

LABEL 000000000PRINTER00175099CC EX OBJECT/READ;FILE SOURCEFILE=SYMBOL/CHECKAL;END+

OBJECT /READ

SYMBOL/CHECKAL

Data Documents/Inc.

COMMENT: \* TITLE: B5500/B5700 MARK XIV SYSTEM RELEASE \* 00000002  
 \* FILE ID: SYMBOL/CHECKAL TAPE ID: SYMBOL1/FILE000 \* 00000004  
 \* THIS MATERIAL IS PROPRIETARY TO BURROUGHS CORPORATION \* 00000006  
 \* AND IS NOT TO BE REPRODUCED, USED, OR DISCLOSED \* 00000008  
 \* EXCEPT IN ACCORDANCE WITH PROGRAM LICENSE OR UPON \* 00000010  
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 \* AA759915 AA320206 AA332366 AA393180 \*; 00000019

SYMBOL/CHECKAL APRIL 1972 00000020  
 EXECUTE WITH A COMMON VALUE OF ZERO AND THE PROGRAM WILL 00000022  
 EXECUTE ALL TEST PROCEDURES ONCE. 00000024  
 IT MAY BE EXECUTED WITH A COMMON VALUE OF NON ZERO. IN THIS 00000026  
 CASE THE COMMON VALUE SHOULD HAVE THE FORMAT: 00000028  
 COMMON = RRRPPP 00000030  
 WHERE PPP IS THE PROCEDURE NUMBER TO BE EXECUTED AND 00000032  
 RRR IS THE NUMBER OF TIMES THE PROCEDURE HAS TO BE EXECUTED 00000034  
 FOR EXAMPLE COMMON = 123094 WILL EXECUTE PROCEDURE 94 FOR 00000036  
 A CYCLE OF 123 TIMES. THIS FEATURE SHOULD BE USED WHEN 00000038  
 AN ERROR HAS BEEN DETECTED IN A PROCEDURE AND THE TECHNICIANS 00000040  
 WISH TO "HANG IT IN A LOOP" FOR THE PROCEDURE AND MAYBE 00000042  
 "SINGLE STEP" THROUGH THE PROCEDURE. 00000044  
 -- NO DATA CARD FILE IS REQUIRED -- 00000046  
 THE CHECKAL PROGRAM IS MADE UP IN MAIN OF PROCEDURE DECLARATIONS 00000048  
 WITH APPROPRIATE CALLS ON THEM. EACH PROCEDURE CONCERNS ITSELF WITH 00000050  
 CHECKING OUT A GIVEN ALGOL 60 CONSTRUCT. 00000052  
 THE WORK AREAS OF THE PROGRAM ARE TWO SINGLE DIMENSION ARRAYS 00000054  
 CALLED TEMP AND ANS. THE ELEMENTS OF THE ARRAY TEMP ARE FILLED WITH 00000056  
 VALUES GENERATED BY THE ALGOL COMPILER AND THE MACHINE, FOR VARIOUS 00000058  
 SYNTACTICAL CONSTRUCTS IN ALGOL. THE ARRAY ANS IS THEN FILLED WITH THE 00000060  
 EXACT BIT CONFIGURATION OF THE ANSWERS EXPECTED. 00000070  
 A CALL FOR A PROCEDURE TO BE EXECUTED ALSO CAUSES A CALL ON A 00000080  
 ROUTINE CALLED VERIFY. THIS ROUTINE COMPARES CVN ELEMENTS OF ARRAY 00000090  
 TEMP WITH THOSE OF ARRAY ANS. CVN IS A PARAMETER TO PROCEDURE VERIFY 00000100  
 TELLING IT HOW MANY ELEMENTS OF THE ARRAYS TO CHECK 00000110  
 IF CVN ELEMENTS OF THE ARRAY CORRESPOND IN EVERY BIT POSITION AN 00000120  
 OUTPUT LINE STATING THIS PROCEDURE IS OK IS PRINTED ON THE LINE 00000130  
 PRINTER. SHOULD ANY ELEMENT OR ELEMENTS OF THE ARRAYS NOT COMPARE THE 00000140  
 OUTPUT WILL STATE THAT THE PROCEDURE IS BAD. WHETHER THE PROCEDURE IS 00000150  
 OK OR BAD THE OUTPUT LINE ALWAYS CONTAINS A DESCRIPTION OF THE CONSTRUCT 00000160  
 BEING CHECKED TOGETHER WITH THE PARAGRAPH AND SUB-PARAGRAPH NUMBER OF 00000170  
 THIS CONSTRUCT IN THE EXTENDED ALGOL MANUAL. 00000180  
 SHOULD THE PROCEDURE PRODUCE A RESULT WHICH IS BAD, THEN THE VALUES 00000190  
 OF ALL ELEMENTS OF THE ARRAYS ANS AND TEMP ARE PRINTED OUT. IF THE 00000200  
 ELEMENTS HAD COMPARED THAT FACT IS ACKNOWLEDGED BY CVN(X) IS TRUE. 00000210  
 IF THE ELEMENT DOES NOT COMPARE THEN IN ADDITION TO PRINTING 00000220  
 CVN(X) IS FALSE THE EXACT VALUES OF TEMP(X) AND ANS(X) ARE PRINTED 00000230  
 GIVING VISUAL PROOF OF THE DISCREPENCY. 00000240  
 THIS FALSE ANSWER CAN VERY EASILY BE TRACED BACK TO THE CONSTRUCT 00000250  
 CREATING IT. SHOULD THE ERROR OCCUR IN SAY PROCEDURE P81, THE BODY OF 00000260  
 THIS PROCEDURE P81 CAN FOUND BY SEARCHING DOWN THE SEQUENCE FIELD 00000270  
 OF THE LISTING FOR CARDS OF SEQUENCE NO A081---. WITHIN THE BODY OF 00000280  
 THE PROCEDURE, SINCE THE ELEMENTS OF ARRAY TEMP ARE SEQUENTIALLY 00000290  
 FILLED, THE PARTICULAR CONSTRUCT CORRESPONDING TO CVN(X) CAN BE LOCATED. 00000300  
 AT THE END OF PROCEDURE P81 THE FILL STATEMENT ON ARRAY ANS SHOWS 00000310  
 WHAT EXACTLY WAS EXPECTED FOR AN ANSWER. WITH THIS INFORMATION IT IS 00000320  
 POSSIBLE TO RAPIDLY RUN DOWN A COMPILER FAILURE AND SOMETIMES A 00000330  
 HARDWARE FAILURE. 00000340  
 \*\* NOTE \*\* ALL WRITES TO THE FILE "FNOK" ARE DONE WITH 00000341

"RELEASE" STATEMENTS. DU N U T PATCH IN ANY WRITE STATEMENTS  
AS THESE WILL HANG THE SYSTEM

BEGIN

1 COMMENT THIS IS THE EXTENDED ALGOL MASTER PROGRAM ;

2 INTEGER COMMON ;

3 DEFINE DD = COMMON := COMMON # ;

4 INTEGER II,IJ,JJ,JK,JKK;

5 INTEGER CVN, PNO;

6 BOOLEAN NOK;

7 ARRAY ANS [1:50];

8 ARRAY TEMP [1:50];

9 BOOLEAN ARRAY CV [1:50];

10 ALPHA ARRAY PROCIDS [0:150,0:5],

11 SAVE ARRAY FDUMMY[0:2,0:9];

12 FILE OUT FNOK 1(1,15);

13 PROCEDURE INITIALIZE;

14 BEGIN

15 FILL CV [\*] WITH OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000470

16 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000480

17 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000490

18 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000500

19 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000510

20 OCTO,OCTO,OCTO,OCTO,OCTO;

21 FILL TEMP[\*] WITH OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000520

22 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000530

23 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000540

24 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000550

25 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000560

26 OCTO,OCTO,OCTO,OCTO,OCTO;

27 FILL ANS [\*] WITH OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000580

28 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000590

29 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000600

30 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000610

31 OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,OCTO,00000620

32 OCTO,OCTO,OCTO,OCTO,OCTO;

33 NOK ← FALSE;

34 CVN ← 0;

35 PNO ← 0

36 END;

37 PROCEDURE REPORT;

38 BEGIN

39 LABEL BOTTOM;

40 INTEGER I;

41 STREAM PROCEDURE HEAD (FIL,NOKV,PROCIDSA,PNO);

42 VALJE NOKV,PNU;

43 BEGIN

44 LOCAL T1;

45 LABEL L1;

46 SI←FIL; DI←LOC T1; DS←1 WDS; DI←T1; COMMENT DI=1ST WD IN BUF 00000780

47 FER; 00000790

48 15(DS ← 8 LIT" "); DI←T1; 00000800

49 10(DS+1 LIT " ");BS←19 LIT "TEST PROCEDURE NO. "; 00000810

50 SI←LOC PNO; DS←3 DEC; DS←4 LIT " "; 00000820

51 SI←PROCIDSA; DS←6 WDS; 00000830

52 RELEASE (FIL);COMMENT WRITE (FNOK,FMHEAD,LHEAD); 00000840

53 COMMENT THE FOLLOWING CARDS NO. 491, 492, 493, 494, 495, 496, 00000850

54 \*\*\*\*\* ARE BEING INSERTED TO GET AROUND THE PRESENCE BIT BEING ON 00000860

55 \*\*\*\*\* FOR BOTH RELEASE STATEMENTS IN PROC, HEAD, THIS CAUSES THE 00000870

56 \*\*\*\*\* UNPRINTED BUT FILLED BUFFER TO BE OVERFILLED BEFORE IT IS 00000880

57 \*\*\*\*\* RELEASED ; 00000890

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SI+FIL; DI+LOC T1; DS+1 WDS; DI+T1; COMMENT DI = 1ST WD OF BUFF ; 00000900
SI+LOC NOKV; SI+SI+7; 00000910
IF SC="1" THEN BEGIN DI+T1; DS+10 LIT " "; 00000920
                                DS+5 LIT "IS OK"; 00000930
                                63(DS+1 LIT " "); 42(DS+1 LIT " "); 00000940
                                RELEASE (FIL); COMMENT WRITE (FNOK,FMOK); 00000950
                                GO TO L1 END; 00000960
DI+T1; DS+10 LIT " "; 00000970
                                DS+6 LIT "IS BAD"; 63(DS+1 LIT " "); 00000980
                                41(DS+1 LIT " "); 00000990
                                RELEASE (FIL); COMMENT WRITE (FNOK,FMBAD); 00001000
L1; 00001010
                                END; 00001020
                                STREAM PROCEDURE CVTRUE (FIL,I); 00001030
                                VALUE I; 00001040
                                BEGIN 00001050
                                LOCAL T1; 00001060
                                SI+FIL; DI+LOC T1; DS+1 WDS; DI+T1; COMMENT DI=BUFFER TOP; 00001070
                                20(DS+1 LIT " "); DS+4 LIT "CV ["; SI+LOC I; DS+2 DEC; 00001080
                                DS+11 LIT "]" = TRUE"; 63(DS+1 LIT " "); 20(DS+1 LIT " "); 00001090
                                COMMENT WRITE (FNOK,FMCV,I,CV[I]); RELEASE (FIL) 00001100
                                END; 00001110
                                STREAM PROCEDURE CVFALSE (FIL,I); 00001120
                                VALUE I; 00001130
                                BEGIN 00001140
                                LOCAL T1; 00001150
                                SI+FIL; DI+LOC T1; DS+1 WDS; DI+T1; COMMENT DI=BUFFER TOP; 00001160
                                20(DS+1 LIT " "); DS+4 LIT "CV ["; SI+LOC I; DS+2 DEC; 00001170
                                DS +11 LIT "]" = FALSE"; 63(DS+1 LIT " "); 20(DS+1 LIT " "); 00001180
                                COMMENT WRITE (FNOK,FMCV,I,CV[I]); RELEASE (FIL) 00001190
                                END; 00001200
                                STREAM PROCEDURE INT (FIL,I,T1,TID,AI,AID); 00001210
                                VALUE I,T1,TID,AI,AID; 00001220
                                BEGIN 00001230
                                LOCAL T1,T2; 00001240
                                SI+FIL; DI+LOC T1; DS+1 WDS; DI+T1; 00001250
                                35(DS+1 LIT " "); DS+6 LIT "TEMP ["; SI+LOC I; 00001260
                                DS+2 DEC; DS+6 LIT "]" = "; SI+LOC TID; T1+DI; 00001270
                                DS+1 LIT " "; 00001280
                                DS+6 DEC; COMMENT 1ST 6 DIGITS BUILT; DI+DI-1; DS+2 RESET; 00001290
                                SI+LOC T1; DS+7 DEC; DI+DI-1; T2+DI; DI+T2; SI+T2; IF SB THEN 00001300
                                BEGIN DI+T1; DS+1 LIT "-" ; DI+T2 END; DS+2 RESET; 00001310
                                57(DS+1 LIT " "); 00001320
                                RELEASE (FIL); COMMENT WRITE (FNOK,FMTEMP,I,TEMP[I]); 00001330
                                SI+FIL; DI+LOC T1; DS+1 WDS; DI+T1; 00001340
                                35(DS+1 LIT " "); DS+6 LIT "ANS ["; SI+LOC I; 00001350
                                DS+2 DEC; DS+6 LIT "]" = "; SI+LOC AID; T1+DI; 00001360
                                DS+1 LIT " "; 00001370
                                DS+6 DEC; DI+DI-1; DS+2 RESET; SI+LOC AI; DS+7 DEC; DI+DI-1; 00001380
                                T2+DI; DI+T2; SI+T2; IF SB THEN BEGIN DI+T1; DS+1 LIT "-" ; 00001390
                                DI+T2 END; DS+2 RESET; 00001400
                                57(DS+1 LIT " "); 00001410
                                COMMENT WRITE (FNOK,FMANSI,I,ANS[I]); RELEASE (FIL) 00001420
                                END; 00001430
                                STREAM PROCEDURE OCTAL (FIL,I,T1,T2,T3,T4,T5,T6,T7,T8,T9,T10,T11, 00001440
                                T12,T13,T14,T15,T16,T17,A1,A2,A3,A4,A5,A6, 00001450
                                A7,A8,A9,A10,A11,A12,A13,A14,A15,A16,A17); 00001460
                                VALUE I,T1,T2,T3,T4,T5,T6,T7,T8,T9,T10,T11,T12,T13,T14,T15, 00001470
                                T16,T17,A1,A2,A3,A4,A5,A6,A7,A8,A9,A10,A11,A12,A13,A14, 00001480
                                A15,A16,A17); 00001490

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BEGIN                                00001500
LOCAL T ; LABEL L1,L2,L3,L4;        00001510
SI+FIL; DI+LOC T ; DS+1 WDS; DI+1 ; 00001520
1 35(DS+1 LIT " ");DS+6 LIT"TEMP [";SI+LOC I; DS+2 DEC; 00001530
2 DS+6 LIT "]" = " ; SI+LOC T1;SI+SI+7;IF SC="1" THEN BEGIN 00001540
3 DS+1 LIT "-";GO TO L1 END; DS+1 LIT "+"; 00001550
4 L1: SI+LOC T5; DS+1 DEC;SI+LOC T6;DS+1 DEC;SI+LOC T7; 00001560
5 DS+1 DEC;SI+LOC T8;DS+1 DEC;SI+LOC T9;DS+1 DEC;SI+LOC T10;00001570
6 DS+1 DEC;SI+LOC T11;DS+1 DEC; SI+LOC T12;DS+1 DEC; 00001580
7 SI+LOC T13;DS+1 DEC;SI+LOC T14;DS+1 DEC;SI+LOC T15; 00001590
8 DS+1 DEC;SI+LOC T16; DS+1 DEC;SI+LOC T17;DS+1 DEC; 00001600
9 DS+2 LIT " x";SI+LOC T2;SI+SI+7;IF SC="1" THEN BEGIN 00001610
10 DS+1 LIT "-";GO TO L2 END;DS+1 LIT "+"; 00001620
11 L2: SI+LOC T3;DS+1 DEC;SI+LOC T4;DS+1 DEC;52(DS+1 LIT " "); 00001630
12 RELEASE (FIL); 00001640
13 COMMENT CONTINUE OCTAL; 00001650
14 SI+FIL; DI+LOC T ; DS+1 WDS; DI+T ; 00001660
15 35(DS+1 LIT " ");DS+6 LIT"ANS [";SI+LOC I; DS+2 DEC; 00001670
16 DS+6 LIT "]" = " ; SI+LOC A1;SI+SI+7;IF SC="1" THEN BEGIN 00001680
17 DS+1 LIT "-";GO TO L3 END;DS+1 LIT "+"; 00001690
18 L3: SI+LOC A5; DS+1 DEC;SI+LOC A6;DS+1 DEC;SI+LOC A7; 00001700
19 DS+1 DEC;SI+LOC A8;DS+1 DEC;SI+LOC A9;DS+1 DEC;SI+LOC A10;00001710
20 DS+1 DEC;SI+LOC A11;DS+1 DEC;SI+LOC A12;DS+1 DEC; 00001720
21 SI+LOC A13;DS+1 DEC;SI+LOC A14;DS+1 DEC;SI+LOC A15; 00001730
22 DS+1 DEC;SI+LOC A16;DS+1 DEC;SI+LOC A17;DS+1 DEC; 00001740
23 DS+2 LIT" x";SI+LOC A2;SI+SI+7;IF SC="1" THEN BEGIN 00001750
24 DS+1 LIT "-";GO TO L4 END;DS+1 LIT "+"; 00001760
25 L4: SI+LOC A3;DS+1 DEC;SI+LOC A4;DS+1 DEC;52(DS+1 LIT " "); 00001770
26 RELEASE (FIL) 00001780
27 END; 00001790
28 HEAD (FNOK,NOK,PROCIDS[PNO,0],PNG);COMMENT 1ST TWO LINES PRINTED; 00001800
29 IF NOK THEN GO TO BOTTOM; 00001810
30 FOR I+1 STEP 1 UNTIL CVN DO 00001820
31 IF CV[I] THEN CVTRUE(FNOK,I) ELSE 00001830
32 BEGIN CVFALSE(FNOK,I); 00001840
33 00001850
34 00001860
35 OCTAL (FNOK,I, TEMP[I],[1:1],TEMP[I],[2:1], 00001870
36 TEMP[I],[3:3],TEMP[I],[6:3],TEMP[I],[9:3], 00001880
37 TEMP[I],[12:3],TEMP[I],[15:3],TEMP[I],[18:3],00001890
38 TEMP[I],[21:3],TEMP[I],[24:3],TEMP[I],[27:3],00001900
39 TEMP[I],[30:3],TEMP[I],[33:3],TEMP[I],[36:3],00001910
40 TEMP[I],[39:3],TEMP[I],[42:3],TEMP[I],[45:3],00001920
41 ANS [I],[1:1],ANS [I],[2:1],ANS [I],[3:3], 00001930
42 ANS [I],[6:3],ANS [I],[9:3],ANS [I],[12:3], 00001940
43 ANS[I],[15:3],ANS[I],[18:3],ANS[I],[21:3], 00001950
44 ANS [I],[24:3],ANS[I],[27:3],ANS[I],[30:3], 00001960
45 ANS [I],[33:3],ANS[I],[36:3],ANS[I],[39:3], 00001970
46 ANS [I],[42:3],ANS[I],[45:3]) 00001980
47 END; 00001990
48 BOTTOM: INITIALIZE 00002000
49 END; 00002010
50 PROCEDURE VERIFY; 00002020
51 BEGIN 00002030
52 INTEGER I1; 00002040
53 LABEL L1; 00002050
54 FOR I1+1 STEP 1 UNTIL CVN DO 00002060
55 IF TEMP [I1]= ANS [I1] THEN CV [I1]+TRUE ELSE CV[I1]+FALSE; 00002070
56 FOR I1+1 STEP 1 UNTIL CVN DO 00002080
57 IF CV [I1]THEN ELSE BEGIN NOK+FALSE;GO TO L1 END; 00002090

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NOK+TRUE;  
L1: REPORT  
END;

00002100

00002110

00002120

BEGIN  
STREAM PROCEDURE OCTFILL(FPARRAY);  
BEGIN

00002130

00002140

00002150

LOCAL T1;

00002160

SI+FPARRAY;

00002170

DI+LOC T1; DS + 1 WDS; DI + T1;

00002180

DS+48 LIT "1.0.0 ALGOL MASTER TEST PROCEDURES";

00002190

DI+LOC T1; DS + 1 WDS; DI + T1;

00002200

DS+48 LIT "2.4.4 COMMENT";

00002210

DI+LOC T1; DS + 1 WDS; DI + T1;

00002220

DS+48 LIT "2.5 IDENTIFIERS";

00002230

DI+LOC T1; DS + 1 WDS; DI + T1;

00002240

DS+48 LIT "2.6 NUMBERS";

00002250

DI+LOC T1; DS + 1 WDS; DI + T1;

00002260

DS+48 LIT "2.7 STRINGS";

00002270

DI+LOC T1; DS + 1 WDS; DI + T1;

00002280

DS+48 LIT "3.1 VARIABLES";

00002290

DI+LOC T1; DS + 1 WDS; DI + T1;

00002300

DS+48 LIT "3.2 PARTIAL WORD DESIGNATORS";

00002310

DI+LOC T1; DS + 1 WDS; DI + T1;

00002320

DS+48 LIT "3.3 FUNCTION DESIGNATORS";

00002330

DI+LOC T1; DS + 1 WDS; DI + T1;

00002340

DS+48 LIT "3.4 STANDARD FUNCTIONS";

00002350

DI+LOC T1; DS + 1 WDS; DI + T1;

00002360

DS+48 LIT "3.3.5 TRANSFER FUNCTIONS";

00002370

DI+LOC T1; DS + 1 WDS; DI + T1;

00002380

DS+48 LIT "3.4.3.2GENERAL ARITHMETIC EXPRESSIONS, IF CLAUSE";

00002390

DI+LOC T1; DS + 1 WDS; DI + T1;

00002400

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, +";

00002410

DI+LOC T1; DS + 1 WDS; DI + T1;

00002420

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, -";

00002430

DI+LOC T1; DS + 1 WDS; DI + T1;

00002440

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, x";

