13) * 0.37714 * SQRT(HD(I, 23))
  ELSE 0;

```

```

COMMENT STREIK;
G := IF I = 7 OR I = 17 THEN 1 ELSE INST(7, 11);
IF (HD(I, 9) < HD(I, 20) OR HD(I, 9) < INST(6, 1) * G + HD(I, 15)) AND
(NOT(I = 8) AND NOT(I = 11) AND NOT(I = 18)) THEN HD(I, 4) := 0;
HD(I, 4) := HD(I, 4) * HD(I, 27);
END EF WERTE AXIMA = 7;

```

```

COMMENT BERECHNUNG DER PLANUNGSGUETE USW;
FOR I := 36 STEP - 1 UNTIL 2 DO FOR J := 1 STEP 1 UNTIL 6 DO
ZEIT(J, I) := ZEIT(J, I - 1);
J := 0;
FOR I := 5, 1, 2, 4 DO
BEGIN
  J := J + 1;
  ZEIT(I, 1) := ((HD(J, 4) / HD(J, 5)) * 7 + HD(J, 6) + ((HD(J, 7) + 1) *
3.5)) / 3
END JI;
PD := HD(5, 4) * (HD(6, 4) / HD(6, 5)) / 6;
A := PD + (PLAN / 7 * 0.2 * PD) + (HD(5, 6) / 7 * 0.2 * PD);
A := A * UST(14);
INST(1, 12) := 0.15 * ((7 - ZEIT(3, 3)) / 7) * ZEIT(6, 3);
INST(1, 3) := IF A > INST(1, 12) THEN ENTIER(A - INST(1, 12))
ELSE 0;
IF INST(1, 3) > INST(4, 4) THEN INST(1, 3) := INST(4, 4);
ZEIT(3, 1) := (HD(5, 7) + 1.001) * (KAPA / 2);
IF INST(1, 3) > INST(1, 1) THEN INST(1, 3) := INST(1, 1);
INST(1, 2) := INST(1, 2) + INST(1, 3);

```

```

INST(1, 1) := INST(1, 1) -
INST(1, 3);

COMMENT VERKAUF;
K := RANDINT( -500, 500, U);
ANFQ := SYC(16) + K;
AQ := ANFQ + (WER / 7 * ANFQ) + (PG / 7 * ANFQ);
IF INST(1, 13) > INST(1, 15) THEN INST(1, 11) := ENTIER (AQ * ((500 /
INST(1, 13)) ** 2) + 0.5)
ELSE INST(1, 11) := ENTIER(AQ * (LN((INST(1, 15) / INST(1, 13) - 0.9) *
100) / 2.302585) + 0.5);
I := INST(4, 3);
J := INST(1, 11);
K := INST(1, 2);
IF J > K
THEN
BEGIN
  INST(1, 4) := IF K > I THEN I ELSE K
END
ELSE
BEGIN
  INST(1, 4) := IF I < J THEN I ELSE J
END;
ZEIT(6, 1) := INST(1, 4);
INST(1, 2) := INST(1, 2) - INST(1, 4);
INST(1, 16) := INST(1, 5);

COMMENT KAPITALBERECHNUNG;
FOR I := 5, 6 DO FOR J := 11, 12, 13 DO INST(I, J) := 0;
INST(1, 6) := INST(1, 17) := 0;
FOR I := 1 STEP 1 UNTIL 7 DO
BEGIN
  INST(1, 6) := INST(1, 6) + HD(I, 9) *
  HD(I, 2);
  INST(1, 17) := INST(1, 17) + HD(I, 17) * HD(I, 19)
END;
A := IF INST(1, 5) < 0 THEN SYC(19) ELSE SYC(20);
INST(1, 10) := INST(1, 5) * A / 12;
INST(1, 8) := INST(1, 4) * INST(1, 13);
INST(1, 7) := UST(1) * INST(1, 8);
INST(1, 9) := INST(1, 1) * .5 + INST(1, 2);
INST(1, 9) := INST(1, 9) + HD(5, 2) * 2 + HD(1, 2) * 15 + HD(2, 2) * 250 +
HD(3, 2) * 200 + HD(4, 2) * 5 + HD(7, 2) * 10;
FOR I := -6, -7, 8, -9, 10, -17 DO
BEGIN
  B := INST(1, ABS(I));
  IF I < 0
  THEN INST(5, 11) := INST(5, 11) + B ELSE INST(6, 11) := INST(6, 11) + B;
  INST(1, 5) := INST(1, 5) + B * SIGN(I)
END KAPITAL FABRIK;

```