00002450

DI+LOC T1; DS + 1 WDS; DI + T1;

00002460

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, /";

00002470

DI+LOC T1; DS + 1 WDS; DI + T1;

00002480

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, DIV";

00002490

DI+LOC T1; DS + 1 WDS; DI + T1;

00002500

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, MOD";

00002510

DI+LOC T1; DS + 1 WDS; DI + T1;

00002520

DS+48 LIT "3.4.4.1ARITHMETIC OPERATOR, \*";

00002530

DI+LOC T1; DS + 1 WDS; DI + T1;

00002540

DS+48 LIT "3.4.4.2ARITHMETIC EXPRESSION TYPES";

00002550

DI+LOC T1; DS + 1 WDS; DI + T1;

00002560

DS+48 LIT "3.4.5 PRECEDENCE OF ARITHMETIC OPERATORS";

00002570

DI+LOC T1; DS + 1 WDS; DI + T1;

00002580

DS+48 LIT "3.4.6 NUMERICAL LIMITATIONS";

00002590

DI+LOC T1; DS + 1 WDS; DI + T1;

00002600

DS+48 LIT "3.5.3.2GENERAL BOOLEAN EXP, IF CLAUSE";

00002610

DI+LOC T1; DS + 1 WDS; DI + T1;

00002620

DS+48 LIT "3.5.3.1RELATIONAL OPERATOR, <";

00002630

DI+LOC T1; DS + 1 WDS; DI + T1;

00002640

DS+48 LIT "3.5.3.1RELATIONAL OPERATOR, >";

00002650

DI+LOC T1; DS + 1 WDS; DI + T1;

00002660

DS+48 LIT "3.5.3.1RELATIONAL OPERATOR, =";

00002670

DI+LOC T1; DS + 1 WDS; DI + T1;

00002680

DS+48 LIT "3.5.3.1RELATIONAL OPERATOR, >=";

00002690

DI+LOC T1; DS + 1 WDS; DI + T1;

00002690

	DI+LOC T1; DS + 1 WDS; DI + T1;	00002700
DS+48 LIT	"3.5.5.1RELATIONAL OPERATOR,>	00002710
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002720
DS+48 LIT	"3.5.5.1RELATIONAL OPERATOR,>	00002730
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002740
DS+48 LIT	"3.5.5.2LOGICAL OPERATOR, NOT	00002750
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002760
DS+48 LIT	"3.5.5.2LOGICAL OPERATOR, AND	00002770
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002780
DS+48 LIT	"3.5.5.2LOGICAL OPERATOR, OR	00002790
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002800
DS+48 LIT	"3.5.5.2LOGICAL OPERATOR, IMP	00002810
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002820
DS+48 LIT	"3.5.5.2LOGICAL OPERATOR, EQV	00002830
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002840
DS+48 LIT	"3.6.3.1SIMPLE DESIGNATIONAL EXPRESSION	00002850
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002860
DS+48 LIT	"3.6.3.2GENERAL DESIGNATIONAL EXPRESSION	00002870
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002880
DS+48 LIT	"3.6.4 SUBSCRIPT EXP OF SWITCH DESIGNATOR	00002890
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002900
DS+48 LIT	"4.1 COMPOUND STATEMENT	00002910
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002920
DS+48 LIT	"4.1 BLOCK & 5.0.2 DECLARATION	00002930
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002940
DS+48 LIT	"4.2 ASSIGNMENT STATEMENT	00002950
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002960
DS+48 LIT	"4.3 GO TO STATEMENT	00002970
	DI+LOC T1; DS + 1 WDS; DI + T1;	00002980
DS+48 LIT	"4.4 DUMMY STATEMENT	00002990
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003000
DS+48 LIT	"4.5.3.1IF STATEMENT	00003010
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003020
DS+48 LIT	"4.5.3.2IF - ELSE STATEMENT	00003030
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003040
DS+48 LIT	"4.5.3.3IF - FOR STATEMENT	00003050
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003060
DS+48 LIT	"4.6.4.1FOR ARITH EXP ELEMENT	00003070
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003080
DS+48 LIT	"4.6.4.2FOR STEP-UNTIL ELEMENT	00003090
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003100
DS+48 LIT	"4.6.4.3FOR WHILE ELEMENT	00003110
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003120
DS+48 LIT	"4.6.4.4FOR STEP-WHILE ELEMENT	00003130
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003140
DS+48 LIT	"4.6.5 FOR CONTROLLED VARIABLE	00003150
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003160
DS+48 LIT	"4.6.6 GO TO INTO FOR	00003170
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003180
DS+48 LIT	"4.7.3.1CALL BY VALUE	00003190
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003200
DS+48 LIT	"4.7.3.2CALL BY NAME	00003210
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003220
DS+48 LIT	"4.8.2.3READ STATEMENT	00003230
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003240
DS+48 LIT	"4.8.3.WRITE STATEMENT	00003250
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003260
DS+48 LIT	"4.8.4.3RELEASE STATEMENT	00003270
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003280
DS+48 LIT	"4.9.3 FILL STATEMENT	00003290

	DI+LOC T1; DS + 1 WDS; DI + T1;		00003300
DS+48 LIT	"5.0.2 DELCLARATIONS	";	00003310
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003320
DS+48 LIT	"5.1 TYPE DECLARATION	";	00003330
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003340
DS+48 LIT	"5.2.3.1SAVE ARRAY	";	00003350
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003360
DS+48 LIT	"5.2.3.2OWN ARRAY	";	00003370
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003380
DS+48 LIT	"5.2.3.3TYPE ARRAY	";	00003390
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003400
DS+48 LIT	"5.2.4 BOUND PAIR LIST	";	00003410
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003420
DS+48 LIT	"5.3.3 SWITCH DECLARATION	";	00003430
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003440
DS+48 LIT	"5.3.4 SWITCH LIST EXPRESSION	";	00003450
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003460
DS+48 LIT	"5.3.5 SWITCH SCOPE	";	00003470
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003480
DS+48 LIT	"5.4 DEFINE DECLARATION	";	00003490
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003500
DS+48 LIT	"5.5 LABEL DECLARATION	";	00003510
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003520
DS+48 LIT	"5.6.3.1FILE BUFFER PART	";	00003530
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003540
DS+48 LIT	"5.6.3.2FILE I-O UNIT CONTROL	";	00003550
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003560
DS+48 LIT	"5.6.3.3FILE DISPOSITION	";	00003570
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003580
DS+48 LIT	"5.6.3.4FILE BLOCKING	";	00003590
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003600
DS+48 LIT	"5.6.3.5FILE END-OF-FILE	";	00003610
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003620
DS+48 LIT	"5.6.3.6FILE SAVE FACTOR	";	00003630
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003640
DS+48 LIT	"5.6.3.7FILE REVERSE	";	00003650
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003660
DS+48 LIT	"5.7.3.1FORMAT A PHRASE IN	";	00003670
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003680
DS+48 LIT	"5.7.3.1FORMAT D PHRASE IN	";	00003690
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003700
DS+48 LIT	"5.7.3.1FORMAT E PHRASE IN	";	00003710
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003720
DS+48 LIT	"5.7.3.1FORMAT F PHRASE IN	";	00003730
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003740
DS+48 LIT	"5.7.3.1FORMAT I PHRASE IN	";	00003750
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003760
DS+48 LIT	"5.7.3.1FORMAT L PHRASE IN	";	00003770
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003780
DS+48 LIT	"5.7.3.1FORMAT U PHRASE IN	";	00003790
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003800
DS+48 LIT	"5.7.3.1FORMAT X PHRASE IN	";	00003810
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003820
DS+48 LIT	"5.7.3.3FORMAT A PHRASE OUT	";	00003830
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003840
DS+48 LIT	"5.7.3.3FORMAT D PHRASE OUT	";	00003850
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003860
DS+48 LIT	"5.7.3.3FORMAT E PHRASE OUT	";	00003870
	DI+LOC T1; DS + 1 WDS; DI + T1;		00003880
DS+48 LIT	"5.7.3.3FORMAT F PHRASE OUT	";	00003890



	DI+LOC T1; DS + 1 WDS; DI + T1;	00003900
DS+48 LIT "5.7.3.3FORMAT I PHRASE OUT	DI+LOC T1; DS + 1 WDS; DI + T1;	00003910
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003920
DS+48 LIT "5.7.3.3FORMAT L PHRASE OUT	DI+LOC T1; DS + 1 WDS; DI + T1;	00003930
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003940
DS+48 LIT "5.7.3.3FORMAT 0 PHRASE OUT	DI+LOC T1; DS + 1 WDS; DI + T1;	00003950
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003960
DS+48 LIT "5.7.3.3FORMAT X PHRASE OUT	DI+LOC T1; DS + 1 WDS; DI + T1;	00003970
	DI+LOC T1; DS + 1 WDS; DI + T1;	00003980
DS+48 LIT "5.8.3 LIST DECLARATION	DI+LOC T1; DS + 1 WDS; DI + T1;	00003990
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004000
DS+48 LIT "5.9.3 FORWARD REFERENCE DECLARATION	DI+LOC T1; DS + 1 WDS; DI + T1;	00004010
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004020
DS+48 LIT "5.1.0.4MONITOR	DI+LOC T1; DS + 1 WDS; DI + T1;	00004030
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004040
DS+48 LIT "5.1.0.5DUMP	DI+LOC T1; DS + 1 WDS; DI + T1;	00004050
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004060
DS+48 LIT "5.11.3.1PROCEDURE DECLARATION (HEADING)	DI+LOC T1; DS + 1 WDS; DI + T1;	00004070
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004080
DS+48 LIT "5.12.3.1STREAM VALUE PART	DI+LOC T1; DS + 1 WDS; DI + T1;	00004090
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004100
DS+48 LIT "5.12.3.2STREAM DECLARATION	DI+LOC T1; DS + 1 WDS; DI + T1;	00004110
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004120
DS+48 LIT "5.12.5.3SET ADDRESS STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004130
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004140
DS+48 LIT "5.12.5.4STORE ADDRESS STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004150
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004160
DS+48 LIT "5.12.5.5RECALL ADDRESS STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004170
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004180
DS+48 LIT "5.12.5.6SKIP ADDRESS STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004190
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004200
DS+48 LIT "5.12.6.3TRANSFER WORDS	DI+LOC T1; DS + 1 WDS; DI + T1;	00004210
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004220
DS+48 LIT "5.12.6.4TRANSFER CHARACTERS	DI+LOC T1; DS + 1 WDS; DI + T1;	00004230
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004240
DS+48 LIT "5.12.6.5INPUT CONVERT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004250
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004260
DS+48 LIT "5.12.6.6OUTPUT CONVERT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004270
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004280
DS+48 LIT "5.12.6.7TRANSFER AND ADD	DI+LOC T1; DS + 1 WDS; DI + T1;	00004290
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004300
DS+48 LIT "5.12.6.8TRANSFER CHARACTER PORTIONS	DI+LOC T1; DS + 1 WDS; DI + T1;	00004310
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004320
DS+48 LIT "5.12.6.9LITERAL CHARACTERS	DI+LOC T1; DS + 1 WDS; DI + T1;	00004330
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004340
DS+48 LIT "5.12.6.10LITERAL BITS	DI+LOC T1; DS + 1 WDS; DI + T1;	00004350
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004360
DS+48 LIT "5.12.7 STREAM GO TO STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004370
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004380
DS+48 LIT "5.12.8 SKIP BIT STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004390
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004400
DS+48 LIT "5.12.9 STREAM TALLY STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004410
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004420
DS+48 LIT "5.12.10 STREAM NEST STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004430
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004440
DS+48 LIT "5.12.10.3JUMP OUT STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004450
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004460
DS+48 LIT "5.12.11 STREAM RELEASE STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004470
	DI+LOC T1; DS + 1 WDS; DI + T1;	00004480
DS+48 LIT "5.12.12 COMPOUND STREAM STATEMENT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004490

DS+48 LIT	DI+LOC T1; DS + 1 WDS; DI + T1;	00004500
"5.12.13.4SOURCE WITH LITERAL	DI+LOC T1; DS + 1 WDS; DI + T1;	00004510
DS+48 LIT	"5.12.13.5SOURCE WITH DESTINATION	00004520
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004530
DS+48 LIT	"5.12.13.6SOURCE BIT	00004540
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004550
DS+48 LIT	"5.12.13.7TOGGLE	00004560
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004570
DS+48 LIT	"5.12.13.8SOURCE FOR ALPHA	00004580
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004590
DS+48 LIT	"4.6.4 FOR LIST ELEMENTS	00004600
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004610
DS+48 LIT	"3.5.6 PRECEDENCE OF LOGICAL OPERATORS	00004620
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004630
DS+48 LIT	"4.3 GO TO STATEMENT (PROCEDURES)	00004640
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004650
DS+48 LIT	"4.3 GO TO STATEMENT (SWITCHES)	00004660
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004670
DS+48 LIT	"5.11.3.2PROCEDURE BODY VARIATIONS	00004680
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004690
DS+48 LIT	"5.11.3.2RECURSIVE PROCEDURES	00004700
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004710
DS+48 LIT	"5.11.4 TYPED PROCEDURE	00004720
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004730
DS+48 LIT	"5.11 A WEB OF PROCEDURE CALLS	00004740
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004750
DS+48 LIT	"5.12.3.1STREAM CALL BY ADDRESS	00004760
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004770
DS+48 LIT	"5.7 FORMAT DECLARATIONS	00004780
DI+LOC T1; DS + 1 WDS; DI + T1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004790
DS+48 LIT	"5.12.12 COMPOUND STREAM STATEMENT	00004800
END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004810
OCTFILL(PROCIDS);	DI+LOC T1; DS + 1 WDS; DI + T1;	00004820
WRITE (FNOK ); COMMENT TO ESTABLISH SINGLE SPACING;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004830
CVN+0; PNO+0; VERIFY	DI+LOC T1; DS + 1 WDS; DI + T1;	00004840
END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004850
BEGIN	DI+LOC T1; DS + 1 WDS; DI + T1;	00004860
PROCEDURE P1;	DI+LOC T1; DS + 1 WDS; DI + T1;	00004870
COMMENT 2.4.4 LEGITIMATE USE OF COMMENT;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010000
BEGIN	DI+LOC T1; DS + 1 WDS; DI + T1;	00010010
BEGIN TEMP [1]+1; BEGIN TEMP[2]+2; TEMP[3]+3 END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010020
BEGIN END	DI+LOC T1; DS + 1 WDS; DI + T1;	00010030
END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010040
BEGIN	DI+LOC T1; DS + 1 WDS; DI + T1;	00010050
COMMENT TEMP [1]+77;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010060
TEMP [4]+4;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010070
COMMENT BEGIN TEMP [2]+77;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010080
BEGIN	DI+LOC T1; DS + 1 WDS; DI + T1;	00010090
TEMP [5]+5;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010100
COMMENT (,x;+( )["GO TO L END WHILE ELSE	DI+LOC T1; DS + 1 WDS; DI + T1;	00010110
UNTIL # ARRAY;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010120
TEMP [6]+6	DI+LOC T1; DS + 1 WDS; DI + T1;	00010130
END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010140
BEGIN	DI+LOC T1; DS + 1 WDS; DI + T1;	00010150
COMMENT;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010160
END	DI+LOC T1; DS + 1 WDS; DI + T1;	00010170
END;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010180
CVN+6; PNO+1; FILL ANS[+] WITH OCT1, OCT2, OCT3, OCT4, OCT5,	DI+LOC T1; DS + 1 WDS; DI + T1;	00010190
OCT6 ;	DI+LOC T1; DS + 1 WDS; DI + T1;	00010200
	DI+LOC T1; DS + 1 WDS; DI + T1;	00010210

VERIFY 00010220  
END; 00010230  
PROCEDURE P2; COMMENT 2.5 LEGITIMATE IDENTIFIERS; 00020000

1 BEGIN 00020010  
2 LABEL EXIT, GOOTOEXIT; 00020020  
3 BOOLEAN B1, NOTT, T, Y, TANDY, B2; 00020030  
4 INTEGER I, I1, FOROI1, IOSTEP01UNTIL01DO, 00020040  
5 ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L12, 00020050  
6 ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L1; 00020060  
7 GOOTOEXIT; 00020070  
8 NOTT+TRUE; T+TRUE; FOROI1+4; Y+TRUE; I+3; I1+1; TANDY+FALSE; 00020080  
9 IOSTEP01UNTIL01DO+5; 00020090  
10 B1+NOTT; B2+TANDY; 00020100  
11 ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L12+6; 00020110  
12 ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L1+7; 00020120  
13 FOROI1+IOSTEP01UNTIL01DO; 00020130  
14 EXIT: IF B1 THEN TEMP [1]+1; 00020140  
15 IF NOTT THEN TEMP [2]+2; 00020150  
16 IF T THEN TEMP [3]+3; IF Y THEN TEMP [4]+4; 00020160  
17 IF TANDY THEN ELSE TEMP[5]+5; IF B2 THEN ELSE TEMP[6]+6; 00020170  
18 IF ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L12 = 6 00020180  
19 THEN TEMP [7]+7; 00020190  
20 IF ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789A1B2C3D4E5F6G7H8I9J10K11L1 = 7 00020200  
21 THEN TEMP [8]+8; 00020210  
22 IF I=3 THEN TEMP [9]+9; IF I1=1 THEN TEMP [10]+10; 00020220  
23 IF FOROI1=5 THEN TEMP [11]+11; 00020230  
24 IF IOSTEP01UNTIL01DO =3 THEN TEMP [12]+12; 00020240  
25 FILL ANS [\*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7, OCT10, OCT11, 00020250  
26 OCT12, OCT13, OCT14; 00020260  
27 CVN+12; PNO+2; 00020270

28 VERIFY 00020280  
29 END; 00020290  
30 PROCEDURE P3; COMMENT THE USE OF NUMERS EXCLUDING SIZE LIMITATIONS, 00030000

31 EXTENDED ALGOL MANUAL SEC 2.6. KM. JULY 26 1963; 00030010  
32 BEGIN 00030020  
33 COMMENT UNSIGNED NUMBERS; 00030030  
34 TEMP[1]+9; 00030040  
35 TEMP[2]+99; 00030050  
36 TEMP[3]+.5; 00030060  
37 TEMP[4]+9.5; 00030070  
38 TEMP[5]+02; 00030080  
39 TEMP[6]+0+3; 00030090  
40 TEMP[7]+0-3; 00030100  
41 TEMP[8]+202; 00030110  
42 TEMP[9]+20-2; 00030120  
43 TEMP[10]+40+2; 00030130  
44 TEMP[11]+4.50-2; 00030140  
45 TEMP[12]+4.50+2; 00030150  
46 COMMENT SIGNED NUMBERS; 00030160  
47 TEMP[13]+-9; 00030170  
48 TEMP[14]+-99; 00030180  
49 TEMP[15]+-.5; 00030190  
50 TEMP[16]++.5; 00030200  
51 TEMP[17]+-9.5; 00030210  
52 TEMP[18]++9.5; 00030220  
53 TEMP[19]+-02; 00030230  
54 TEMP[20]+-0+3; 00030240  
55 TEMP[21]+-01; 00030250  
56 TEMP[22]+-202; 00030260  
57 TEMP[23]+-20-2; 00030270

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TEMP[24]++4e-2; 00030280
TEMP[25]++4.5e-2; 00030290
TEMP[26]++-2.5e+2; 00030300
1 COMMENT EFFECT OF ZERO ON SELECTED VALUES; 00030310
2 TEMP[27]++-.0; 00030320
3 TEMP[28]++-e0; 00030330
4 TEMP[29]++-2.5e-0; 00030340
5 TEMP[30]++2.5e-0; 00030350
6 TEMP[31]++-0e+10; 00030360
7 TEMP[32]++-0e+0; 00030370
8 TEMP[33]++-.0e-0; 00030380
9 TEMP[34]++-.5e+0; 00030390
10 TEMP[35]++4e-0; 00030400
11 TEMP[36]++0e+4; 00030410
12 TEMP[37]++0e2; 00030420
13 FILL ANS[*] WITH 9, 99, OCT1010000000000004, 00030430
14 OCT1010000000000114, 100, 1000, 00030440
15 OCT1204061115645707, 200, OCT1161217270243656, 00030450
16 400, OCT1162702436560510, 450, 00030460
17 OCT2000000000000011, OCT2000000000000143, 00030470
18 OCT3010000000000004, OCT1010000000000004, 00030480
19 OCT3010000000000114, OCT1010000000000114, 00030490
20 OCT3000000000000144, OCT3000000000001750, 00030500
21 OCT3131200000000000, OCT3123100000000000, 00030510
22 OCT3161217270243656, OCT1162436560507534, 00030520
23 OCT1162702436560510, OCT3123720000000000, 00030530
24 OCT1000000000000000, OCT3141000000000000, 00030540
25 OCT3142400000000000, OCT1142400000000000, 00030550
26 OCT1000000000000000, OCT1000000000000000, 00030560
27 OCT1000000000000000, OCT3154000000000000, 00030570
28 OCT1144000000000000, 0, 0; 00030580
29 CVN + 37; 00030590
30 PNO + 3; 00030600
31 VERIFY 00030610
32 END; 00030620
33 PROCEDURE P4; COMMENT 2.7 STRINGS; 00040000
34 BEGIN 00040010
35 TEMP[1]++""; 00040020
36 TEMP[2]++" "; 00040030
37 TEMP[3]++"ABCDEF"; 00040040
38 TEMP[4]++"A C E "; 00040050
39 TEMP[5]++"A=J+I$"; 00040060
40 TEMP[6]++"(>=<89"; 00040070
41 TEMP[7]++"SQRT Y"; 00040080
42 FILL ANS [*] WITH OCT77, OCT60, OCT212223242526, 00040090
43 OCT216023602560, OCT217541373152, OCT331654361011, 00040100
44 OCT625051636070; 00040110
45 CVN+7; PNO+4;VERIFY 00040120
46 END; 00040130
47 PROCEDURE P5;COMMENT 3.1 VARIABLES; 00050000
48 BEGIN 00050010
49 COMMENT SIMPLE VARIABLES ; 00050020
50 INTEGER ALGOL, BAGOL, SVE , AC,I; 00050030
51 COMMENT SUBSCRIPTED VARIABLES; 00050040
52 ARRAY SUBSC[0:5], TWO[0:1,0:1],TOW[0:1,0:1],VAR[0:5]; 00050050
53 ALGOL+123; BAGOL+ALGOL; SVE+ "ASSBLY"; AC+ "SAVE"; 00050060
54 FOR I + 0 STEP 1 UNTIL 5 DO 00050070
55 BEGIN SUBSC[I] + I END; 00050080
56 FOR I + 1 STEP 1 UNTIL 5 DO VAR[I] + SUBSC[I]; 00050090
57 I + 6; 00050100

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VAR[I-6] + ALGOL;TWO[1,1] + 220;TOW[1,1] + TWO[I-5,I-5];      00050110
TEMP[1] + ALGOL;      TEMP[2] + BAGOL;      TEMP[3] + SVE ;    00050120
TEMP[4] + AC;      TEMP[5] + VAR[1];      TEMP[6] + VAR[2];    00050130
TEMP[7] + VAR[3];      TEMP[8] + VAR[4];      TEMP[9] + VAR[5];  00050140
TEMP[10] + VAR[0];      TEMP[11] + TOW[1,1];    00050150
FILL ANS [*] WITH OCT173, OCT173, OCT216262224370, OCT62216525, 00050160
OCT1, OCT2, OCT3, OCT4, OCT5, OCT173, OCT334; 00050170
PNO+5; CVN+11; VERIFY 00050180
END; 00050190
PROCEDURE P6; COMMENT 3.2 PARTIAL WORD DESIGNATORS; 00060000
BEGIN 00060010
INTEGER I,VAR; 00060020
ARRAY VARAY[1:2,1:5]; 00060030
COMMENT VARIABLES; 00060040
I + 79 ; 00060050
VAR + 549755813887; 00060060
TEMP[1]+VAR.[1:47]; 00060070
VAR + 134; 00060080
TEMP[2]+ VAR.[40:8]; 00060090
TEMP[3]+ VAR.[40:6]; 00060100
VARAY[1,1]+ 1962; 00060110
TEMP[4]+ VARAY[1,1].[45:2]; 00060120
VARAY[1,1].[43:1] + 2; 00060130
TEMP[5] + VARAY [1,1]; 00060140
VAR +113; 00060150
TEMP[6] + (VAR + 7).[39:6], 00060160
VAR+4316; 00060170
TEMP[7] + VAR.[43:2] + I.[39:9]; 00060180
FILL ANS[*] WITH OCT0007777777777777, OCT206, OCT041, OCT1, 00060190
OCT3652, OCT17, OCT122; 00060200
CVN+7; PNO+6; VERIFY 00060210
END; 00060220
PROCEDURE P7; COMMENT 3.3 FUNCTION DESIGNATORS; 00070000
BEGIN 00070010
INTEGER I,J,L,K; 00070020
ARRAY A[1:1]; 00070030
INTEGER PROCEDURE NOFORMALPARAMETERS; 00070040
NOFORMALPARAMETERS+1; 00070050
REAL PROCEDURE ARITH (VAR1,VAR2,VAR3); 00070060
VALUE VAR1,VAR2,VAR3; 00070070
INTEGER VAR1,VAR2,VAR3; 00070080
BEGIN 00070090
TEMP[2]+ VAR1; 00070100
TEMP[4]+ VAR3; 00070110
TEMP[3]+ VAR2; 00070120
ARITH + VAR1 + VAR2 + VAR3 + TEMP[1] 00070130
END; 00070140
REAL PROCEDURE ARAY(A); 00070150
REAL A ; 00070160
BEGIN 00070170
A +6; ARAY + 4; 00070180
END; 00070190
BOOLEAN PROCEDURE BOOL(B); 00070200
VALUE B; BOOLEAN B ; 00070210
BEGIN 00070220
BOOL + B 00070230
END; 00070240
REAL PROCEDURE STRNG(ONE,TWO); 00070250
VALUE ONE,TWO;REAL ONE,TWO; 00070260
BEGIN 00070270

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	STRNG ← ONE + TWO;	00070280
	END ;	00070290
	I+1; J+15; K+14; L+3;	00070300
1	TEMP[1] ← NOFORMALPARAMETERS;	00070310
2	TEMP[5] ← ARITH(I+J, J × L, L + 56); TEMP[7] ← 6;	00070320
3	TEMP[6] ← ARAY( TEMP[7] );	00070330
4	TEMP[8] ← REAL (TEMP[3]=3);	00070340
5	TEMP[9] ← STRNG(K)"STRING"(J);	00070350
6	FILL ANS[*] WITH OCT1, OCT20, OCT55, OCT73, OCT171, OCT4,	00070360
7	OCT6, OCT0, OCT35;	00070370
8	CVN← 9; PND ←7; VERIFY	00070380
9	END;	00070390
10	PROCEDURE P9; COMMENT TRANSFER FUNCTIONS 3.3.5. KM, JUNE 10 63;	00090000
11	BEGIN	00090010
12	REAL X, Y, Z, C;	00090020
13	INTEGER H;	00090030
14	BOOLEAN A, B, D;	00090040
15	REAL PROCEDURE WHICHWASFORWARD(Q, R); REAL Q, R; FORWARD;	00090050
16	REAL PROCEDURE CHECKTRANSFER(XX, YY);	00090060
17	REAL XX, YY;	00090070
18	BEGIN	00090080
19	CHECKTRANSFER←XX DIV YY;	00090090
20	END;	00090100
21	BOOLEAN PROCEDURE CHECKREAL( F, G);	00090110
22	BOOLEAN F, G;	00090120
23	BEGIN	00090130
24	CHECKREAL ← F AND G ;	00090140
25	END;	00090150
26	REAL PROCEDURE WHICHWASFORWARD(Q, R);	00090160
27	REAL Q, R;	00090170
28	BEGIN	00090180
29	WHICHWASFORWARD ← Q+R;	00090190
30	END;	00090200
31	TEMP[1]←5; TEMP[2]←6;	00090210
32	X←3.1; Y←2; H←7; Z←-3.3; A←TRUE; B ← FALSE;	00090220
33	COMMENT CHECKOUT OF ENTIER TRANSFER FUNCTION;	00090230
34	TEMP[3]← ENTIER (X MOD Y);	00090240
35	TEMP[4]←ENTIER( CHECKTRANSFER(X, Y) + H.[46:1]);	00090250
36	TEMP[5]←ENTIER(-2.999999999);	00090260
37	TEMP[6]←ENTIER(X);	00090270
38	TEMP[7]←ENTIER(-Z);	00090280
39	TEMP[8]←ENTIER(IF A THEN CHECKTRANSFER(5.7, -2.1) ELSE	00090290
40	"AB"+"A");	00090300
41	TEMP[9]←ENTIER( IF A THEN REAL(A) ELSE REAL(B));	00090310
42	TEMP[10]←ENTIER( IF A THEN WHICHWASFORWARD (2.1, 3.2) ELSE	00090320
43	2.7);	00090330
44	TEMP[11]←ENTIER ((IF BOOLEAN(O) THEN REAL(A) ELSE IF A	00090340
45	THEN( IF BOOLEAN(H.[46:1]) THEN	00090350
46	REAL(BOOLEAN(IF A THEN 1 ELSE 2.4)) ELSE 5.4)	00090360
47	ELSE 1 ) +2.3);	00090370
48	COMMENT CHECKOUT OF REAL TRANSFER FUNCTION;	00090380
49	C←REAL(A EQV A ); C←C.[47:1]; TEMP[12]←ENTIER(C);	00090390
50	C←REAL(CHECKREAL(TRUE, BOOLEAN(O)) OR BOOLEAN(H.[47:1]));	00090400
51	TEMP[13] ← ENTIER (C);	00090410
52	C ← REAL (B); TEMP[14] ← ENTIER(C);	00090420
53	C ← REAL( IF A THEN A OR B ELSE A AND B); TEMP[15]←ENTIER(C);	00090430
54	C←REAL (IF A THEN BOOLEAN(H.[47:1]) ELSE BOOLEAN(H.[42:1]));	00090440
55	TEMP[16]←ENTIER(C);	00090450
56	C ← REAL( IF B THEN BOOLEAN(IF A THEN 2.5 ELSE X) ELSE	00090460
57	( IF A THEN BOOLEAN(REAL(A)) ELSE B ) );	00090470

	TEMP[17]+ENTIER(C);	00090480
	COMMENT CHECK OUT OF BOOLEAN TRANSFER FUNC;	00090490
	D + BOOLEAN( Y DIV X); TEMP[18]+ENTIER(REAL(D));	00090500
1	D + BOOLEAN( IF A THEN CHECKTRANSFER(6, 2) ELSE "A");	00090510
2	TEMP[19]+ENTIER(REAL(D));	00090520
3	D + BOOLEAN (IF B DR B THEN TEMP[1]+TEMP[2] ELSE	00090530
4	REAL(BOOLEAN("A")));	00090540
5	TEMP[20]+ENTIER(REAL(D));	00090550
6	COMMENT GENERAL USE OF TRANSFER FUNCTIONS;	00090560
7	TEMP[21]+ENTIER(REAL(BOOLEAN(REAL(BOOLEAN(REAL(BOOLEAN(5)))))));	00090570
8	TEMP[22]+ENTIER( (IF A THEN REAL(BOOLEAN(H)) ELSE REAL(BOOLEAN	00090580
9	(=5))) + ENTIER(REAL(BOOLEAN(H))));	00090590
10	FILL ANS[*] WITH OCT5, OCT6, OCT1, OCT2,	00090600
11	OCT200000000000000003, OCT3, OCT3,	00090610
12	OCT20000000000000002, OCT1, OCT5, OCT3, OCT1, OCT1, OCT0,	00090620
13	OCT1, OCT1, OCT1, OCT0, OCT3, OCT21, OCT5,	00090630
14	OCT16;	00090640
15	CVN+22;	00090650
16	PND+9;	00090660
17	VERIFY	00090670
18	END;	00090680
19	PROCEDURE P10; COMMENT GEN. ARITHMETIC EXPRESSION, IF CLAUSE,	00100000
20	3.4.3.2 DEC.11. KM. ;	00100010
21	BEGIN	00100020
22	BOOLEAN A,B;	00100030
23	INTEGER X,Y ;	00100040
24	REAL P,Q ;	00100050
25	REAL PROCEDURE GENARITH (X,Y,A);	00100060
26	REAL X,Y; BOOLEAN A;	00100070
27	BEGIN	00100080
28	GENARITH+ IF A THEN X/Y ELSE X MOD Y;	00100090
29	END ;	00100100
30	INTEGER PROCEDURE GENERAL (X,Y,A);	00100110
31	INTEGER X,Y;	00100120
32	BOOLEAN A;	00100130
33	BEGIN	00100140
34	GENERAL + IF A THEN X.[46:2] ELSE (X+Y).[46:2]	00100150
35	END;	00100160
36	A+ TRUE; B+ FALSE; X+4; Y+66; P+ 7/2; Q+ 7/4;	00100170
37	TEMP[1] + 5; TEMP[2] + 7;	00100180
38	TEMP[3]+ IF B THEN 7/5 ELSE (GENARITH(7,5,TRUE) +	00100190
39	GENERAL(5,7,FALSE)).[44:4];	00100200
40	TEMP[4]+ IF A THEN "ABC" + "ABC" ELSE X.[47:1]+3 ;	00100210
41	TEMP[5]+ IF A THEN - GENERAL(7,5,TRUE) ELSE - (P MOD Q MOD P);	00100220
42	TEMP[6]+ IF A AND B THEN -"A" ELSE - "ABC" - "CDE";	00100230
43	TEMP[7] + IF B THEN Q ELSE -(GENARITH(10,5,FALSE).[45:2]);	00100240
44	TEMP[8]+IF NOT A THEN (GENERAL(2,4,TRUE) MOD X.[45:3]) ELSE	00100250
45	("AB" MOD "A") + "B";	00100260
46	TEMP[9] + IF B THEN P+Q ELSE (4 DIV 4) + X.[45:1] ;	00100270
47	TEMP[10]+ IF B THEN X ELSE IF B THEN X ELSE IF B THEN X ELSE Y;	00100280
48	TEMP[11]+IF B THEN GENERAL(X,Y,A) ELSE IF B THEN	00100290
49	GENERAL (4,1,TRUE) MOD GENARITH (4,1,TRUE) ELSE	00100300
50	IF A THEN GENARITH("ABC" , "ABC" , (A AND B)) ELSE	00100310
51	0;	00100320
52	TEMP[12]+ IF A THEN TEMP[1] MOD TEMP[2] ELSE TEMP[1] x 5;	00100330
53	FILL ANS[*] WITH OCT5, OCT7, OCT6, OCT424446,	00100340
54	OCT20000000000000003, OCT2000000000444650,OCT0,	00100350
55	OCT23, OCT2, OCT102, OCT0, OCT5;	00100360
56	CVN+ 12;	00100370
57	PND+ 10;	00100380

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VERIFY
END;
PROCEDURE P11;
  COMMENT 3.4.4.1,+ LEGITIMATE USE OF ";
BEGIN
  REAL PROCEDURE FUNC; FUNC+4;
  TEMP [1]++5;
  TEMP [2]++((+(+(+(+(+3))))));
  TEMP [3]++5+(+3);
  TEMP [4]++"";
  TEMP [5]++TEMP[1];
  TEMP [6]++TEMP[2].[40:7];
  TEMP [7]++FUNC;
  TEMP [8]++6+"13"+TEMP[7]+TEMP[3].[44:1]+FUNC;
  TEMP[9]+++"3"+"-6" ;
  FILL ANS[*] WITH OCT5, OCT3, OCT10, OCT77, OCT5, OCT1,OCT4,
    OCT122, OCT7411 ;
  CVN+ 9; PNO+11;
  VERIFY
END;
PROCEDURE P12; COMMENT THE ARITHMETIC OPERATOR (-);
BEGIN
  REAL A,B;
  A +15/4; B+386/4;
  TEMP[1]+ 4-2 ; TEMP [2] + 2-3 ; TEMP [3] + 4-2-1;
  TEMP[4] + A-B; TEMP [5] + B-A ;
  TEMP[6] + 152 ; TEMP [7] + 98; TEMP[8] + TEMP [6] - TEMP [7];
  TEMP[9]+A.[ 9:9]- (B+5).[9: 9];
  TEMP[10]+-11-(-4); TEMP[11]+-11-(-4)-5;
  TEMP[12]+ +A - (+B); TEMP[13] + -B-(-A);
  TEMP[14]+ - TEMP [6]- TEMP[7];
  TEMP[15]+ -A.[ 9:9]-B.[ 9:9];
  BEGIN
  INTEGER PROCEDURE CALC (DSUBD); COMMENT THIS PROCEDURE USED TO FORM
  FUNCTION;
  INTEGER DSUBD;
  BEGIN CALC+ DSUBD END;
  TEMP [16]+ CALC (-7) -3; END;
  TEMP [17]+ -""-"A+B";
  FILL ANS[*] WITH OCT2, OCT2000000000000001, OCT1, OCT1010000000001442,
  OCT3010000000001442, OCT230,OCT142, OCT66, OCT225,
  OCT2000000000000007, OCT2000000000000014, OCT1010000000001442,
  OCT1010000000001442, OCT2000000000000372, OCT2000000000000520,
  OCT2000000000000012, OCT2000000000212121 ;
  CVN +17;
  PNO +12;
  VERIFY
END;
PROCEDURE P13; COMMENT ARITH OPERATOR * 3.4.4.1;
BEGIN
  INTEGER I0,I1,I2,I3,I4;
  REAL R0, R1, R2, R3, R4, R5;
  ALPHA A0, A1;
  BOOLEAN B;
  INTEGER PROCEDURE X (K);
  INTEGER K;
  BEGIN
  X+K+7;
  END;
  REAL PROCEDURE Y(L);

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REAL L;

Y←L+3,7+3,5;

00130120

BEGIN

00130130

END;

00130140

I0←0; I1←1; I2←2; I3←549755813887; I4←-1;

00130150

TEMP[1]←I0×I0;

00130160

TEMP[2]←I0×I2;

00130170

TEMP[3]←I1×I2;

00130180

TEMP[4]←I1×I4;

00130190

TEMP[5]←I0×I4;

00130200

TEMP[6]←I4×I4;

00130210

TEMP[8]←I4×I3;

00130220

TEMP[7]←I1×I3;

00130230

TEMP[9]←I2×X(2);

00130240

R0←0; R1←1; R2←2.2; R3←8058; R4←-1; R5←80-20;

00130250

TEMP[10]←R0×R2;

00130260

COMMENT \*\*\*\*\* THE CARD NO A013029 IS ORIGINAL. REMOVE A0130295 WHEN

00130270

\*\*\*\*\* VALUE OF 8 @ 58 IS KNOWN

00130280

TEMP[11]←R1×(R3+I3);

00130290

TEMP[11]←( (R1 × ( R3 + I3 ) ) - R3);

00130300

TEMP[12]←R4×I3;

00130310

COMMENT \*\*\*\*\* CARD NO A013031 IS ORIGINAL REMOVE CARD NO A013031 WHEN

00130320

\*\*\*\*\* VALUE FOR 8 @ -20 IS KNOWN

00130330

TEMP[13]←R1×R5;

00130340

TEMP[13]←(R1×R5) + (-R5);

00130350

COMMENT \*\*\*\*\* CARD NO A013032 IS ORIGINAL REMOVE CARD NO A0130325

00130360

\*\*\*\*\* WHEN VALUE FOR 8 @ -20 IS KNOWN

00130370

TEMP[14]←R4×R5;

00130380

TEMP[14]←(R4 × R5 ) + R5;

00130390

COMMENT \*\*\*\*\* CARD NO A013033 IS ORIGINAL REMOVE CZRD NO A0130335

00130400

\*\*\*\*\* WHEN VALUE FOR 8 @ 58 AND : @ -20 IS KNOWN

00130410

TEMP[15]←R3×R5;

00130420

TEMP[15]←(R3×R5) - (R3×R5);

00130430

TEMP[16]←R1×Y(6,8);

00130440

A0←"0"; A1←"AA"; B←TRUE;

00130450

TEMP[17]←3.14×"BB";

00130460

TEMP[18]←I1×A1;

00130470

TEMP[19]←R4×A1;

00130480

TEMP[20]←2.7×(IF B THEN 7 ELSE -1.5);

00130490

TEMP[21]←X(-5)×Y(0,8);

00130500

TEMP[22]←"BB"×A1;

00130510

TEMP[23]←A0×A1;

00130520

TEMP[24]←I1.[45:3] × I2.[43:3];

00130530

TEMP[25]←A1.[42:6] × R1.[45:3];

00130540

FILL ANS[\*] WITH OCT0, OCT0, OCT2, OCT2000000000000001,

00130550

OCT0, OCT1, OCT0007777777777777, OCT2007777777777777, 00130570

OCT22, OCT0, OCT0, 00130580

OCT2007777777777777, OCT0, 00130590

OCT0, OCT0, OCT16, 00130600

OCT1117131631463146, OCT2121, OCT20000000000002121, 00130610

OCT1132271403140315, OCT20, OCT4735062, 00130620

OCT122006, OCT0, OCT21; 00130630

CVN←25; 00130640

PNO←13; 00130650

VERIFY 00130660

END; 00130670

PROCEDURE P14; COMMENT ARITHMETIC OPERATOR / EK 7 NOV 62; 00140000

BEGIN 00140010

INTEGER J,K; 00140020

REAL A,B; 00140030

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ARRAY Y[1:3];                                00140040
REAL PROCEDURE PROD (A,B); REAL A, B;        00140050
BEGIN                                          00140060
  PRCD←A×B                                    00140070
END;                                          00140080
TEMP[1]←1023/2;                               00140090
TEMP[2]←1023/1023;                           00140100
TEMP[3]← -0/1;                                00140110
J← 2;                                          00140120
K← 10;                                         00140130
A←125;                                         00140140
B←5;                                           00140150
Y[1]←Y[2]+Y[3]+15;                            00140160
TEMP[5]← "#KEHE"/"#KEHE";                    00140170
TEMP[6]←Y[2]/B;                               00140180
TEMP[7]← K/J;                                  00140190
TEMP[8]←A/B;                                   00140200
TEMP[9]←K/B;                                   00140210
TEMP[10]←PROD(A,B)/125;                       00140220
TEMP[11]←A×B/(20+B);                          00140230
TEMP[12]←A.[39:3]/1;                          00140240
FILL ANS[*] WITH OCT1010000000007774, OCT1,  00140250
OCT2000000000000000, OCT0, OCT1, OCT3,      00140260
OCT5, OCT31, OCT2, OCT5, OCT31, OCT1;       00140270
CVN← 12;                                       00140280
PNO← 14;                                       00140290
VERIFY                                         00140300
END;                                          00140310
PROCEDURE P15 ; COMMENT THE ARITHMETIC OPERATUR (DIV); 00150000
BEGIN                                          00150010
REAL A,B;                                       00150020
INTEGER C, D;                                    00150030
INTEGER PROCEDURE CALCZ ( DDIVD); COMMENT THE PROCEDURE USED TO FURM 00150040
FUNCTION;                                        00150050
INTEGER DDIVD;                                   00150060
BEGIN INTEGER A;                                  00150070
A ← 25 DIV DDIVD ; CALCZ ← A; END;              00150080
A ← 137/5; B ← 69/5; C ← 89; D ← 89;           00150090
TEMP[1]← 270 DIV 9 ; TEMP[2]← A DIV B; TEMP [3]← CALCZ ( 5 )DIV 00150100
CALCZ (5);                                       00150110
TEMP[4]← "AB"DIV "A"; TEMP[5]← C.[42:6] DIV   D.[42:6]; 00150120
TEMP[6] ← -270 DIV 9 ; TEMP[7]←A DIV("B"); TEMP[8] ← "CALCZ( 25) 00150130
DIV 1;                                           00150140
TEMP[9]← -"AB" DIV "A"; TEMP[10]← C.[39:9] DIV D.[42:6]; 00150150
TEMP[11]← 270 DIV 9 DIV 3;TEMP[12]←A DIV B DIV 4; 00150160
TEMP[13]← CALCZ( 5 )DIV CALCZ( 5 )DIV D.[42:6]; 00150170
TEMP[15]←D.[42:6]DIV 3 DIV A;                   00150180
TEMP[16] ← 15 DIV 25 DIV B ; TEMP[17] ← B DIV CALCZ (25) DIV A; 00150190
TEMP[18]← CALCZ( 1)DIV 1 DIV A; TEMP[19]← "AB"DIV C.[45:3]; 00150200
TEMP[20]← C.[42:6]DIV 5 DIV"A";                 00150210
FILL ANS[*] WITH OCT36, OCT1, OCT1, OCT101, OCT1, 00150220
OCT2000000000000036, OCT2000000000000001, OCT2000000000000001, 00150230
OCT2000000000000101, OCT3, OCT12, OCT0, OCT0, OCT0, OCT0, OCT0, 00150240
OCT0, OCT0, OCT2122, OCT0;                     00150250
CVN ← 20;                                       00150260
PNO ← 15;                                       00150270
VERIFY                                         00150280
END;                                          00150290
PROCEDURE P16; COMMENT ARITH OPERATOR MOD      3.4.4.1; 00160000
BEGIN                                          00160010

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Data Documents/Inc.