```

COMMENT EINNAHMEN UND AUSGABEN STADTVERWALTUNG;
FOR I := 9, 10, 12, 13 DO
BEGIN
  INST(2, 6) := INST(2, 6) + HD(I, 2) * HD(I, 9);
  INST(2, 17) := INST(2, 17) + HD(I, 17) * HD(I, 19)
END;
FOR I := 8, 11, 16, 18 DO
INST(2, 17) := INST(2, 17) + HD(I, 17) * HD(I, 19);
INST(2, 8) := INST(2, 8) + INST(1, 7);
ENERG := ENERG + 0.5 * INST(1, 3) * UST(2);
ENT := ENT + 0.75 * INST(1, 3) * UST(4);
INST(2, 1) := ENERG;
INST(2, 2) := ENT;
INST(2, 4) := LONST;

```

```

COMMENT BEZAHLUNG LEHRLINGE;
B := HD(17, 2) * HD(17, 9);
AR(3) := (LME / (LME + AME)) * B;
AR(4) := (AME / (LME + AME)) * B;

```

```

COMMENT KAUFLUTE;
AR(1) := LME;
AR(2) := AME;
IND(1) := 11;
IND(2) := 18;
M := HD(11, 2) * UST(12);
P := M + HD(18, 2) * UST(12);
IND(3) := (HD(16, 2) * M) / P;
IND(4) := HD(16, 2) - IND(3);
IND(5) := 5;
IND(6) := 7;
FOR I := 1, 2 DO
BEGIN
  K := IND(I);
  L := IND(I + 4);
  A := AR(I);
  INST(L, 8) := A;
  INST(L, 6) := IND(I + 2) * HD(16, 9);
  INST(L, 9) := A * UST(I + 7);
  INST(L, 7) := A * UST(L);
  B := SYC(12) * HD(K, 2);
  INST(2, 3) := INST(2, 3) + B;
  HD(K, 9) := A - INST(L, 6) - INST(L, 9) - INST(L, 7) - B - AR(I + 2);
  INST(2, 8) := INST(2, 8) + INST(L, 7);
  IF HD(K, 2) > 0 THEN HD(K, 9) := HD(K, 9) / HD(K, 2);
END;

```

```

COMMENT EINNAHMEN UND AUSGABEN AERZTE;
K := ENTIER(BEV * (0.05 + 0.05 * (7 - ROLAK) / 7) + 0.5);
L := ENTIER(BEV * 0.02 + 0.5);
M := RANDINT(K - L, K + L, U);

```

```

B := SYC(13) * HD(8, 2);
INST(2, 3) := INST(2, 3) + B;
HD(8, 9) := (M * SYC(10) - B) / HD(8, 2);
INST(2, 13) := M * SYC(10);

COMMENT BANK;
INST(3, 16) := INST(3, 5);
FOR I := 6, 3, 17 DO INST(3, I) := 0;
FOR I := 14, 15 DO
BEGIN
  INST(3, 6) := INST(3, 6) + HD(I, 2) * HD(I, 9);
  INST(3, 17) := INST(3, 17) + HD(I, 17) * HD(I, 19)
END;
K := IF INST(2, 5) < 0 THEN 21 ELSE 22;
INST(2, 10) := INST(2, 5) * (SYC(K) / 12);
INST(3, 3) := INST(2, 10) + INST(1, 10);
C := C1 + INST(1, 5) + INST(2, 5) + INST(3, 5);
INST(3, 12) := C1;
INST(3, 13) := C;
INST(3, 9) := HD(14, 2) * 100 + HD(15, 2) * 50;
IF C > 0 THEN
BEGIN
  K := ENTIER((1 - UST(11) / 100) * UST(10) + 0.5);
  L := RANDINT(-K, K, U);
  C := C * (UST(6) + ((1 - UST(11) / 100) * UST(13)) + L) / 100;
  INST(3, 8) := C * (((HD(14, 4) / HD(14, 5)) * 3 + HD(15, 4) / HD(15, 5))
/ 4)
  END ELSE INST(3, 8) := 0;
  IF INST(3, 8) > 400000 THEN INST(3, 8) := 400000 + RANDINT(-50000, 50000,
U);
FOR I := -3, -6, -7, 8, 10, -9, -17 DO
BEGIN
  B := INST(3, ABS(I));
  IF I <
  0 THEN INST(5, 13) := INST(5, 13) + B ELSE INST(6, 13) := INST(6, 13) +
B;
  INST(3, 5) := INST(3, 5) + B * SIGN(I)
END KAPITAL BANK;
INST(3, 14) := INST(3, 5) - INST(3, 16);
INST(3, 7) := IF INST(3, 14) > 0 THEN INST(3, 14) * UST(3) ELSE 0;
INST(2, 8) := INST(2, 8) + INST(3, 7);