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INTEGER I0, I1, I2, I3, I4, I5;
REAL R0, R1, R2, R3, R4, R5;
INTEGER PROCEDURE Z(X, Y);
  INTEGER X, Y;
  BEGIN
    Z ← X + Y;
  END;
I0 ← 0; I1 ← 1; I2 ← 2; I3 ← 17; I4 ← -2; I5 ← -8;
TEMP[1] ← I0 MOD I1;
TEMP[2] ← I3 MOD I2;
TEMP[3] ← 3 MOD I1;
TEMP[4] ← I5 MOD I2;
TEMP[5] ← I5 MOD I4;
TEMP[6] ← I3 MOD I4;
R0 ← 0; R1 ← 1; R2 ← 2.2; R3 ← 8.9; R4 ← 2;
TEMP[7] ← R0 MOD R1;
TEMP[8] ← R3 MOD R2;
TEMP[9] ← R3 MOD R1;
TEMP[10] ← I5 MOD R2;
TEMP[11] ← I5 MOD (I1 + I2 + R2);
TEMP[12] ← "A" MOD 4;
TEMP[13] ← 37 MOD (IF R2 = 2.2 THEN 6 ELSE 3);
TEMP[14] ← 48.5 MOD Z(3, 3);
TEMP[15] ← I3, [42:6] MOD I2, [45:3];
COMMENT ***** VALUES IN THE ANS ARRAY WERE MODIFIED TO ACCOUNT
***** FOR THE DEVIATION OF THE CONVERT ROUTINE
***** TEMP[8] = 1150631463146340
***** ANS[8] = 1150631463146314
TEMP[9] = 1157146314631500
ANS[9] = 1157146314631463
TEMP[10] = 3141314631463147
ANS[10] = 3141314631463146
TEMP[11] = 3142631463146315
ANS[11] = 3142631463146314
;
FILL ANS[*] WITH OCT0, OCT1, OCT0, OCT0, OCT0,
OCT1, OCT0, OCT1150631463146340,
OCT1157146314631500, OCT3141314631463147,
OCT3142631463146315, OCT1, OCT1, OCT1154000000000000, OCT1;
CVN ← 15;
PNO ← 16;
VERIFY;
END;
PROCEDURE P17; COMMENT ARITHMETIC OPERATOR * EK 7 NOV 63;
BEGIN
  INTEGER J, K;
  REAL Y, Z, W;
  ARRAY X[1:3];
  INTEGER PROCEDURE SUM (J, K);
    INTEGER J, K;
    BEGIN
      SUM ← J + K;
    END;
  W ← 10.0 × 2;
  J ← 2;
  K ← 4;
  Y ← 10.0;
  Z ← 0.2 × 1;

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Data Documents/Inc.

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X[1]+X[2]+ X[3]+ 3.0; 00170150
TEMP[1]+ 2*2; 00170160
TEMP[2]+ J+K; 00170170
TEMP[3]+ (J/4)+J; 00170180
TEMP[4]+ 0*K; 00170190
TEMP[5]+ 0*J; 00170200
TEMP[6]+ Y*0; 00170210
TEMP[7]+ 2+(-0); 00170220
TEMP[8]+ (W/Y)*(-J); 00170230
TEMP[9]+ (X-Y)*2.5; 00170240
TEMP[10]+ Y*2.0; 00170250
TEMP[11]+ (K-J)*(J*1.5); 00170260
TEMP[12]+ (K/Y)*0.0; 00170270
TEMP[13]+ (-1.5)*(0); 00170280
TEMP[14]+(Y*Y) *(-J); 00170290
TEMP[15]+ X[1]+ X[2]; 00170300
TEMP[16]+X[3] * SUM(J,K); 00170310
TEMP[17]+ X[2]*J,[47;1]; 00170320
TEMP[18]+ 1*"000000"; 00170330
COMMENT THE FOLLOWING ANSWERS WERE MODIFIED TO OBTAIN A CLEAN LISTING 00170340
***** CONSTRUCT ANS SHOULD BE ANS IS 00170350
***** (4-2) *(2*1.5) OCT 10 OCT10.00000000002 00170360
*** 3*3 OCT 33 OCT33.00000000004 ;00170370
FILL ANS[*] WITH OCT4, OCT20, OCT1010000000000002, OCT0, 00170380
OCT2000000000000000, OCT1, OCT1, 00170390
OCT10100000000000002, OCT0, OCT144, OCT1131000000000002, 00170400
OCT1, OCT1, OCT1213215561353071, OCT1133300000000004, 00170410
OCT1331, OCT1, OCT1; 00170420
CVN+ 18; 00170430
PND+ 17; 00170440
VERIFY 00170450
END; 00170460
PROCEDURE P18; COMMENT ARITHMETIC EXPRESSIONS WITH MIXED TYPES; 00180000
BEGIN 00180010
TEMP[1]+(-57)*23; TEMP[2]+ 27+13,27*3; TEMP[3]+ 27* 13,27*3; 00180020
TEMP[4]+2,7*3 *3,4*4; TEMP[5]+2,7*3+3,4*4; 00180030
TEMP[6]+7/4; TEMP[7]+9/2,3;TEMP[8]+2,3/2;TEMP[9]+27,3*2/27,3*1;00180040
TEMP[10]+8 MOD 9; TEMP[11]+ (-8)MOD 1.6; TEMP [12]+7.5 MOD(-3); 00180050
TEMP[13]+1.5MOD 0.7; 00180060
FILL ANS[*] WITH OCT2000000000002437, OCT1121026365605076, 00180070
OCT1112062675341220, OCT1121561217270244, 00180080
OCT1132554631463146, OCT1141600000000000, 00180090
OCT1143723364675157, OCT1141114631463147, 00180100
OCT1151463146314632, OCT10, 00180110
OCT3141463146314630, OCT1141400000000000, 00180120
OCT1150631463146314; 00180130
CVN+13; 00180140
PND+18; 00180150
VERIFY 00180160
END; 00180170
PROCEDURE P19; COMMENT PRECEDENCE OF ARITHMETIC OPERATORS 3,4,5; 00190000
BEGIN 00190010
INTEGER I1,I2,I3,I4,I5,I10,IX,IY; 00190020
REAL R0,R1,R2,R3,R4,R5,R6; 00190030
ALPHA A1,A2; 00190040
INTEGER PROCEDURE X(G,H,IX); 00190050
VALUE G,H,IX; 00190060
INTEGER G,H,IX; 00190070
BEGIN 00190080
H+6; 00190090

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	IX+3;	00190100
	X+6;	00190110
	END;	00190120
1	INTEGER PROCEDURE Y(J,IY);	00190130
2	VALUE J, IY;	00190140
3	INTEGER J,IY;	00190150
4	BEGIN	00190160
5	Y+J+IY+2;	00190170
6	END;	00190180
7	REAL PROCEDURE Z(K,L,M,R0,R1,R2,R3 );	00190190
8	VALUE K,L,M,R0,R1,R2,R3;	00190200
9	INTEGER K;	00190210
10	REAL L,M,R0,R1,R2,R3;	00190220
11	BEGIN	00190230
12	R0+K+L;	00190240
13	R1+K=L;	00190250
14	R2+K/L;	00190260
15	R3+K×L;	00190270
16	Z+M;	00190280
17	END;	00190290
18	I1+1; I2+2; I3+3; I4+4; I5+5; I10+10; IX+0; IY+0;	00190300
19	TEMP[1]+I1 + I2×I3 * I4 -(I10 DIV I5);	00190310
20	TEMP[2]+I1 + I2×I3 * (I4 - I10 DIV I5);	00190320
21	TEMP[3]+I1 + I2×(I3 + I4 - I10 DIV I5);	00190330
22	TEMP[4]+I1 + (I2 × I3 * I4 - I10 DIV I5);	00190340
23	TEMP[5]+(I1 + I2 × I3 * I4 - I10 DIV I5);	00190350
24	TEMP[6]+(I1 + I2 × I3 * I4 - I10) DIV I5;	00190360
25	TEMP[7]+ (I1+I2×I3+3)-I10 DIV I5;	00190370
26	TEMP[8]+(I1 + I2×I3) * I4 - I10 DIV I5;	00190380
27	TEMP[9]+(I1 + I2) × I3 * I4 - I10 DIV I5;	00190390
28	TEMP[10]+I1 + I2×I3 * I4 - I10 DIV I5;	00190400
29	TEMP[11]+I1 + I2 × I3 * (I10 - I4) DIV I5;	00190410
30	TEMP[12]+I1 + (I2 * I3) * I4 - I10 DIV I5;	00190420
31	TEMP[13]+I10 × I1 +I2 MOD X(I1, I2, I3)×IY+Y(I1,I2)+I1-I2 DIV	00190430
32	I5-I1+I3;	00190440
33	TEMP[14]+(I10×I1+I2 MOD X(I1,I2,I3)×Y(I4,I5)+I4-I10 DIV	00190450
34	I5-I1+I3);	00190460
35	TEMP[15]+I10×I1+I2 MOD X(I1,I2,I3)×Y(I4,I5)+I4-I10 DIV	00190470
36	(I5-I1+I3);	00190480
37	R0+0; R1+0; R2+0; R3+0; R4+1; R5+549755813887; R6+2; A2+"A";	00190490
38	TEMP[16]+I3+I3×I2;	00190500
39	TEMP[17]+I3×I4-I2;	00190510
40	TEMP[18]+I3×(I4-I2);	00190520
41	TEMP[19]+I4/I2+I3×I2;	00190530
42	TEMP[20]+I5 MOD I2 + I3;	00190540
43	TEMP[21]+I3 DIV I2 MOD I2;	00190550
44	TEMP[22]+I3-R6×R4;	00190560
45	TEMP[23]+R4+I5-R6×9 MOD 4;	00190570
46	TEMP[24]+(R0-R2+R3×Z(4,2,R0,R1,R2,R3,R4))/(R2+6);	00190580
47	TEMP[25]+22+(IF I1=0 THEN I2×R5 ELSE A2);	00190590
48	A1+"AA";	00190600
49	TEMP[26]+ "AA"+R5 MOD 7+1;	00190610
50	TEMP[27]+A1+R5 DIV (7+1)-68719476733;	00190620
51	TEMP[28]+Z(1,2,R0,R1,R2,R3,R4)×R6;	00190630
52	TEMP[29]+Z(6,3,R1,R2,R3,R4,R5)×R2+R3-R0×R3;	00190640
53	TEMP[30]+(4×8-3+4.5+2.5)/9;	00190650
54	COMMENT ANSWERS AND OUTPUT;	00190660
55	FILL ANS[*] WITH OCT241, OCT23, OCT237,	00190670
56	OCT241, OCT241, OCT36,	00190680
57	OCT65, OCT4537, OCT361,	00190690

	OCT241, OCT444, OCT2421,	00190700
	OCT14, OCT12, OCT11,	00190710
	OCT11, OCT12, OCT6,	00190720
1	OCT10, OCT4, OCT1,	00190730
2	OCT1, OCT6, OCT0,	00190740
3	OCT47, OCT2122, OCT2123,	00190750
4	OCT0, OCT0, OCT4;	00190760
5	CVN+30;	00190770
6	PNO+19;	00190780
7	VERIFY	00190790
8	END;	00190800
9	PROCEDURE P21; COMMENT BOOLEAN EXPRESSION USING IF CLAUSE ;	00210000
10	BEGIN	00210010
11	BOOLEAN A,B,C,D,E;	00210020
12	INTEGER H,J;	00210030
13	BOOLEAN PROCEDURE BOOL (BLSUBBL,A,B);	00210040
14	BOOLEAN BLSUBBL,A,B;	00210050
15	BEGIN BOOL+ A OR B OR NOT BLSUBBL END;	00210060
16	BOOLEAN PROCEDURE SECBOOL(BSUBBL,A,B);	00210070
17	BOOLEAN BSUBBL,A,B;	00210080
18	BEGIN SECBOOL +A OR NOT BSUBBL END;	00210090
19	B + FALSE; A+ TRUE; H+ 14; J+ 14; C+ FALSE; D+ FALSE; E+ TRUE;	00210100
20	A+IF H=J THEN TRUE ELSE FALSE; TEMP[1]+REAL(A,[47:1]);	00210110
21	A+ IF TRUE THEN A ELSE B; TEMP[2]+ REAL(A,[47:1]); A+TRUE;	00210120
22	A+IF A THEN BOOL(B,A,B) ELSE IF B THEN C ELSE D;	00210130
23	TEMP[3]+ REAL(A,[47:1]); H+H+J;	00210140
24	A+ IF H≠J THEN H+J>H-J ELSE A; TEMP[4]+ REAL(A,[47:1]);	00210150
25	A+ IF H>J THEN (IF J≥H THEN A ELSE B) ELSE IF C THEN A ELSE D;	00210160
26	TEMP[5]+ REAL(A,[47:1]);	00210170
27	A+ IF A THEN TRUE EQV FALSE ELSE TRUE; TEMP[6]+ REAL(A,[47:1]);	00210180
28	A+ IF A THEN H= J ELSE B; TEMP[7]+ REAL(A,[47:1]);	00210190
29	A+IF H≠J THEN BOOL(B,A,B) EQV SECBOOL(B,A,B) ELSE C;	00210200
30	TEMP[8]+ REAL(A,[47:1]);	00210210
31	A+ IF B THEN (H+J) = (H+J) ELSE IF H+J > H-J THEN A ELSE B;	00210220
32	TEMP[9]+REAL(A,[47:1]);	00210230
33	A+ IF A THEN (IF H=J THEN C ELSE A) EQV (H>J) ELSE B;	00210240
34	TEMP[10]+ REAL(A,[47:1]);	00210250
35	A+ IF A THEN C OR D ELSE E; TEMP[11]+ REAL(A,[47:1]);	00210260
36	A+IF B EQV A THEN BOOL(B,A,B) OR SECBOOL(B,A,B) ELSE C;	00210270
37	TEMP[12]+ REAL(A,[47:1]);	00210280
38	A+ IF B THEN H > J OR J > H ELSE IF C THEN D ELSE A;	00210290
39	TEMP[13]+ REAL(A,[47:1]);	00210300
40	A+ IF A THEN ((IF A OR B THEN C ELSE A) OR (A AND B)) ELSE E ;	00210310
41	TEMP[14]+ REAL(A,[47:1]);	00210320
42	A+IF B THEN BOOL(B,A,B) AND SECBOOL(B,A,B) ELSE A AND B;	00210330
43	TEMP[15]+REAL(A,[47:1]);	00210340
44	A+ IF H ≠ J THEN (IF A OR B THEN C ELSE A) AND (B OR D) ELSE E;	00210350
45	TEMP[16]+REAL(A,[47:1]); A+TRUE;	00210360
46	A+ IF A OR B THEN NOT B ELSE E; TEMP[17]+ REAL(A,[47:1]);	00210370
47	A+ TRUE;	00210380
48	A+ IF A THEN A EQV B AND NOT C ELSE IF C THEN A ELSE C ;	00210390
49	TEMP[18]+ REAL(A,[47:1]);	00210400
50	A+ IF A THEN H.[45:3] > J.[42:6] ELSE E;	00210410
51	TEMP[19]+REAL(A,[47:1]);	00210420
52	A+ IF A THEN (IF H.[45:3] > (J.[42:6] - H.[45:3]) THEN C	00210430
53	ELSE A ) OR NOT (A OR B) ELSE A; TEMP[20]+REAL(A,[47:1]);	00210440
54	FILL ANS[*] WITH OCT1, OCT1, OCT1, OCT1, OCT0, OCT1,	00210450
55	OCT0, OCT1, OCT1, OCT1, OCT0, OCT1, OCT1,	00210460
56	OCT0, OCT0, OCT0, OCT1, OCT0, OCT1, OCT1;	00210470
57	CVN + 20;	00210480

	PNO + 21;	00210490
	VERIFY	00210500
	END;	00210510
1	PROCEDURE P22; COMMENT RELATIONAL OPERATOR <	3,5,5,1;00220000
2	BEGIN	00220010
3	INTEGER IO,I1,IN1,I2,IN2,IMAX,IMIN;	00220020
4	INTEGER PROCEDURE X(K);	00220030
5	INTEGER K;	00220040
6	BEGIN	00220050
7	X+K+2;	00220060
8	END;	00220070
9	REAL PROCEDURE Y(L);	00220080
10	REAL L;	00220090
11	BEGIN	00220100
12	Y+L+3,6;	00220110
13	END;	00220120
14	IO+0; I1+1; IN1+1; I2+2; IN2+2;	00220130
15	IMAX+549755813887; IMIN+549755813887;	00220140
16	TEMP[1]+IF 0.0 < 1.0 THEN 1 ELSE 0;	00220150
17	TEMP[2]+IF -1.0 < IO THEN 1 ELSE 0;	00220160
18	TEMP[3]+ IF 4.314@63 < X(1) THEN 1 ELSE 0;	00220170
19	TEMP[4]+ IF 4.314@63 < IO.[47:1] THEN 1 ELSE 0;	00220180
20	TEMP[5]+IF 1.75@46 < " " THEN 1 ELSE 0;	00220190
21	TEMP[6]+IF -1.75@-30 < I1 THEN 1 ELSE 0;	00220200
22	TEMP[7]+IF I1 < IN1 THEN 1 ELSE 0;	00220210
23	TEMP[8]+IF I2 < Y(-3,0) THEN 1 ELSE 0;	00220220
24	TEMP[9]+IF IN2 < IO.[9:39] THEN 1 ELSE 0;	00220230
25	TEMP[10]+IF IMAX < " " THEN 1 ELSE 0;	00220240
26	TEMP[11]+IF IMIN < (2*8) THEN 1 ELSE 0;	00220250
27	TEMP[12]+IF X(1) < Y(2,4) THEN 1 ELSE 0;	00220260
28	TEMP[13]+IF X(2) < I1.[45:3] THEN 1 ELSE 0;	00220270
29	TEMP[14]+IF Y(3,4) < "0" THEN 1 ELSE 0;	00220280
30	TEMP[15]+IF Y(1) < (10/5) THEN 1 ELSE 0;	00220290
31	TEMP[16]+ IF I2.[42:6] < IMAX.[1:3] THEN 1 ELSE 0;	00220300
32	TEMP[17]+ IF IMAX.[45:3] < "" THEN 1 ELSE 0;	00220310
33	TEMP[18]+IF IMAX.[9:39] < (9 DIV 2) THEN 1 ELSE 0;	00220320
34	TEMP[19]+IF "AA" < "ZZ" THEN 1 ELSE 0;	00220330
35	TEMP[20]+IF "MMM" < ( 100 MOD 51) THEN 1 ELSE 0;	00220340
36	TEMP[21]+IF (12 +5) < (47 - 18) THEN 1 ELSE 0;	00220350
37	COMMENT ANSWERS AND OUTPUT;	00220360
38	FILL ANS[*] WITH OCT1, OCT1, OCT0,	00220370
39	OCT0,OCT0, OCT1,	00220380
40	OCT0,OCT0, OCT1,	00220390
41	OCT0, OCT1, OCT1,	00220400
42	OCT0, OCT0, OCT0,	00220410
43	OCT0, OCT1, OCT0,	00220420
44	OCT1, OCT0, OCT1;	00220430
45	CVN+21;	00220440
46	PNO+22;	00220450
47	VERIFY	00220460
48	END;	00220470
49	PROCEDURE P23; COMMENT THE RELATIONAL OPERATOR (S);	00230000
50	BEGIN	00230010
51	BOOLEAN A,B,C;	00230020
52	INTEGER H,J,K;	00230030
53	A+ TRUE; B+FALSE; H+15; J+ 15; K+ 30; C+TRUE;	00230040
54	A+IF A THEN HSJ ELSE B; TEMP[1] + REAL (A,[47:1]);	00230050
55	A+ IF A THEN H < J EQV H < J ELSE B; TEMP[2]+ REAL(A,[47:1]);	00230060
56	A+HSJ; TEMP[3] + REAL (A,[47:1]);	00230070
57	A+HSJ EQV HSJ; TEMP[4]+REAL(A,[47:1]);	00230080

1	A+ IF A THEN H+ JS K OR HSJ ELSE C; TEMP[5] + REAL(A.[47:1]);	00230090
2	A+ IF B THEN A ELSE H-JSK; TEMP[6]+REAL(A.[47:1]);	00230100
3	A+H+JSK OR HSJ; TEMP[7]+REAL(A.[47:1]);	00230110
4	A+ IF A THEN H+J AND HSJ ELSE C; TEMP[8]+REAL(A.[47:1]);	00230120
5	A+H+KSJ AND HSK; TEMP[9]+REAL(A.[47:1]);	00230130
6	A+ IF A THEN NOT H ≤ K ELSE NOT B; TEMP[10]+ REAL(A.[47:1]);	00230140
7	A+ NOT HSJ; TEMP[11]+REAL(A.[47:1]);	00230150
8	FILL ANS[*] WITH OCT1, OCT1, OCT1, OCT1, OCT1, OCT1, OCT1,	00230160
9	OCT0, CCT0, OCT1, OCT0;	00230170
10	CVN+11;	00230180
11	PND+23;	00230190
12	VERIFY END;	00230200
13	PROCEDURE P24; COMMENT THE RELATIONAL OPERATOR (=);	00240000
14	BEGIN	00240010
15	BOOLEAN A,B,C;	00240020
16	INTEGER H,J,K;	00240030
17	A+ TRUE; B+FALSE ; H+ 15; J+ 15; K+ 30; C+ TRUE;	00240040
18	A+ IF A THEN H=J ELSE B; TEMP [1] + REAL (A.[47:1]);	00240050
19	A+IF A THEN H=J EQV H=J ELSE B;	00240060
20	TEMP[2]+REAL(A.[47:1]);	00240070
21	A+ H=J; TEMP [3] + REAL(A);	00240080
22	A +H=J EQV H=J; TEMP[4]+REAL (A.[47:1]);	00240090
23	A+ IF A THEN H+4=5 OR H=J ELSE B ;	00240100
24	TEMP[5]+ REAL (A.[47:1]);	00240110
25	A+ IF B THEN A ELSE H+4=4 ; TEMP [6] + REAL (A);	00240120
26	A+ H+J=K OR H= J ; TEMP [7]+ REAL(A);	00240130
27	A+ IF A THEN H=J AND H=K ELSE C;	00240140
28	TEMP[8]+REAL(A.[47:1]);	00240150
29	A+ H+J=K AND H=J ; TEMP [9] + REAL(A.[47:1]);	00240160
30	A+ IF A THEN NOT H=K ELSE B; TEMP[10]+REAL(A.[47:1]);	00240170
31	A+NOT H=J; TEMP[11]+REAL(A.[47:1]);	00240180
32	FILL ANS[*] WITH OCT1, OCT1, OCT1, OCT1, OCT1, OCT0, OCT1,	00240190
33	OCT0, CCT1, OCT1, OCT0;	00240200
34	CVN + 11;	00240210
35	PND+ 24;	00240220
36	VERIFY	00240230
37	END;	00240240
38	PROCEDURE P25; COMMENT RELATIONAL OPERATOR ≥	3.5.5.1;00250000
39	BEGIN	00250010
40	INTEGER IO,I1,IN1,I2,IN2,IMAX,IMIN;	00250020
41	INTEGER PROCEDURE X(K);	00250030
42	INTEGER K;	00250040
43	BEGIN	00250050
44	X+K+2;	00250060
45	END;	00250070
46	REAL PROCEDURE Y(L);	00250080
47	REAL L;	00250090
48	BEGIN	00250100
49	Y+L+3.6;	00250110
50	END;	00250120
51	IO+0; I1+1; I2+2; IN2+2;	00250130
52	IMAX+549755813887; IMIN+549755813887;	00250140
53	TEMP[1]+IF 0.0 ≥ 1.0 THEN 1 ELSE 0;	00250150
54	TEMP[2]+IF = 1.0 ≥ IO THEN 1 ELSE 0;	00250160
55	TEMP[3]+ IF 4.314@63 ≥ X(1) THEN 1 ELSE 0;	00250170
56	TEMP[4]+IF -4.314@63 ≥ IO.[47:1] THEN 1 ELSE 0;	00250180
57	TEMP[5]+ IF -1.75@-30 ≥ " " THEN 1 ELSE 0 ;	00250190
	TEMP[6]+ IF 1.75@-30 ≥ IO THEN 0 ELSE 1;	00250200
	TEMP[7]+IF I1 ≥ IN1 THEN 1 ELSE 0;	00250210
	TEMP[8]+IF I2 ≥ Y(-3.0) THEN 1 ELSE 0;	00250220



1	TEMP[9]+ IF IN2 ≥ 10.[19:39] THEN 1 ELSE 0;	00250230
2	TEMP[10]+IF IMAX ≥ " " THEN 1 ELSE 0;	00250240
3	TEMP[11]+IF IMIN ≥ (2 × 8) THEN 1 ELSE 0;	00250250
4	TEMP[12]+IF X(3) ≥ Y(1,4) THEN 1 ELSE 0;	00250260
5	TEMP[13]+ IF X(2) ≥ I1.[43:3] THEN 1 ELSE 0;	00250270
6	TEMP[14]+IF Y(3,4) ≥ "0" THEN 1 ELSE 0;	00250280
7	TEMP[15]+IF Y(-1.6) ≥ (10/5) THEN 1 ELSE 0;	00250290
8	TEMP[16]+ IF I2.[42:6] ≥ IMAX.[1:3] THEN 1 ELSE 0;	00250300
9	TEMP[17]+ IF IMAX.[45:3] ≥ "" THEN 1 ELSE 0;	00250310
10	TEMP[18]+ IF IMAX.[9:39] ≥ (90IV 2) THEN 1 ELSE 0;	00250320
11	TEMP[19]+IF "AA" ≥ "ZZ" THEN 1 ELSE 0;	00250330
12	TEMP[20]+IF "MMM" ≥ (100 MOD 51) THEN 1 ELSE 0;	00250340
13	TEMP[21]+IF (12+5) ≥ (47-30) THEN 1 ELSE 0;	00250350
14	COMMENT ANSWERS AND OUTPUT;	00250360
15	FILL ANS[*] WITH UCTO, OCTO, OCT1,	00250370
16	OCTO, OCTO, OCTO,	00250380
17	OCT1, OCT1, OCTO,	00250390
18	OCT1, OCTO, OCT1,	00250400
19	OCT1, OCT1, OCT1,	00250410
20	OCT1, OCT0, OCT1,	00250420
21	OCTO, OCT1, OCT1;	00250430
22	CVN+21;	00250440
23	PNO+25;	00250450
24	VERIFY;	00250460
25	END;	00250470
26	PROCEDURE P26; COMMENT THE RELATIONAL OPERATOR (>);	00260000
27	BEGIN	00260010
28	BOOLEAN A, B, C;	00260020
29	REAL H, J, K;	00260030
30	A+ TRUE; B+ FALSE; C+ TRUE; H+ 29/2; J+ 29/2; K+ 29/1;	00260040
31	A+ IF A THEN H>J ELSE B ; TEMP[1]+REAL(A.[47:1]);	00260050
32	A+IF C THEN H>J EQV H>J ELSE B; TEMP[2]+REAL(A.[47:1]);	00260060
33	A+H>J; TEMP[3]+REAL(A.[47:1]);	00260070
34	A+H>J EQV J>H;TEMP[4]+REAL(A.[47:1]);	00260080
35	A+IF A THEN H+J>K OR H>J ELSE C; TEMP[5]+REAL(A.[47:1]);	00260090
36	A+ IF B THEN C ELSE H=J>K; TEMP[6]+REAL(A.[47:1]);	00260100
37	A+H+J>K OR H>K ; TEMP[7]+REAL(A.[47:1]);	00260110
38	A+IF C THEN H>J AND H>J ELSE B ; TEMP[8]+REAL(A.[47:1]);	00260120
39	A+H+K>J AND H>K; TEMP[9]+REAL(A.[47:1]);	00260130
40	A+ IF C THEN NOT H>K ELSE NOT B; TEMP[10]+REAL(A.[47:1]);	00260140
41	A+ NOT H>J; TEMP[11]+REAL(A.[47:1]);	00260150
42	FILL ANS[*] WITH OCTO, OCT1, OCTO, OCT1, OCTO, OCTO, OCTO,	00260160
43	OCTO, OCTO, OCT1, OCT1;	00260170
44	CVN+ 11 ;	00260180
45	PNO+26;	00260190
46	VERIFY	00260200
47	END;	00260210
48	PROCEDURE P27; COMMENT THE RELATIONAL OPERATOR (≠);	00270000
49	BEGIN	00270010
50	BOOLEAN A, B, C;	00270020
51	INTEGER H, J, K ;	00270030
52	A+ TRUE; B+ FALSE; H+ 20; J+ 20; K+ 40; C+ TRUE;	00270040
53	A + IF A THEN H≠J ELSE C; TEMP[1]+ REAL (A.[47:1]);	00270050
54	A+ TRUE;	00270060
55	A+ IF A THEN H≠J EQV H≠J ELSE B; TEMP[2]+ REAL(A.[47:1]);	00270070
56	A+ H ≠ J; TEMP[3]+ REAL (A);	00270080
57	A+H≠J EQV H≠J; TEMP[4]+ REAL (A.[47:1]);	00270090
58	A+ IF A THEN H+J≠K×2 OR H≠J ELSE C;	00270100
59	TEMP[5]+ REAL (A.[47:1]);	00270110
60	A+ IF B THEN A ELSE H + J ≠ K ; TEMP[6]+ REAL (A.[47:1]);	00270120

	A ← H+J/K OR H.[45:1] × J.[45:1]; TEMP[7] ← REAL(A.[47:1]);	00270130
	A ← TRUE;	00270140
	A ← IF A THEN H×J AND H×J ELSE C; TEMP[8] ← REAL(A.[47:1]);	00270150
1	A ← H + K × J AND H × K; TEMP [9] ← REAL (A.[47:1]);	00270160
2	A ← IF A THEN NOT H×K ELSE C ; TEMP[10] ← REAL(A.[47:1]);	00270170
3	A ← NOT H×J; TEMP[11] ← REAL(A.[47:1]);	00270180
4	A ← IF A THEN H.[47:1] × H × (J+2) ELSE FALSE;	00270190
5	TEMP[12] ← REAL(A.[47:1]);	00270200
6	A ← NOT TEMP[10] × TEMP[11]; TEMP[13] ← REAL(A.[47:1]);	00270210
7	A ← (TEMP[10] × TEMP[11] MOD TEMP[11]) × (H +(J×H.[45:3])/2);	00270220
8	TEMP[14] ← REAL (A.[47:1]);	00270230
9	A ← "ABCD" × "" ; TEMP[15] ← REAL(A.[47:1]);	00270240
10	A ← "ABCDEF" × "JKLMNP" ; TEMP[16] ← REAL(A.[47:1]);	00270250
11	FILL ANS[*] WITH OCT0, OCT1, OCT0, OCT1, OCT1, OCT1, OCT0, OCT0,	00270260
12	OCT0, OCT1, OCT0, OCT1, OCT1, OCT0, OCT1, OCT1, OCT1;	00270270
13	CVN ← 16;	00270280
14	PNQ ← 27 ;	00270290
15	VERIFY	00270300
16	END;	00270310
17	PROCEDURE P28; COMMENT LOGICAL OPERATOR NOT	3,5,5,2; 00280000
18	BEGIN	00280010
19	INTEGER IO, IMAX;	00280020
20	ALPHA AA, AB, AC, AD;	00280030
21	BOOLEAN T, F;	00280040
22	BOOLEAN PROCEDURE X(K);	00280050
23	BOOLEAN K;	00280060
24	BEGIN	00280070
25	X ← K AND TRUE;	00280080
26	END;	00280090
27	IO ← 0; IMAX ← 1023; AA ← "A"; AB ← "B"; AC ← "C"; AD ← "D";	00280100
28	T ← TRUE; F ← FALSE;	00280110
29	TEMP[1] ← REAL (NOT TRUE);	00280120
30	TEMP[2] ← REAL (NOT FALSE);	00280130
31	TEMP[3] ← REAL (NOT (BOOLEAN (IMAX)));	00280140
32	TEMP[4] ← REAL (NOT (BOOLEAN (IO)));	00280150
33	TEMP[5] ← REAL (NOT X(TRUE)) ;	00280160
34	TEMP[6] ← REAL (NOT X(FALSE)) ;	00280170
35	TEMP[7] ← REAL (NOT AA < AB) ;	00280180
36	TEMP[8] ← REAL (NOT AA ≤ AA) ;	00280190
37	TEMP[9] ← REAL (NOT AC = AD) ;	00280200
38	TEMP[10] ← REAL (NOT AD ≥ AC) ;	00280210
39	TEMP[11] ← REAL (NOT AD > AC) ;	00280220
40	TEMP[12] ← REAL (NOT AD ≠ AD);	00280230
41	TEMP[13] ← REAL (NOT (IF AA = IMAX THEN TRUE ELSE FALSE));	00280240
42	TEMP[14] ← REAL (NOT T AND F);	00280250
43	TEMP[15] ← REAL (NOT T OR F);	00280260
44	COMMENT *** TEMP[16] ← REAL (NOT T IMP F) ***CHANGE OCT TO TRUE;	00280270
45	TEMP[17] ← REAL (NOT T EQV F);	00280280
46	TEMP[18] ← REAL ( NOT T . [47:1]);	00280290
47	TEMP[19] ← REAL (NOT T . [46:1]);	00280300
48	FOR IO ← 1 STEP 1 UNTIL 19 DO TEMP[IO] ← TEMP[IO].[47:1];	00280310
49	COMMENT ANSWERS AND OUTPUT;	00280320
50	FILL ANS [*] WITH OCT0, OCT1, OCT0,	00280330
51	OCT1, OCT0, OCT1,	00280340
52	OCT0, OCT0, OCT1,	00280350
53	OCT0, OCT0, OCT1,	00280360
54	OCT1, OCT0, OCT0,	00280370
55	OCT0, OCT1, OCT0,	00280380
56	OCT1;	00280390
57	CVN ← 19; PNQ ← 28; VERIFY	00280400

END;  
PROCEDURE P29; COMMENT THE LOGICAL OPERATOR AND ;  
BEGIN

00280410  
00290000  
00290010

1 BOOLEAN A, B;  
2 INTEGER H, J;  
3 BOOLEAN PROCEDURE BAND(BANDB);

00290020  
00290030  
00290040

4 BOOLEAN BANDB;  
5 BEGIN  
6 BAND+ BANDB OR TRUE;

00290050  
00290060  
00290070

7 END;  
8 INTEGER PROCEDURE TWOBAND(TWOB);  
9 INTEGER TWOB;

00290080  
00290090  
00290100

10 BEGIN  
11 TWOBAND+ TWOB+5;  
12 END;

00290110  
00290120  
00290130

13 A+ TRUE; B+ FALSE; H+ 14; J+ 7;  
14 A+ TRUE AND FALSE; TEMP[1]+ REAL(A.[47:1]);  
15 A+ TRUE AND NOT TRUE; TEMP[2]+ REAL(A.[47:1]);  
16 A+ TRUE AND TRUE AND TRUE; TEMP[3]+ REAL(A.[47:1]);  
17 A+ B AND B; TEMP[4]+ REAL(A.[47:1]);  
18 A+ B AND NOT B; TEMP[5]+ REAL(A.[47:1]);  
19 A+ A AND B AND B; TEMP[6]+ REAL(A.[47:1]);  
20 A+ BAND(TRUE) AND BAND(FALSE); TEMP[7]+ REAL(A.[47:1]);  
21 A+ BAND(A) AND NOT BAND(B); TEMP[8]+ REAL(A.[47:1]);  
22 A+ BAND(TRUE) AND BAND(A) AND NOT A; TEMP[9]+ REAL(A.[47:1]);  
23 A+ H+J>TWOBAND(11) AND H>J, TEMP[10]+ REAL(A.[47:1]);  
24 A+ H-J>J AND NOT J>H; TEMP[11]+ REAL(A.[47:1]);

00290140  
00290150  
00290160  
00290170  
00290180  
00290190  
00290200  
00290210  
00290220  
00290230  
00290240  
00290250

25 A+ H+J>H AND H>TWOBAND(5) AND TWOBAND(0)< TWOBAND(1);  
26 TEMP[12]+ REAL(A.[47:1]);  
27 A+ (TRUE AND TRUE OR TRUE) AND (B AND A);  
28 TEMP[13]+ REAL(A.[47:1]);  
29 A+ (H-J>J AND NOT H>J) AND (BAND(A) OR NOT TWOBAND(3)>H);  
30 TEMP[14]+ REAL(A.[47:1]);

00290260  
00290270  
00290280  
00290290  
00290300  
00290310

31 A+ (TRUE AND FALSE) AND (H+J>H) AND (BAND(A) AND NOT H<  
32 TWOBAND(0)); TEMP[15]+ REAL(A.[47:1]);  
33 A+ H.[45:3]>H.[45:2] AND J.[45:3] ≠ J.[45:1];  
34 TEMP[16]+ REAL(A.[47:1]);  
35 A+H.[45:3]> TWOBAND(5) AND NOT J.[45:1]>0 ;  
36 TEMP[17]+ REAL(A.[47:1]);

00290320  
00290330  
00290340  
00290350  
00290360  
00290370

37 A+H.[45:1] ≠ 0 AND J.[45:3]>0 AND B; TEMP[18]+ REAL(A.[47:1]);  
38 FILL ANS[\*] WITH OCT0, OCT0, OCT1, OCT0, OCT0, OCT0, OCT1,  
39 OCT0, OCT1, OCT1, OCT0, OCT1, OCT0,  
40 OCT0, OCT0, OCT1, OCT0, OCT0;

00290380  
00290390  
00290400

41 CVN+ 18 ;  
42 PND+ 29 ;  
43 VERIFY

00290410  
00290420  
00290430  
00290440

44 END;  
45 PROCEDURE P30; COMMENT THE LOGICAL OPERATOR OR;  
46 BEGIN

00290450  
00300000  
00300010

47 BOOLEAN A, B;  
48 INTEGER H, J;  
49 BOOLEAN PROCEDURE ONEOR (PARA1);  
50 BOOLEAN PARA1;  
51 BEGIN

00300020  
00300030  
00300040  
00300050  
00300060

52 ONEOR+ TRUE AND PARA1; END;  
53 INTEGER PROCEDURE TWOOR (PARA2);  
54 INTEGER PARA2;

00300070  
00300080  
00300090

55 BEGIN  
56 TWOOR+ PARA2+2 ; END;  
57 A+ TRUE ; B+ FALSE ; H+ 14 ; J+ 7;

00300100  
00300110  
00300120

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A ← TRUE OR FALSE; TEMP[1] ← REAL (A);                                00300130
A ← TRUE OR NOT TRUE; TEMP[2] ← REAL(A,[47:1]);                        00300140
A ← TRUE AND TRUE OR TRUE; TEMP[3] ← REAL (A) ;                       00300150
A ← B OR B ; TEMP[4] ← REAL (A,[47:1]);                                00300160
A ← A OR NOT B ; TEMP [5] ← REAL (A,[47:1]);                          00300170
A ← A AND B OR B ; TEMP [6] ← REAL (A,[47:1]); A ← TRUE;              00300180
A ← ONEOR (A) OR ONEOR (B); TEMP[7] ← REAL (A,[47:1]);                00300190
A ← ONEOR (A) OR NOT ONEOR (A); TEMP[8] ← REAL(A,[47:1]);             00300200
A ← ONEOR (B) AND ONEOR (A) OR ONEOR(B);                               00300210
TEMP[9] ← REAL (A,[47:1]);                                             00300220
A ← H+J<TWOOR(3) OR H<J; TEMP[10] ← REAL (A);                          00300230
A ← H=J/J OR NOT H>J; TEMP[11] ← REAL (A,[47:1]);                     00300240
A ← H+J>H AND H>J OR J<H ; TEMP [12] ← REAL (A);                     00300250
A ← (TRUE AND TRUE OR TRUE) OR (B OR B);                              00300260
TEMP[13] ← REAL (A,[47:1]);                                            00300270
A ← (H=J ≠ J OR NOT H>J) OR (ONEOR (A) OR NOT H >                     00300280
TWOOR(2)); TEMP[14] ← REAL (A,[47:1]);                                00300290
A ← (TRUE OR FALSE ) AND (H + J > H) OR ( H > J ) ;                  00300300
TEMP[15] ← REAL (A,[47:1]);                                             00300310
A ← H.[45:3] > H.[45:2] OR J.[45:3] ≠ J.[45:1];                       00300320
TEMP[16] ← REAL (A,[47:1]);                                             00300330
A ← H. [45:3] > TWOOR(1) OR NOT J.[45:1] > 0;                          00300340
TEMP[17] ← REAL(A,[47:1]);                                              00300350
A ← H.[45:1] ≠ 0 AND J.[45:3] > 0 OR B;                                00300360
TEMP[18] ← REAL(A,[47:1]);                                              00300370
FILL ANS[*] WITH OCT1, OCT1, OCT1, OCT0, OCT1, OCT0, OCT1, OCT1,      00300380
OCT0, OCT0, OCT0, OCT1, OCT1, OCT1, OCT1, OCT1, OCT1, OCT1,          00300390
OCT1, OCT1;                                                            00300400
CVN ← 18 ;                                                              00300410
PND ← 30 ;                                                              00300420
VERIFY                                                                    00300430
END;                                                                      00300440
PROCEDURE P31; COMMENT LOGICAL OPERATOR IMP                               3.5.5.2; 00310000
BEGIN
INTEGER IO, I1, IN1, I2, IN2, IMAX, IMIN;                                00310010
REAL R, RR, RRR;                                                         00310020
ALPHA AA, AB;                                                             00310030
BOOLEAN B0, B1;                                                           00310040
REAL PROCEDURE X(K);                                                      00310050
REAL K;                                                                    00310060
BEGIN                                                                      00310070
X ← K + (23/10);                                                         00310080
END;                                                                        00310090
INTEGER PROCEDURE Y(L);                                                    00310100
INTEGER L;                                                                  00310110
BEGIN                                                                      00310120
Y ← L + 5;                                                                00310130
END;                                                                        00310140
BOOLEAN PROCEDURE Z(M);                                                    00310150
BOOLEAN M;                                                                  00310160
BEGIN                                                                      00310170
Z ← M AND TRUE;                                                         00310180
END;                                                                        00310190
IO ← 0; I1 ← 1; IN1 ← -1; I2 ← 2; IN2 ← -2;                                00310200
IMAX ← 1023; IMIN ← -1023;                                                00310210
R ← 11/10; RR ← 22/10; RRR ← 33/10;                                       00310220
AA ← "A"; AB ← "B";                                                       00310230
B0 ← FALSE; B1 ← TRUE;                                                    00310240
TEMP[1] ← REAL(TRUE IMP FALSE);                                           00310250
TEMP[ 1] ← TEMP[ 1],[47:1];                                               00310260
TEMP[ 1] ← TEMP[ 1],[47:1];                                               00310270