COMMENT GEWINN – UND VERLUSTRECHNUNG STADT;
INST(2, 9) := (HD(10, 2) + HD(13, 2) + HD(12, 2)) * 13 + HD(9, 2) * 15 +
50 + 833;
FOR I := -1, -2, 3, 4, -6, 8, 10, -9, -13, -17, -15 DO
BEGIN
  B := INST(2, ABS(I));
  IF I < 0 THEN INST(5, 12) := INST(5, 12) + B ELSE INST(6, 12) :=
INST(6, 12) + B;
  INST(2, 5) := INST(2, 5) + B * SIGN(I)
END KAP STADT;

```

```

FOR I := 1, 2, 3 DO INST(I, 14) := INST(I, 5) - INST(I, 16);
FOR I := 1 STEP 1 UNTIL AKTEM DO
BEGIN
  A := IF EMERG(I, 2) > 1 THEN INST(EMERG(I, 3),
  EMERG(I, 4)) ELSE HD(EMERG(I, 3), EMERG(I, 4));
  B := IF EMERG(I, 1) < 1 THEN EMERG(I, 5) / A ELSE A;
  IF EMERG(I, 7) < 0 THEN
  BEGIN
    AB := IF B <
      EMERG(I, 6) THEN TRUE ELSE FALSE
  END ELSE
  BEGIN
    AB := IF B > EMERG(I, 6) THEN TRUE ELSE FALSE
  END;
  EMERG(I, 5) := A;
  IF AB THEN
  BEGIN
    OUTIMAGE;
    OUTTEXT("ABBRUCH");
    OUTINT(I, 5);
    GOTO LAUS
  END
END I;
FOR I := 1 STEP 1 UNTIL 18 DO
BEGIN
  IF HD(I, 2) > 0 AND
  HD(I, 4) <= 0 THEN
  BEGIN
    NL(2);
    OUTTEXT("STREIK");
    AB := TRUE;
    GOTO LAUS
  END
END;
IF INST(3, 13) < INST(3, 1) THEN
BEGIN
  NL(2);
  OUTTEXT("ZU HOHE VERSCHULDUNG");
  AB := TRUE;
  GOTO LAUS
END;
LAUS:
IF MOD(MON, AUS) = 0 OR AB OR MON = MEND THEN GRUNDAUS;
IF AB OR MON = MEND THEN
BEGIN
  NL(5);
  OUTINT(CODE, 10);
  OUTINT(MON + 1, 10);
  MATA(HD, W0, 1, E, 1, F, 15, 2, -1);
  MATA(INST, W0, 1, 7, 1, 17, 15, 2, -1);
  MATA(HD, ALTER, 1, E, 1, 5, 6, 0, 1);
  MATA(HD, POOL, 1, E, 1, 5, 6, 0, 1);
  MATA(ZEIT, W0, 1, 6, 1, 36, 10, 2, -1);
  VEKA(SYC, GREP, 1, 22, 10, 4, -1);

```

```
VEKA(STERIN, GREP, 1, 9, 10, 4, -1);
VEKA(JAHRIN, GREP, 1, 9, 10, 4, -1);
VEKA(SYC, ALGRU, 1, 9, 15, 0, 1);
VEKA(UST, GREP, 1, 14, 10, 4, -1);
VEKA(FLUK, GREP, 1, 5, 10, 4, -1);
MATA(HD, W0, 1, 6, 0, E + 1, 6, 0, 1);
MATA(KUMZU, W0, 1, E, 1, 5, 10, 7, -1);
MATA(KUMAB, W0, 1, E, 1, 5, 10, 7, -1);
VEKA(ALAB, GREP, 1, 9, 10, 7, -1);
MATA(HD, BW, 1, E, 1, E, 3, 0, 1);
OUTINT(NEIN, 5);
MATA(EIN, W0, 1, NEIN, 1, 11, 12, 1, -1);
GOTO EEE
END ABBRUCHAUSGABE;
END MON - SCHLEIFE;
EEE: END
END
```