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	TEMP[2]+REAL (FALSE IMP TRUE);	00310280
	TEMP[ 2]+ TEMP[ 2].[47:1];	00310290
	TEMP[3]+ REAL (FALSE IMP FALSE);	00310300
1	TEMP[ 3]+ TEMP[ 3].[47:1];	00310310
2	TEMP[4]+ REAL (TRUE IMP TRUE);	00310320
3	TEMP[04]+ TEMP[ 4].[47:1];	00310330
4	TEMP[5]+ REAL (TRUE IMP B1);	00310340
5	TEMP[05]+ TEMP[05].[47:1];	00310350
6	TEMP[6]+REAL (FALSE IMP Z(TRUE));	00310360
7	TEMP[06]+ TEMP[ 6].[47:1];	00310370
8	TEMP[7]+REAL (FALSE IMP IN1 < IN2);	00310380
9	TEMP[07]+ TEMP[ 7].[47:1];	00310390
10	TEMP[8]+ REAL(TRUE IMP (IF I2<3 THEN TRUE ELSE FALSE));	00310400
11	TEMP[ 8]+ TEMP[ 8].[47:1];	00310410
12	TEMP[9]+ REAL (FALSE IMP BOOLEAN (I0.[47:1]));	00310420
13	TEMP[ 9]+ TEMP[ 9].[47:1];	00310430
14	TEMP[10]+REAL (B1 IMP BOOLEAN(I1));	00310440
15	TEMP[10]+ TEMP[10].[47:1];	00310450
16	TEMP[11]+ REAL (B0 IMP Z(FALSE));	00310460
17	TEMP[11]+ TEMP[11].[47:1];	00310470
18	TEMP[12]+ REAL (B0 IMP R ≥ AB);	00310480
19	TEMP[12]+ TEMP[12].[47:1];	00310490
20	TEMP[13]+ REAL (B1 IMP B0 EQV B1);	00310500
21	TEMP[14]+ REAL(B1 IMP BOOLEAN (IMAX.[47:1]));	00310510
22	TEMP[14]+ TEMP[14].[47:1];	00310520
23	TEMP[15]+ REAL (Z(TRUE) IMP BOOLEAN (Y(-4)));	00310530
24	TEMP[15]+ TEMP[15].[47:1];	00310540
25	TEMP[16]+REAL (Z(FALSE) IMP (RR < X(1)));	00310550
26	TEMP[16]+ TEMP[16].[47:1];	00310560
27	TEMP[17]+REAL (Z(FALSE) IMP B0 OR BOOLEAN (I0));	00310570
28	TEMP[17]+ TEMP[17].[47:1];	00310580
29	TEMP[18]+ REAL (Z(TRUE) IMP BOOLEAN (IMAX.[47:1]));	00310590
30	TEMP[18]+ TEMP[18].[47:1];	00310600
31	TEMP[19]+ REAL (( B0 IMP BOOLEAN(I0)) IMP (NOT B1 IMP B0));	00310610
32	TEMP[20]+ REAL (I2 < I1 IMP NOT B1);	00310620
33	TEMP[20]+ TEMP[20].[47:1];	00310630
34	TEMP[21]+ REAL ((RRR≤RR) IMP BOOLEAN (IMAX.[39:1]));	00310640
35	TEMP[21]+ TEMP[21].[47:1];	00310650
36	TEMP[22]+ REAL (B0 AND BOOLEAN (I0) IMP NOT B1 OR B0);	00310660
37	TEMP[22] +TEMP[22].[47:1];	00310670
38	TEMP[23]+ REAL (B1 IMP BOOLEAN (IMIN.[41:1]) IMP NOT B0);	00310680
39	TEMP[23]+ TEMP[23].[47:1];	00310690
40	TEMP[24]+ REAL ( BOOLEAN ( I0.[45:1]) IMP B0.[40:1]);	00310700
41	TEMP[24]+ TEMP[24].[47:1];	00310710
42	COMMENT ANSWERS AND OUTPUT;	00310720
43	FILL ANS[*] WITH OCT0, OCT1, OCT1,	00310730
44	OCT1, OCT1, OCT1,	00310740
45	OCT1, OCT1, OCT1,	00310750
46	OCT1, OCT1, OCT1,	00310760
47	OCT0, OCT1, OCT1,	00310770
48	OCT1, OCT1, OCT1,	00310780
49	OCT1, OCT1, OCT1,	00310790
50	OCT1, OCT1, OCT1;	00310800
51	CVN+29;	00310810
52	PNO+31;	00310820
53	VERIFY	00310830
54	END;	00310840
55	PROCEDURE P32;COMMENT 3.5.5.2 EQV;	00320000
56	BEGIN	00320010
57	BOOLEAN A,B,C,D;	00320020

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A+TRUE; B+FALSE; C+TRUE; D+FALSE; 00320030
TEMP[1] ← IF A EQV C THEN 1 ELSE 0; 00320040
TEMP[2] ← IF A EQV D THEN 1 ELSE 0; 00320050
TEMP[3] ← IF B EQV C THEN 1 ELSE 0; 00320060
TEMP[4] ← IF B EQV D THEN 1 ELSE 0; 00320070
TEMP[5] ← IF B EQV(A EQV(B EQV C)) THEN 1 ELSE 0; 00320080
TEMP[6] ← IF (B OR C) EQV A THEN 1 ELSE 0; 00320090
FILL ANS[*] WITH OCT1, OCT0, OCT0, OCT1, OCT1, OCT1; 00320100
CVN ← 6; PNO ← 32; VERIFY 00320110
END; 00320120
PROCEDURE P33; COMMENT SIMPLE DESIGNATION EXPRESSION 3.6.3.1 00330000
NDV 13. 1962. KM.; 00330010
BEGIN 00330020
LABEL A1, A2, A3, A4, A5, A6, A7, A11, A22, A33, A34, A44, A45, A46, 00330030
A48, A47, C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, 00330040
C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, 00330050
C27, C28, D1, D2, D3, D4, D5, D6; 00330060
LABEL B1, B2, B3, B4, B5, B6, B7, B8; 00330070
REAL A, B; 00330080
INTEGER H, C; 00330090
BOOLEAN D, E; 00330100
SWITCH SIMDESIG ← A1, A2, A3, A4, A5, A6, A7; 00330110
SWITCH EXTRA ← B1, B2, B3, B4, B5, B6, B7, B8; 00330120
SWITCH DESIGSTAT FORWARD; 00330130
INTEGER PROCEDURE A55(A55A); INTEGER A55A; FORWARD; 00330140
SWITCH DESIGSTAT ← A11, (A22), EXTRA [A+B], IF D THEN A33 00330150
ELSE A34, IF D THEN EXTRA [2+(3 MOD 2)] 00330160
ELSE DESIGSTAT [7], IF D THEN A44 ELSE IF 00330170
E THEN A45 ELSE A46, C26, 00330180
EXTRA [(A55(3)+H.[47:1] + ENTIER (A))]; 00330190
INTEGER PROCEDURE A55(A55A); 00330200
INTEGER A55A ; 00330210
BEGIN 00330220
A55 ← A55A + 1; 00330230
END; 00330240
A ← 3/2; B ← 7/4; D ← TRUE ; E ← TRUE; H ← 77 ; C ← 1; 00330250
GO TO A1; TEMP[C] ← 0; C ← C+1; GO TO D1; 00330260
A1: TEMP[C] ← 2; C ← C+1; 00330270
D1: GO TO (A2); TEMP[C] ← 0; C ← C+1; GO TO D2; 00330280
A2: TEMP[C] ← 3; C ← C+1; 00330290
D2: GO TO SIMDESIG[4+7-B]; TEMP[C] ← 0; C ← C+1; GO TO D3; 00330300
A3: TEMP[C] ← 4; C ← C+1; 00330310
D3: GO TO SIMDESIG[ B + B + B - A ]; TEMP[C] ← 0; C ← C+1; GO TO D4; 00330320
A4: TEMP[C] ← 5; C ← C+1; 00330330
D4: GO TO SIMDESIG [ H.[45:3] ]; TEMP[C] ← 0; C ← C+1; GO TO D5; 00330340
A5: TEMP[C] ← 6; C ← C+1; 00330350
D5: GO TO SIMDESIG [ A55(5) ]; TEMP[C] ← 0; C ← C+1; GO TO D6; 00330360
A6: TEMP[C] ← 7; C ← C+1; 00330370
D6: GO TO SIMDESIG [(H.[45:3] × A) + B + A55(-3)]; TEMP[C] ← 0; 00330380
C ← C+1; 00330390
A7: GO TO ( IF D THEN C1 ELSE C2); TEMP[C] ← 0; C ← C+1; GO TO C3; 00330400
C1: TEMP[C] ← 8; C ← C+1; GO TO C3; 00330410
C2: TEMP[C] ← 88; C ← C+1; 00330420
C3: GO TO ( IF D THEN (C4) ELSE (C5)); TEMP[C] ← 0; C ← C+1; GO TO C6; 00330430
C4: TEMP[C] ← 9; C ← C+1; GO TO C6; 00330440
C5: TEMP[C] ← 99; C ← C+1; 00330450
C6: GO TO (IF D THEN (IF E THEN C7 ELSE C8) ELSE C9); TEMP[C] ← 0; 00330460
C ← C+1; GO TO C10; 00330470
C7: TEMP[C] ← 10; C ← C+1; GO TO C10 ; 00330480
C8: TEMP[C] ← 100; C ← C+1; GO TO C10; 00330490

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C9: TEMP[C]+111; C+C+1; 00330500
C10: E+FALSE; GO TO (IF D THEN (IF E THEN C12 ELSE C11 ) ELSE 00330510
      (IF E THEN C13 ELSE (IF E THEN C14 ELSE C15 ))); 00330520
      TEMP[C]+0; C+C+1; GO TO C16; 00330530
C11: TEMP[C]+11; C+C+1; GO TO C16; 00330540
C12: TEMP[C]+112; C+C+1; GO TO C16; 00330550
C13: TEMP[C]+113; C+C+1; GO TO C16; 00330560
C14: TEMP[C]+114; C+C+1; GO TO C16; 00330570
C15: TEMP[C]+115; C+C+1; 00330580
C16: GO TO (IF D THEN DESIGSTAT[B + B -A -A] ELSE C17);TEMP[C]+0; 00330590
      C+ C+1; GO TO C18 ; 00330600
A11: TEMP[C]+12;C+C+1; GO TO C18; 00330610
C17: TEMP[C]+121; C+C+1; 00330620
C18: GO TO (IF D THEN (IF D THEN DESIGSTAT [H.[45:2]]ELSE 00330630
      C19) ELSE C20); TEMP[C]+0; C+C+1; GO TO C21; 00330640
A22: TEMP[C]+13; C+C+1; GO TO C21; 00330650
C19: TEMP[C]+131; C+C+1; GO TO C21; 00330660
C20: TEMP[C] +132; C+C+1; 00330670
C21: GO TO (IF D THEN (IF E THEN C22 ELSE DESIGSTAT [A55(2)]) ELSE 00330680
      (IF E THEN C23 ELSE (IF E THEN C24 ELSE C25))); 00330690
      TEMP[C]+0; C+C+1; GO TO C26; 00330700
B3: TEMP[C]+14; C+C+1; GO TO C26; 00330710
C22: TEMP[C]+141; C+C+1; GO TO C26; 00330720
C23: TEMP[C]+142; C+C+1; GO TO C26; 00330730
C24: TEMP[C]+ 143; C+C+1; GO TO C26; 00330740
C25: TEMP[C] + 144; C+C+1; 00330750
C26: GO TO DESIGSTAT[H.[42:6]x(A+B) - A55(37 )]; 00330760
      TEMP[C]+0; C+C+1; GO TO C27; 00330770
A33: TEMP[C]+15; C+C+1; GO TO C27; 00330780
A34: TEMP[C]+151; C+C+1; 00330790
C27: GO TO EXTRA [5]; TEMP[C]+0; C+C+1; GO TO C28; 00330800
B5: TEMP[C]+16; C+C+1; GO TO C26; 00330810
A48: TEMP[C]+161; C+C+1; 00330820
C28: GO TO DESIGSTAT[8]; TEMP[C]+0; C+ C+1; GO TO A47; 00330830
B6: TEMP[C]+ 17; GO TO A47; 00330840
A47: B1: B2: B4: B8: B7: A44:A45: A46: 00330850
      FILL ANS [*] WITH OCT2, OCT3, OCT4, OCT5, OCT6, OCT7, 00330860
      OCT10, OCT11,OCT12, OCT13, OCT14, 00330870
      OCT15, OCT16, OCT17, OCT20, OCT21; 00330880
CVN+16; 00330890
PNO+33; 00330900
VERIFY 00330910
END; 00330920
PROCEDURE P34; COMMENT GENERAL DESIGNATION EXPRESSION 3.6.3.2 00340000
      NOV 15 1962. KM.; 00340010
BEGIN 00340020
      LABEL X1, X2, X3, X4, X5, X6, X47, Y1, Y2, Y3, Y4, Y5, Y6, 00340030
      Y7, Y8, Y9, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, 00340040
      Y18, Y19, Y20; 00340050
      INTEGER H,K; 00340060
      REAL A,B,C; 00340070
      BOOLEAN B,E; 00340080
      SWITCH GENERAL FORWARD ; 00340090
      SWITCH GEN FORWARD ; 00340100
      SWITCH GENDESIG FORWARD; 00340110
      REAL PROCEDURE FUN(AAA); REAL AAA; FORWARD; 00340120
      SWITCH GENDESIG + GEN[A+B], IF D THEN GENERAL[8/2] ELSE 00340130
      GEN[C+1], GENDESIG[4], GEN[H.[46:2]]; 00340140
      SWITCH GEN+ GENERAL[3 MOD 2], GENERAL[FUN(17/4)], 00340150
      GENERAL[(A+B x( H/2) +( 3 DIV 2))]; 00340160

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	SWITCH GENERAL + X1, X2, X3, X4, X5, X6;	00340170
	REAL PROCEDURE FUN(AAA);	00340180
	REAL AAA;	00340190
1	BEGIN	00340200
2	FUN+ AAA/2;	00340210
3	END;	00340220
4	H+7; A+ 3/4; B+ 7/20; C+ 9/10; D+ TRUE; E+ FALSE; K+ 1;	00340230
5	GO TO IF D THEN Y1 ELSE Y2; TEMP[K]+REAL(D); K+K+1; GO TO Y3;	00340240
6	Y1: TEMP[K]+ 1; K+K+1; GO TO Y3;	00340250
7	Y2: TEMP[K]+ 11; K+K+1;	00340260
8	Y3: GO TO IF E THEN Y4 ELSE GENDESIG[A]; TEMP[K]+0;K+K+1; GO TO Y5;	00340270
9	Y4: TEMP[K]+ 21; K+ K+1; GO TO Y5;	00340280
10	X1: TEMP[K]+ 2 ; K+K+1;	00340290
11	Y5: GO TO IF D THEN GENDESIG[A+1] ELSE Y6; TEMP[K]+0; K+K+1;	00340300
12	GO TO Y7;	00340310
13	X4: TEMP[K]+3 ; K+K+1; GO TO Y7;	00340320
14	Y6: TEMP[K]+ 31; K+K+1;	00340330
15	Y7: GO TO IF D THEN (IF E THEN Y8 ELSE Y9) ELSE Y10; TEMPI[K]+0; K+K+1;	00340340
16	GO TO Y11;	00340350
17	Y8: TEMP[K]+41; K+ K+1; GO TO Y11;	00340360
18	Y9: TEMP[K]+4; K+ K+1; GO TO Y11;	00340370
19	Y10: TEMP[K]+42; K+ K+1;	00340380
20	Y11: GO TO IF E THEN Y12 ELSE IF E THEN Y13 ELSE Y14;	00340390
21	TEMP[K]+0; K+K+1; GO TO Y15;	00340400
22	Y12: TEMP[K]+51; K+K+1; GO TO Y15;	00340410
23	Y13: TEMP[K]+52; K+K+1; GO TO Y15;	00340420
24	Y14: TEMP[K]+5 ; K+ K+1;	00340430
25	Y15: GO TO IF E THEN GENERAL[5] ELSE IF E THEN GENERAL[6] ELSE	00340440
26	GENDESIG[3]; TEMP[K]+0; K+K+1; GO TO Y16;	00340450
27	X5: TEMP[K]+61; K+K+1; GO TO Y16;	00340460
28	X6: TEMP[K]+62; K+K+1; GO TO Y16;	00340470
29	X3: TEMP[K]+6 ; K+K+1;	00340480
30	Y16: D+FALSE; GO TO IF E THEN (IF E THEN Y17 ELSE Y18) ELSE IF E THEN	00340490
31	(IF D THEN Y19 ELSE Y20) ELSE GENDESIG[H.[46:2] -1];	00340500
32	TEMP[K]+0 ; GO TO X47;	00340510
33	Y17: TEMP[K]+71; GO TO X47;	00340520
34	Y18: TEMP[K]+72; GO TO X47;	00340530
35	Y19: TEMP[K]+73; GO TO X47;	00340540
36	Y20: TEMP[K]+ 74; GO TO X47;	00340550
37	X2: TEMP[K]+7;	00340560
38	X47:	00340570
39	FILL ANS [*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7;	00340580
40	CVN+ 7;	00340590
41	PNO+ 34;	00340600
42	VERIFY	00340610
43	END;	00340620
44	PROCEDURE P35; COMMENT SUBSCRIPT EXPRESSION OF A SWITCH DESIGNATOR	00350000
45	3.6.4, NOV, 15 1962, KM;	00350010
46	BEGIN	00350020
47	LABEL X1, X2, X3, X4, X5, X6, F1, P2, P3, P4, P5, P6, P7,	00350030
48	P8, P9, P10, P11, P44;	00350040
49	REAL A,B,C; BOOLEAN K,L;	00350050
50	INTEGER F,G,H,Q;	00350060
51	SWITCH SUBS+ X1,X2,X3,X4,X5, X6 ;	00350070
52	INTEGER PROCEDURE SUBSVAL(SWICHVAL);	00350080
53	INTEGER SWICHVAL;	00350090
54	BEGIN	00350100
55	SUBSVAL+SWICHVAL + 1;	00350110
56	END ;	00350120
57	A+2; B+4/3; C+ 2/1; F+77; G+ 55; H+ 21; K+ TRUE; Q+1;	00350130



	GO TO L+ FALSE;	00350140
	IF K OR L THEN SUBS[ 2*C -(A+B)] ELSE P1; TEMP[Q]+0;	00350150
	Q+Q+1; GO TO P2;	00350160
1	X1: TEMP[Q]+1; Q+Q+1; GO TO P2;	00350170
2	P1: TEMP[Q]+11; Q+Q+1; GO TO P3;	00350180
3	P2: GO TO IF L THEN P3 ELSE SUBS[ (SUBSVAL(3) MOD A) + A];	00350190
4	Q+Q+1; GO TO P4;	00350200
5	P3: TEMP[Q]+21; Q+Q+1; GO TO P4;	00350210
6	X2: TEMP[Q]+2; Q+Q+1;	00350220
7	P4: GO TO IF K THEN SUBS["AB" MOD "A" + H.[43:2]] ELSE P5;	00350230
8	TEMP[Q]+0 ; Q+Q+1; GO TO P6;	00350240
9	P5: TEMP[Q]+0 ; Q+Q+1; GO TO P6;	00350250
10	X3: TEMP[Q]+3; Q+Q+1; GO TO P6;	00350260
11	P6: GO TO IF K AND NOT L THEN SUBS["A"-SUBSVAL(12)] ELSE P7;	00350270
12	TEMP[Q]+0 ; Q+Q+1; GO TO P8;	00350280
13	P7: TEMP[Q]+41; Q+Q+1; GO TO P8;	00350290
14	X4: TEMP[Q] + 4; Q+Q+1;	00350300
15	P8: GO TO IF L THEN P9 ELSE SUBS[H.[42:6] +((-A)* 10) +4];	00350310
16	TEMP[Q] + 0 ; Q+Q+1; GO TO P10;	00350320
17	P9: TEMP[Q]+ 51; Q+Q+1; GO TO P10;	00350330
18	X5: TEMP[Q]+ 5; Q+Q+1;	00350340
19	P10: GO TO IF L THEN P11 ELSE SUBS[SUBSVAL(A.[45:3])+3];	00350350
20	TEMP[Q]+0 ; GO TO P44;	00350360
21	P11: TEMP[Q]+ 61; GO TO P44;	00350370
22	X6: TEMP[Q]+ 6 ;	00350380
23	P44:	00350390
24	FILL ANS [*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6 ;	00350400
25	CVN+6 ;	00350410
26	PND+35;	00350420
27	VERIFY	00350430
28	END;	00350440
29	PROCEDURE P36; COMMENT COMPOUND STATEMENT;	00360000
30	BEGIN LABEL L1,L2,L3,L4,L5,L6;	00360010
31	BEGIN COMMENT DUMMY STATEMENT TEMP[1]+6 END; END;	00360020
32	BEGIN END;	00360030
33	BEGIN	00360040
34	BEGIN BEGIN BEGIN TEMP[2] + 2 END END END;	00360050
35	TEMP[3] +3; GO TO L1;	00360060
36	L2: TEMP[5] + TEMP[4]; GO TO L3;	00360070
37	BEGIN	00360080
38	L1: TEMP[4] + TEMP[3]; GO TO L2;	00360090
39	L3: END	00360100
40	END;	00360110
41	BEGIN	00360120
42	GO TO L4 ; L5: GO TO L6;	00360130
43	BEGIN	00360140
44	L4: TEMP[6] + 6; GO TO L5	00360150
45	END;	00360160
46	L6: END;	00360170
47	FILL ANS[*] WITH OCT0, OCT2, OCT3, OCT3, OCT3, OCT6;	00360180
48	CVN + 6; PND + 36; VERIFY	00360190
49	END;	00360200
50	PROCEDURE P37; COMMENT 4,1 BLOCK, 5,0,2 DECLARATION, C,C,Z, 11-19-62;	00370000
51	BEGIN INTEGER I1, I2, I3; REAL R1, R2, R3; BOOLEAN B1, B2, B3;	00370010
52	ARRAY A1[1:3], A2[1:3,1:3], A3[1:3,1:3,1:3]; LABEL L1, L2, L3;	00370020
53	L1: B1 + B2 + B3 + TRUE ; R1 + 1; R2 + 2; R3 + 3;	00370030
54	FOR I1 + 1 STEP 1 UNTIL 3 DO	00370040
55	L2: BEGIN A1[I1] + I1; FOR I2 + 1 STEP 1 UNTIL 3 DO	00370050
56	BEGIN A2[I1,I2] + I1+I2; FOR I3+1 STEP 1 UNTIL 3 DO	00370060
57	A3[I1,I2,I3] + A2[I1,I2] + I3;	00370070

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L3:END                                00370080
END;                                    00370090
I1 + 1; I2 + 2; I3 + 3; COMMENT INITIALIZATION DONE; 00370100
BEGIN COMMENT RE-DECLARATION OF LABEL AS BOOLEAN VARIABLE; 00370110
BOOLEAN L1; L1 + B1; IF L1 THEN TEMP[1] + 1 00370120
END;                                     00370130
BEGIN COMMENT USE OF GLOBAL VARIABLES AND RE-DECLARATION OF AN 00370140
ARRAY AS A LABEL; LABEL A3,L1;           00370150
IF R1 ≤ R2 THEN GO TO L1 ELSE GO TO A3 ; 00370160
L1:TEMP[2] + R3;                          00370170
A3:END;                                    00370180
BEGIN COMMENT SWITCH DECLARATIONS; LABEL L1, L2, L3; SWITCH SW1 00370190
+ L1, L2, L3; GO TO SW1[2]; GO TO L1; L2: TEMP[3] + 64; 00370200
L1: L3: END;                               00370210
BEGIN COMMENT NESTED RE-DECLARATIONS; INTEGER I2; I2 + I3; 00370220
BEGIN INTEGER I1; I1 + I2 + 1;           00370230
BEGIN INTEGER I2; I2 + I1 + 1;         00370240
BEGIN INTEGER I1; I1 + I2 + 1; TEMP[4] + I1 END; 00370250
TEMP[5] + I2                             00370260
END; TEMP[6] + I1                         00370270
END; TEMP[7] + I2                         00370280
END; TEMP[8] + I2 ; TEMP[9] + I1 ;       00370290
BEGIN COMMENT SPOT-CHECK OF ARRAY VALUES; ARRAY B1[I1:I3], 00370300
B2[I1:I3, I1:I3], B3[I1:I3, I1:I3, I1:I3]; INTEGER R1, R2, R3; 00370310
FOR R1 + 1 STEP 1 UNTIL 3 DO             00370320
BEGIN B1[R1] + A1[R1]; FOR R2 + 1 STEP 1 UNTIL 3 DO 00370330
BEGIN B2[R1, R2] + A2[R1, R2]; FOR R3 + 1 STEP 1 UNTIL 00370340
3 DO B3[R1, R2, R3] + A3[R1, R2, R3] 00370350
END                                       00370360
END; TEMP[10] + B1[3]; TEMP[11] + B2[3, 3]; 00370370
TEMP[12] + B3[3, 3, 3];                 00370380
END; TEMP[13] + R1; TEMP[14] + R2; TEMP[15] + R3; 00370390
IF B1 THEN TEMP[16] + 1; IF B2 THEN TEMP[17] + 1; 00370400
IF B3 THEN TEMP[18] + 1;                00370410
FILL ANS[*] WITH OCT1, OCT3, OCT100, OCT6, OCT5, OCT4, OCT3, 00370420
OCT2, OCT1, OCT3, OCT6, OCT11, OCT1, OCT2, 00370430
OCT3, OCT1, OCT1, OCT1;                 00370440
CVN + 18 ; PNO + 37 ;                   00370450
VERIFY                                    00370460
END;                                       00370470
PROCEDURE P38; COMMENT ASSIGNMENT STATEMENT JW 30 OCT 63; 00380000
BEGIN                                     00380010
REAL A;                                   00380020
INTEGER J, K, M;                          00380030
BOOLEAN S, T;                              00380040
ALPHA Z;                                   00380050
ARRAY X[1:3];                              00380060
REAL PROCEDURE KORK;                       00380070
BEGIN                                       00380080
TEMP[12] + KORK + TEMP[10]                00380090
END;                                       00380100
TEMP[1] + 27/2;                            00380110
TEMP[2] + 162;                             00380120
Z + "WEIZIR";                              00380130
TEMP[3] + Z;                               00380140
M + 7;                                      00380150
T + TRUE;                                   00380160
S + M < TEMP[2] AND T;                     00380170
TEMP[4] + IF S THEN 1 ELSE 0;              00380180
J + 67/5;                                  00380190

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TEMP[5] ← J;
K ← TEMP[1];
TEMP[6] ← K;
TEMP[7] ← TEMP[8] + TEMP[9] + TEMP[1];
TEMP[10] ← X[1] + 21/2;
TEMP[11], [45:3] ← M., [45:3];
A ← KORK;
FILL ANS[*] WITH OCT1010000000000154, OCT242, OCT662531713151,
OCT1, OCT15, OCT16, OCT1010000000000154, OCT1010000000000154,
OCT1010000000000154, OCT1010000000000124, OCT7,
OCT1010000000000124;
CVN ← 12;
PNO ← 38;
VERIFY

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END;
PROCEDURE P39; COMMENT GO TO STATEMENT WITHOUT PROCEDURES AND SWITCHES,
4.3, WIT, 11-9-62, THIS PROCEDURE DOES NOT USE
NORMAL TESTING MECHANISMS OF TEMP, ANS, VERIFY =

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THE PATH THROUGH THIS PROCEDURE IS AS FOLLOWS:
L1 L2 L3 L4 L5 L6 L7 L8 L9 L1000390040
L11 L12 L13 L14 L15 L16 L17 L18 L19 L2000390050
L21 L22 L23 L24 L25 L26 L27 L28 L29 L3000390060
L31 L32 L33 L34 L35 L36 L37 L38 L39 L4000390070
L41 L42 L43 L44 L45 L46 L47 L48 L49 L5000390080
L51 L52 L53 L54 L55 L56 L57 L58 L59 L6000390090
L61 L62 L63 L64 L65 L66 L67 L68 L69 L7000390100
L71 L72 L73 L74;

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BEGIN LABEL
L1, L2, L3, L4, L5, L6, L7, L8, L9, L11, L12, L13, L14, L15, L16,
L17, L18, L19, L20, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32,
L33, L35, L36, L37, L38, L39, L41, L42, L44, L45, L46, L47, L48, L49, L50,
L52, L53, L54, L55, L56, L57, L58, L59, L62, L63, L64, L67, L70, L71, L72,
L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87,
L88, L89, L90, L91;
MONITOR FNOK(L1, L2, L3, L4, L5, L6, L7, L8, L9, L11, L12, L13, L14, L15, L16,
L17, L18, L19, L20, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32,
L33, L35, L36, L37, L38, L39, L41, L42, L44, L45, L46, L47, L48, L49, L50,
L52, L53, L54, L55, L56, L57, L58, L59, L62, L63, L64, L67, L70, L71, L72,
L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87,
L88, L89, L90, L91);

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INTEGER I;
L1: GO TO L2;
L46: GO TO L47;
L48: GO TO L49;
L53: GO TO L54;
L2: IF TRUE THEN L3: GO TO L4;
L4: IF TRUE THEN L5: BEGIN L6: GO TO L7 END;
L8: IF TRUE THEN L9: BEGIN LABEL L10;
MONITOR FNOK (L10);
L10: GO TO L11 END;
L91: IF FALSE THEN L14: FOR I ← 0 DO L15: GO TO L16;
L90: IF FALSE THEN L89: GO TO L74 ELSE L49: GO TO L50;
L12: IF TRUE THEN L13: GO TO L14 ELSE L11: GO TO L12;
L88: IF FALSE THEN L47: GO TO L48 ELSE L37: GO TO L38;
L87: IF FALSE THEN L86: GO TO L74 ELSE L58: GO TO L59;
L85: IF FALSE THEN L63: GO TO L64 ELSE L62: GO TO L63;
L84: IF FALSE THEN L52: GO TO L53 ELSE L83: BEGIN L16: GO TO L17
END;
L82: IF FALSE THEN L19: GO TO L20 ELSE L20: BEGIN LABEL L21;

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                                TEMP[I]← I;                                00400230
END;                                                                    00400240
                                BEGIN                                00400250
1 REAL PROCEDURE ABCD ;                                00400260
2 BEGIN                                00400270
3 LABEL L3;                                00400280
4 INTEGER J;                                00400290
5 L3: ;                                00400300
6 FOR J←0 STEP 1 UNTIL 3 DO ;                                00400310
7 END                                00400320
8 ;                                00400330
9 TEMP[14]← ABCD;                                00400340
10 END ;                                00400350
11 FILL ANS[*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7,
12 OCT10, OCT11, OCT12, OCT13, OCT14, OCT15, OCT0, OCT0;
13 CVN ← 15;                                00400380
14 PNO←40; VERIFY                                00400390
15 END;                                00400400
16 PROCEDURE P41; COMMENT IF STATEMENT JW 31 OCT 62;
17 BEGIN                                00410010
18 BOOLEAN A,B;                                00410020
19 LABEL ABLE, CAIN, FINI, NEXT;
20 PROCEDURE NOTH(F1,F2);
21 BOOLEAN F1,F2;                                00410050
22 BEGIN                                00410060
23 IF F1 OR F2 THEN TEMP[3] ← TEMP[3]+4;
24 TEMP[3] ← TEMP[3]+6                                00410080
25 END;                                00410090
26 A ← TRUE;                                00410100
27 B ← FALSE;                                00410110
28 IF A THEN TEMP[1] ← 135;
29 IF B THEN BEGIN TEMP[2]←2; GO TO NEXT END;
30 TEMP[2] ← TEMP[2] +3;                                00410140
31 NEXT: IF A THEN NOTH(A,B);
32 IF A THEN GO TO ABLE;
33 TEMP[4] ← 100;                                00410170
34 ABLE: IF A OR B THEN TEMP[4] ← TEMP[4]+7;
35 IF A OR B THEN BEGIN TEMP[5] ← 8;
36 TEMP[5] ← TEMP[5]+1 END;                                00410200
37 IF A THEN BEGIN REAL M,N;
38 M← TEMP[6] ← 11;                                00410220
39 N← TEMP[5];                                00410230
40 TEMP[6] ← TEMP[6] +1 END;
41 GO TO CAIN;                                00410250
42 TEMP[7] ← TEMP[7]+30;                                00410260
43 IF A THEN CAIN: TEMP[7] ← TEMP[7] +31;
44 GO TO FINI;                                00410280
45 TEMP[8] ← TEMP[8]+27;                                00410290
46 IF B THEN FINI: TEMP[8] ← TEMP[8]+28;
47 FILL ANS[*] WITH OCT207, OCT3, OCT12, OCT7, OCT11, OCT14,
48 OCT37, OCT34;                                00410320
49 CVN← 8;                                00410330
50 PNO ← 41;                                00410340
51 VERIFY                                00410350
52 END;                                00410360
53 PROCEDURE P42; COMMENT IF THEN ELSE STATEMENT JW 31 OCT 62;
54 BEGIN                                00420010
55 INTEGER J;                                00420020
56 BOOLEAN A,B;                                00420030
57 INTEGER X,Y;                                00420040
```

	LABEL BAKE, MANNY, MOE, JACK, DUG, EASY, FOX, LAST;	00420050
	A ← TRUE;	00420060
	B ← FALSE;	00420070
1	X ← Y + 4;	00420080
2	J ← 0;	00420090
3	IF A OR B THEN TEMP[1] ← TEMP[1]+2 ELSE TEMP[1] ← TEMP[1]+3;	00420100
4	IF A AND B THEN TEMP[2] ← TEMP[2]+7 ELSE TEMP[2] ← TEMP[2]+8;	00420110
5	IF X ≥ 4 OR Y = 7 THEN TEMP[3] ← TEMP[3]+9 ELSE IF A AND B THEN	00420120
6	TEMP[3] ← TEMP[3]+11 ELSE TEMP[3] ← TEMP[3]+12;	00420130
7	IF A AND B THEN TEMP[4] ← TEMP[4]+17 ELSE IF X = Y THEN	00420140
8	TEMP[4] ← TEMP[4]+18 ELSE TEMP[4] ← TEMP[4]+19;	00420150
9	IF IF A OR B THEN X = Y ELSE X > Y THEN TEMP[5] ← TEMP[5]+24 ELSE	00420160
10	TEMP[5] ← TEMP[5]+25;	00420170
11	IF A THEN GO TO BAKE;	00420180
12	J ← J+1;	00420190
13	BAKE: IF B THEN TEMP[6] ← TEMP[6]+32 ELSE TEMP[6] ← TEMP[6]+33;	00420200
14	IF X = 3 THEN GO TO MANNY ELSE IF X = 4 THEN GO TO MOE	00420210
15	ELSE GO TO JACK;	00420220
16	J ← J+100;	00420230
17	MANNY: TEMP[7] ← TEMP[7]+38;	00420240
18	GO TO LAST;	00420250
19	MOE: TEMP[7] ← TEMP[7]+39;	00420260
20	GO TO DUG;	00420270
21	JACK: TEMP[7] ← TEMP[7]+40;	00420280
22	J ← J+3;	00420290
23	IF A THEN DUG: TEMP[8] ← TEMP[8]+98 ELSE TEMP[8] ← TEMP[8]+99;	00420300
24	GO TO EASY;	00420310
25	J ← J+5;	00420320
26	IF B THEN TEMP[9] ← TEMP[9]+300 ELSE IF A THEN	00420330
27	EASY: TEMP[9] ← TEMP[9]+301 ELSE TEMP[9] ← TEMP[9]+302;	00420340
28	GO TO FOX;	00420350
29	J ← J+7;	00420360
30	IF A THEN TEMP[10] ← TEMP[10]+600 ELSE IF B THEN	00420370
31	FOX: TEMP[10] ← TEMP[10]+601 ELSE TEMP[10] ← TEMP[10]+602;	00420380
32	GO TO LAST;	00420390
33	J ← J+9;	00420400
34	LAST: TEMP[11] ← J;	00420410
35	FILL ANS[*] WITH OCT2, OCT10, OCT11, OCT22, OCT30, OCT41,	00420420
36	OCT47, OCT142, OCT455, OCT1131, OCT10;	00420430
37	CVN ← 11;	00420440
38	PNO ← 42;	00420450
39	VERIFY	00420460
40	END;	00420470
41	PROCEDURE P43; COMMENT IF FOR STATEMENT JW 31 OCT 62;	00430000
42	BEGIN	00430010
43	BOOLEAN A, B;	00430020
44	INTEGER Y, Z;	00430030
45	A ← TRUE;	00430040
46	B ← FALSE;	00430050
47	Z ← Y + 0;	00430060
48	IF A THEN FOR Y ← Y+1 STEP 1 UNTIL 5 DO TEMP[1] ← TEMP[1]+5;	00430070
49	IF B THEN FOR Z ← Z+1 STEP 1 UNTIL 3 DO TEMP[2] ← TEMP[2]+3;	00430080
50	TEMP[2] ← TEMP[2]+4;	00430090
51	FILL ANS[*] WITH OCT31, OCT4;	00430100
52	CVN ← 2;	00430110
53	PNO ← 43;	00430120
54	VERIFY	00430130
55	END;	00430140
56	PROCEDURE P44; COMMENT FOR STATEMENT USING THE ARITH. EXP. ELEMENT ;	00440000
57	BEGIN	00440010

	REAL A,B,C;	00440020
	INTEGER D;	00440030
	INTEGER PROCEDURE THREE(FAEX);	00440040
1	INTEGER FAEX;	00440050
2	BEGIN	00440060
3	THREE+ FAEX + 2 ;	00440070
4	END;	00440080
5	A+ 27.2; B+ 20; C+ 5.5; TEMP[1]+5.5; TEMP[2]+ 7; D+ 2732;	00440090
6	FOR C+ 2+3 DO TEMP[3]+ C+5;	00440100
7	FOR C+ B-A DO TEMP[4]+ C-2 ;	00440110
8	FOR C+ TEMP[1] + TEMP[2] DO TEMP[5]+ C;	00440120
9	FOR C+ D.[44:2] + D.[40:3] DO TEMP[6] + C-8;	00440130
10	FOR C+ + D.[44:4] + (-D.[45:3]) DO TEMP[7] + C;	00440140
11	FOR C+ THREE(0) x THREE(2) x D.[44:4] DO TEMP[8] + C;	00440150
12	FOR C+ "AB"/ "A" DO TEMP[9]+ C-0.05882352941;	00440160
13	FOR C+ "AB" MOD "A" DO TEMP[10]+ C-1;	00440170
14	FOR C+ "AB" DIV THREE(2120) DO TEMP[11]+ C;	00440180
15	FOR C+ C+2 DO TEMP[12]+ C;	00440190
16	FILL ANS[*] WITH OCT1145400000000000, OCT7, OCT12,	00440200
17	OCT3131114631463146, UCT1010000000000144,	00440210
18	UCT0, UCT10, UCT140, UCT101, UCT0, UCT0,	00440220
19	UCT2;	00440230
20	CVN+ 12;	00440240
21	PND+ 44;	00440250
22	VERIFY	00440260
23	END;	00440270
24	PROCEDURE P45; COMMENT FOR STATEMENT USING STEP UNTIL ELEMENT;	00450000
25	BEGIN	00450010
26	REAL A, B, C;	00450020
27	INTEGER I,D;	00450030
28	REAL PROCEDURE CHECK(I);	00450040
29	REAL I;	00450050
30	BEGIN	00450060
31	CHECK+I; I+I+2;	00450070
32	END;	00450080
33	INTEGER PROCEDURE FOUR (FSU);	00450090
34	INTEGER FSU;	00450100
35	BEGIN FOUR + FSU + 2 ; END;	00450110
36	INTEGER PROCEDURE THREE(FAEX);	00450120
37	INTEGER FAEX;	00450130
38	BEGIN	00450140
39	THREE+ FAEX + 2 ;	00450150
40	END;	00450160
41	A+ 25.5 ; B+ 20; C+ 3.5; TEMP[1] + 3.5; TEMP[2]+ 7;	00450170
42	D+2732; I+5;	00450180
43	FOR C + 2+1 STEP 1 UNTIL 5 DO TEMP[3]+ C;	00450190
44	FOR C + B-A STEP (-C/5 + I) UNTIL A+B DO BEGIN I+I+3;	00450200
45	TEMP[4] + C; END;	00450210
46	FOR C+ TEMP[1]+TEMP[2] STEP TEMP[1] UNTIL 14 DO	00450220
47	TEMP[5]+ C;	00450230
48	FOR C+ D.[44:2] + D.[40:3] STEP 1 UNTIL D.[44:4] DO	00450240
49	TEMP[6]+ C;	00450250
50	FOR C+ D.[44:4]+(-D.[45:3]) STEP D. [45:1] UNTIL	00450260
51	D.[36:4] DO	00450270
52	TEMP[7]+ C ;	00450280
53	FOR C+ FOUR (2) x FOUR (0) STEP 5 UNTIL FOUR (16) DO	00450290
54	TEMP[8]+ C;	00450300
55	FOR C+ "AB"/2 STEP "A" UNTIL ("A"x 10)+ 1061 DO	00450310
56	TEMP[9]+ C;	00450320
57	FOR C+ "AB" MOD "A" STEP 1 UNTIL "A" DO TEMP [10]+ C;	00450330

	FOR C+ "AB" DIV THREE (2120) STEP D. [45:1] UNTIL	00450340
	THREE(0) DO	00450350
	TEMP[11]+ C;	00450360
1	C+TEMP[11];	00450370
2	FOR C+C+THREE(2) STEP 1 UNTIL C.[44:3]+THREE(C.[45:3]-1) DO	00450380
3	TEMP[12]+C;	00450390
4	FOR C+FOUR(2) STEP 2 UNTIL 15 DO C+CHECK(B);TEMP[13]+B;	00450400
5	FILL ANS[*] WITH OCT1010000000000034, OCT7, OCT5,	00450410
6	OCT1134505246230276, OCT16, OCT14, OCT12, OCT22,	00450420
7	OCT2300, OCT21, OCT2, OCT7, OCT26;	00450430
8	CVN+13;	00450440
9	PNO + 45;	00450450
10	VERIFY	00450460
11	END;	00450470
12	PROCEDURE P46; COMMENT FOR STATEMENT USING THE WHILE ELEMENT ;	00460000
13	BEGIN	00460010
14	REAL E,F,C;	00460020
15	BOOLEAN A,B;	00460030
16	INTEGER D, G;	00460040
17	INTEGER PROCEDURE FIVE (FWS);	00460050
18	INTEGER FWS;	00460060
19	BEGIN FIVE + FWS x FWS END;	00460070
20	E+15.5; F+10; G+5.5; D+2732; A+TRUE;	00460080
21	B+ FALSE;	00460090
22	TEMP[1]+ 17; TEMP[2]+ 7;	00460100
23	FOR C+ 2+1 WHILE A OR B DO BEGIN A+ FALSE;	00460110
24	TEMP[3]+ C END;	00460120
25	FOR C+ F+E WHILE A OR B DO TEMP[4]+ C; A+ TRUE;	00460130
26	TEMP[G-1]+5;	00460140
27	FOR C+ = TEMP[1] WHILE A AND B OR A DO BEGIN	00460150
28	A+ FALSE; TEMP[G]+ C	00460160
29	END;	00460170
30	FOR C+ D. [44:2] + D.[40:3] WHILE	00460180
31	A EQV B EQV B EQV B DO BEGIN	00460190
32	IF A THEN A+ FALSE ELSE A+ TRUE; TEMP[7]+ C END;	00460200
33	FOR C + FIVE (3) + FIVE (3) WHILE NOT B DO BEGIN IF	00460210
34	A THEN	00460220
35	TEMP[8]+ C ELSE TEMP[8]+ 0; B+ TRUE END;	00460230
36	A+ TRUE; B+ FALSE;	00460240
37	FOR C+ "AB" MOD "A" WHILE (A OR B ) OR B DO	00460250
38	BEGIN A+ FALSE;	00460260
39	TEMP[9] + C x 10 + FIVE (3) END;	00460270
40	FOR C+ "AB" DIV 11 WHILE A IMP B DO BEGIN	00460280
41	FOR G+ 190 STEP 1 UNTIL	00460290
42	193 DO G+ G; TEMP[10]+ C+G; A+ TRUE END;	00460300
43	FILL ANS[*] WITH OCT21, OCT7, OCT3, OCT0,	00460310
44	OCT5, OCT2000000000000021,	00460320
45	OCT10, OCT22, OCT23, OCT446, OCT23, OCT602;	00460330
46	CVN + 10;	00460340
47	PNO + 46 ;	00460350
48	VERIFY	00460360
49	END;	00460370
50	PROCEDURE P47; COMMENT THE FOR STATEMENT USING THE STEP WHILE ELEMENT;	00470000
51	BEGIN	00470010
52	REAL E,F,C;	00470020
53	BOOLEAN A,B;	00470030
54	INTEGER D, G;	00470040
55	INTEGER PROCEDURE SIX(FSW);	00470050
56	INTEGER FSW;	00470060
57	BEGIN SIX+ (FSW +2)x FSW END;	00470070



	E+ 6.5; F+ 5; C+ 7.5; D+ 2732 ; A+ TRUE; B+ FALSE;	00470080
	G+3;	00470090
	TEMP[1]+ 15 ; TEMP [2]+ 5;	00470100
1	FOR C+ 3 STEP 1 WHILE A OR B DO BEGIN G+ G-1 ;	00470110
2	A+ BOOLEAN(G.[46:1]);	00470120
3	TEMP[3]+ C END; A+ TRUE; G+ 0;	00470130
4	FOR C+ F-E STEP-E WHILE A AND B OR A DO BEGIN	00470140
5	G+G + ENTIER ((E - F)+2);	00470150
6	A+ BOOLEAN (G.[45:1]+1); TEMP[4]+C + D.[45:2] END; G+ 0;	00470160
7	A+TRUE;	00470170
8	FOR C+ TEMP[1] + TEMP[2] STEP TEMP[2] WHILE A IMP B EQV B DO	00470180
9	BEGIN G+ G + SIX(2); A+ BOOLEAN (G.[43:1]);	00470190
10	TEMP[5]+ G + TEMP[1] END;	00470200
11	FOR C+ SIX (3) + D.[45:3] STEP SIX (0) WHILE NOT A DO	00470210
12	BEGIN A+TRUE;	00470220
13	TEMP[6] + C + E MOD F END; G+ 0;	00470230
14	FOR C+ "AB" MOD "A" STEP "A" WHILE (A OR B) OR B DO	00470240
15	BEGIN	00470250
16	G+ G + SIX (C) +	00470260
17	("A" MOD 9) ; A+ BOOLEAN (G.[43:1]); A+ NOT A;	00470270
18	TEMP[7]+ C MOD 100 END;	00470280
19	FILL ANS [*] WITH OCT17, OCT5, OCT4,	00470290
20	OCT200000000000000006,	00470300
21	OCT27, OCT1010000000000244, OCT22;	00470310
22	CVN+ 7;	00470320
23	PNO+ 47;	00470330
24	VERIFY	00470340
25	END;	00470350
26	PROCEDURE P48; COMMENT FOR STATEMENT CONTROL VARIABLE GO TO	00480000
27	CONSTRUCT;	00480010
28	BEGIN	00480020
29	LABEL PNT1, PNT2, PNT3, PNT4, PNT5;	00480030
30	INTEGER D, H, J;	00480040
31	REAL C, E, F, G;	00480050
32	BOOLEAN A, B;	00480060
33	INTEGER PROCEDURE EIGHT (FGT) ;	00480070
34	INTEGER FGT;	00480080
35	BEGIN EIGHT+ FGT. [45:3] END;	00480090
36	E+ 15.5; F+ 7.5; C+2.0; A+ TRUE; B+ FALSE; D+ 2732; G+ 2;	00480100
37	TEMP[1]+ 15; TEMP[2]+ 3; H+ 4; J+ 10;	00480110
38	FOR C+ TEMP[2] STEP 2 UNTIL TEMP[1] DO BEGIN C+ C+TEMP[1];	00480120
39	GO TO PNT1 END; G+G+1 ; TEMP[G]+ 5;	00480130
40	PNT1: G+G+1; TEMP[G]+ C;	00480140
41	FOR C+ F-E STEP H UNTIL J DO BEGIN H+ H+1; J+ J+1;	00480150
42	IF H ≥ 8 THEN GO TO PNT2 END; G+G+1; TEMP[G]+ 6;	00480160
43	PNT2: G+G +1; TEMP[G]+ C;	00480170
44	FOR C+ EIGHT(TEMP[1]+TEMP[2]) STEP F WHILE A OR B DO BEGIN	00480180
45	C+ C + 5; IF	00480190
46	C≥14 THEN GO TO PNT3 END;	00480200
47	PNT3: G+ G+1; TEMP[G]+ C; H+ 4;	00480210
48	FOR C+ E.[12:3] WHILE A OR B DO BEGIN H+ H+1; IF H>6 THEN	00480220
49	GO TO PNT4 END;	00480230
50	PNT4: G+ G+1; TEMP[G]+ C+H;	00480240
51	FOR C+ 2 STEP 1 UNTIL 5 DO FOR C+ C+5 STEP 1 UNTIL 15 DO BEGIN	00480250
52	IF C≥13 THEN GO TO PNT5 END ;	00480260
53	PNT5: G+G+1; TEMP[G]+ C ;	00480270
54	FILL ANS[*] WITH OCT17, OCT13, OCT22, OCT12,	00480280
55	OCT1010000000000234, OCT16, OCT15;	00480290
56	CVN+ 7;	00480300
57	PNO+ 48;	00480310

	VERIFY	00480320
	END;	00480330
	PROCEDURE P50; COMMENT VALUE ASSIGNMENT - PROCEDURE CALLED BY VALUE	00500000
1	EK 18 NOV 62;	00500010
2	BEGIN	00500020
3	INTEGER X1,X2,X3,X4,X5,N,J,I;	00500030
4	ARRAY A[1:3], B[1:3];	00500040
5	BOOLEAN T;	00500050
6	LABEL TEST, TAG, CALL;	00500060
7	INTEGER PROCEDURE FUNC(A,X3, N);	00500070
8	ARRAY A[1];	00500080
9	INTEGER X3,N;	00500090
10	BEGIN	00500100
11	FUNC ← (A[1]-X3)×N	00500110
12	END;	00500120
13	PROCEDURE VASSIG(FP1,FP2,FP3,FP4,FP5,FP6,FP7,FP8,FP9,FP10,FP11,	00500130
14	FP12,FP13,FP14,FP15,FP16,FP19,FP20,FP21,FP22,FP23,FP24,	00500140
15	FP25);	00500150
16	VALUE FP1,FP2,FP3,FP4,FP5,FP6,FP7;	00500160
17	INTEGER FP1,FP2, FP3,FP4,FP5,FP9,FP10,FP11,FP12,FP13,	00500170
18	FP15,FP19,FP20,FP21,FP22,FP23,FP25,FP7;	00500180
19	BOOLEAN FP6,FP14,FP24;	00500190
20	ARRAY FP8[1], FP16[1];	00500200
21	BEGIN	00500210
22	LABEL FP7; INTEGER I;	00500220
23	COMMENT WHEN ALGOL IMPLEMENTS GO TO NON LOCAL LABELS	00500230
24	THE ORIGINAL MEANING OF THIS LABEL DECLARATION	00500240
25	SHOULD NE EXPLORED. SEE NOTES.;	00500250
26	FP9 ← FP1;	00500260
27	FP10 ← FP2;	00500270
28	FP11 ← FP3 ;	00500280
29	FP12 ← FP4;	00500290
30	FP13 ← FP5;	00500300
31	FP14 ← FP6;	00500310
32	GO TO FP7;	00500320
33	FP7: FP15 ← 4095;	00500330
34	FOR I ← 1 STEP 1 UNTIL 3 DO FP8 [I] ← 7;	00500340
35	FP1 ← 2;	00500350
36	FP2 ← 8;	00500360
37	FP3←FP2.[45:3];	00500370
38	FP4 ← FP4 × FP1;	00500380
39	FP5 ← (FP2-FP1×3)× FP1;	00500390
40	FP6 ← FALSE;	00500400
41	FOR I ← 1 STEP 1 UNTIL 3 DO FP16[I] ← FP8[I];	00500410
42	FP19 ← FP1;	00500420
43	FP20 ← FP2;	00500430
44	FP21 ← FP3;	00500440
45	FP22 ← FP4;	00500450
46	FP23 ← FP5;	00500460
47	FP24 ← FP6;	00500470
48	FP25 ← FP8[2]	00500480
49	END;	00500490
50	INTEGER PROCEDURE FUNK(X4,X5);	00500500
51	INTEGER X4, X5;	00500510
52	BEGIN	00500520
53	X4 ← X4+2;	00500530
54	X5 ← X5+1;	00500540
55	FUNK ← X4+ X5	00500550
56	END;	00500560
57	PROCEDURE VALORD(F1,F2,F3,F4,F5,F6,F7,F8,F9,F10);	00500570

	VALUE F3,F4,F5,F1,F2;	00500580
	INTEGER F1,F2,F3,F4,F5,F6,F7,F8,F9,F10;	00500590
	BEGIN	00500600
1	F6 ← F1;	00500610
2	F7 ← F2;	00500620
3	F8 ← F3;	00500630
4	F9 ← F4;	00500640
5	F10 ← F5	00500650
6	END;	00500660
7	PROCEDURE CALORD(G1,G2,G3,G4,G5,G6,G7,G8,G9,G10);	00500670
8	VALUE G1,G2,G3,G4,G5;	00500680
9	INTEGER G1,G2,G3,G4,G5,G6,G7,G8,G9,G10;	00500690
10	BEGIN	00500700
11	G6 ← G1;	00500710
12	G7 ← G2;	00500720
13	G8 ← G3;	00500730
14	G9 ← G4;	00500740
15	G10 ← G5	00500750
16	END;	00500760
17	X1 ← 4;	00500770
18	X2 ← X3 + 2;	00500780
19	A[1] ← A[2] + A[3] + 5;	00500790
20	COMMENT *****KLUGE CARD REMOVE LATER *****; B[1] ← 1;	00500800
21	N ← 1;	00500810
22	J ← 1;	00500820
23	CALL VASSIG(N,A[3],X3,[45:3],FUNC(A,X3,N), (X2 + FUNC(A,X3,N))×A[1],	00500830
24	IF X1>X2 THEN TRUE ELSE FALSE, N, A, TEMP[1], TEMP[2],	00500840
25	TEMP[3], TEMP[4], TEMP[5], T, TEMP[7], 8, TEMP[11],	00500850
26	TEMP[12],TEMP[13],TEMP[14],TEMP[15],NOT T,TEMP[17]);	00500860
27	FOR I ← 1 STEP 1 UNTIL 3 DO TEMP[I+7] ← B[I];	00500870
28	IF J > 1 THEN GO TO TAG ELSE	00500880
29	FOR I ← 1 STEP 1 UNTIL 18 DO TEMP[I+17] ← TEMP[I];	00500890
30	N ← 2;	00500900
31	X1 ← 3;	00500910
32	X2 ← 4;	00500920
33	X3 ← 1;	00500930
34	A[1] ← A[2] + A[3] + 6;	00500940
35	J ← J+1;	00500950
36	GO TO CALL;	00500960
37	TAG: X4 ← X5 + 1;	00500970
38	CALORD(X4,X5,FUNK(X4,X5),X4+1,X5×2,TEMP[35],TEMP[36],TEMP[37],	00500980
39	TEMP[38], TEMP[39]);	00500990
40	VALORD( X4,X5,FUNK(X4,X5),X4+1,X5×2,TEMP[40],TEMP[41],TEMP[42],	00501000
41	TEMP[43], TEMP[44]);	00501010
42	FILL ANS[*] WITH OCT2, OCT6, OCT1, OCT12, OCT124, OCT0,	00501020
43	OCT7777, OCT7, OCT7, OCT7, OCT2, OCT10, OCT0, OCT24,	00501030
44	OCT4, OCT0, OCT7, OCT1, OCT5, OCT2, OCT3, OCT31,	00501040
45	OCT0, OCT7777, OCT7, OCT7, OCT7, OCT2, OCT10, OCT0,	00501050
46	OCT6, OCT4, OCT0, OCT7, OCT1, OCT1, OCT5, OCT4,	00501060
47	OCT4, OCT3, OCT2, OCT10, OCT6, OCT6;	00501070
48	CVN ← 44;	00501080
49	PNO ← 50;	00501090
50	VERIFY	00501100
51	END;	00501110
52	PROCEDURE P51; COMMENT CALL BY NAME FORMAL PARAMETERS 4,7,3,2	00510000
53	NOV 20 1962 KM.;	00510010
54	BEGIN	00510020
55	LABEL LAB,LAB1,LAB3,LAB4,L1,L2,LAB5,LAB2,LAB6;	00510030
56	INTEGER B,C,D,E,F,G,H ;	00510040
57	LABEL SPECLAB1, SPECLAB2; COMMENT REMOVE LATER MAY 6 1963;	00510050

```

1  BOOLEAN LCCB; 00510060
2  ARRAY ARAE [1:10]; 00510070
3  SWITCH SWCH+LAB3,LAB,LAB1,LAB2,LAB4; 00510080
4  PROCEDURE ABC (C,ARY1); 00510090
5  INTEGER C; 00510100
6  ARRAY ARY1[1] ; 00510110
7  BEGIN 00510120
8  FOR C←C STEP 1 UNTIL (C+(10-C)) DO ARY1[C] ←C; 00510130
9  END; 00510140
10 INTEGER PROCEDURE DEF (GHJ); 00510150
11 INTEGER GHJ; 00510160
12 BEGIN 00510170
13 DEF ← GHJ+ (GHJ-1); 00510180
14 END; 00510190
15 REAL PROCEDURE SPR1 (STFORM); 00510200
16 REAL STFORM; 00510210
17 BEGIN 00510220
18 SPR1← 7 MOD STFORM ; 00510230
19 END; 00510240
20 PROCEDURE CALL (P1,P2,P3,P4,P5,P6,P7,P8,P9,P10,P11,P12,P13,P14, 00510250
21 P17,P18); 00510260
22 INTEGER P2, P5, P6, P10, P12; 00510270
23 BOOLEAN P3; 00510280
24 REAL PROCEDURE P11; 00510290
25 PROCEDURE P8, P17, P18; 00510300
26 INTEGER PROCEDURE P9; 00510310
27 ARRAY P4[1]; 00510320
28 SWITCH P7; 00510330
29 LABEL P13, P14; 00510340
30 REAL P1; 00510350
31 COMMENT P8 IS PROCEDURE ABC 00510360
32 P17 IS PROCEDURE PRA 00510370
33 P18 IS PROCEDURE PRQ 00510380
34 P9 IS PROCEDURE DEF 00510390
35 P11 IS PROCEDURE SPR1 ; 00510400
36 BEGIN 00510410
37 INTEGER Q1; 00510420
38 LABEL LBL1, LBL2; 00510430
39 Q1 ← 3; 00510440
40 P1 ← IF P3 THEN (P1 + Q1) ELSE (P1 + 2); 00510450
41 FOR Q1 ← 2 STEP 1 UNTIL 5 DO P2 ← P2+Q1; 00510460
42 IF P3 THEN P3← FALSE ELSE P3← TRUE; 00510470
43 P8(4,P4); P5← P4[4]; P6← P4[4] + P5 ; 00510480
44 P17(P3,P7,P4, LBL1); 00510490
45 LBL1:P4[1]← P9(P10); 00510500
46 P12←P11(P12); 00510510
47 COMMENT KLUGE CARD REMOVE LATER *****; P4[1] ← P4[1] ; 00510520
48 P18(LBL2,P4,P3); 00510530
49 LBL2:END; 00510540
50 PROCEDURE PRA(BOL, SW,ARY,LBL); 00510550
51 BOOLEAN BOL; 00510560
52 SWITCH SW; 00510570
53 LABEL LBL; 00510580
54 ARRAY ARY[1]; 00510590
55 BEGIN LABEL LAB1, LAB2,L1; 00510600
56 GO TO IF BOL THEN LAB1 ELSE LAB2; 00510610
57 LAB1: ARY[2]←5; GO TO L1; 00510620
58 LAB2: ARY[2]← 10; 00510630
59 L1: GO TO LBL 00510640
60 END; 00510650

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	PROCEDURE PROC(LBLL,ARRY,BLO);	00510660
	LABEL  LBLL;	00510670
	ARRAY  ARRY[1];	00510680
1	BOOLEAN BLO;	00510690
2	BEGIN	00510700
3	LABEL L2, LAB3, LAB4;	00510710
4	GO TO IF BLO THEN LAB3 ELSE LAB4;	00510720
5	LAB3: ARRY[3]+ 5; GO TO L2;	00510730
6	LAB4: ARRY[3]+ 10;	00510740
7	L2: GO TO LBLL	00510750
8	END;	00510760
9	DEFINE A1 = (23/2) +(E-1)#;	00510770
10	B + 23; LOOB+ TRUE; E+ 5 MOD 3;  F+10;	00510780
11	COMMENT CLUGE CARD REMOVE LATER; ARAE[1] + ARAE[1] ;	00510790
12	COMMENT CLUGE CARD REMOVE LATER. THIS WAS INSERTED TO GET AROUND	00510800
13	***** PRESENCE BIT FOR PROCEDURE PRA AND PRQ WHICH ARE MARKED ABSENT	00510810
14	***** IN THE STACK FOR PROCEDURE CALL. MAY2, 1963;	00510820
15	PRA(LOOP,SWCH,ARAE,SPECLAB1); COMMENT *** REMOVE MAY 6 1963;	00510830
16	SPECLAB1: LOOP+TRUE; PROC(SPECLAB2,ARAE,LOOP); COMMENT REMOVE 6ATER;	00510840
17	SPECLAB2: COMMENT REMOVE LATER MAY 6 1963;	00510850
18	CALL(A1, B, LOOP, ARAE, C, D, SWCH, ABC, DEF, E, SPR1, F,	00510860
19	IF TRUE THEN LAB3 ELSE LAB5, IF FALSE THEN LAB6 ELSE	00510870
20	SWCH[5], PRA, PRO);	00510880
21	G+ DEF(DEF(3));	00510890
22	TEMP[1]+A1; TEMP[2]+B; TEMP[3]+REAL(LOOP,[47:1]);	00510900
23	FOR H+ 4 STEP 1 UNTIL 10 DO TEMP[H] + ARAE[H];	00510910
24	TEMP[11]+C; TEMP[12]+D; TEMP[13]+ARAE[2]; TEMP[14]+ARAE[1];	00510920
25	TEMP[15]+ F; TEMP[16]+ ARAE[3]; TEMP[17]+ G;	00510930
26	LAB: LAB1: LAB2: LAB3: LAB4:	00510940
27	LAB6: LAB5:	00510950
28	FILL ANS [*] WITH  OCT1010000000000144,  OCT45,  OCT0,	00510960
29	OCT4,OCT5,  OCT6,  OCT7,  OCT10,  OCT11,  OCT12,	00510970
30	OCT4,OCT10,  OCT12,  OCT3,  OCT7,OCT12,  OCT11;	00510980
31	CVN + 17;	00510990
32	PNO + 51;	00511000
33	VERIFY	00511010
34	END	00511020
35	PROCEDURE P52; COMMENT THE READ STATEMENT IN EXTENDED ALGOL;	00520000
36	BEGIN	00520010
37	FORMAT OUT READWRITE ( X10, "THE READ STATEMENT OF ALGOL",	00520020
38	" WITH ALL ITS VARIOUS CONSTRUCTS OF"),	00520030
39	SECONDLIN (X10, "READ, SPACE, ETC HAS BEEN WRITTEN AS A SPECI"	00520040
40	, "AL ROUTINE BY JOHN SKELTON."),	00520050
41	THIRDLIN (X10, "TO TEST THESE ALGOL CONSTRUCTS THE I/O",X1	00520060
42	"PACKAGE IS TO BE USED");	00520070
43	FORMAT OUT FIRSTLINE (X10,"TEST PROCEDURE NO. 052      4.8",	00520080
44	".2.3 EXTENDED ALGOL READ STATEMENT");	00520090
45	WRITE (FNOK[DBL],FIRSTLINE);	00520100
46	WRITE (FNOK[DBL],READWRITE);	00520110
47	WRITE (FNOK[DBL],SECONDLIN);	00520120
48	WRITE (FNOK[DBL],THIRDLIN);	00520130
49	END;	00520140
50	PROCEDURE P53; COMMENT THE WRITE STATEMENT IN EXTENDED ALGOL;	00530000
51	BEGIN	00530010
52	FORMAT OUT FIRSTONE(X10, "TEST PROCEDURE NO. 053      4.8",	00530020
53	".3.3 EXTENDED ALGOL WRITE STATEMENT"),	00530030
54	WRITENOTE (X10,"THE WRITE STATEMENT OF ALGOL WITH",	00530040
55	" ALL ITS VARIOUS CONSTRUCTS OF"),	00530050
56	WRITETWO(X10, "WRITE,SPACE,ETC. HAS BEEN WRITTEN",	00530060
57	" AS A SPECIAL ROUTINE BY JOHN SKELTON."),	00530070

	WRITELAST(X10,"TO TEST THESE ALGOL CONSTRUCTS THE",	00530080
	" I/O PACKAGE IS TO BE USED");	00530090
	WRITE(FNOK(DBL),FIRSTONE);	00530100
1	WRITE(FNOK(DBL),WRITENOTE);	00530110
2	WRITE(FNOK(DBL),WRITETWO);	00530120
3	WRITE(FNOK(DBL),WRITELAST);	00530130
4	END;	00530140
5	PROCEDURE P55; COMMENT FILL STATEMENT EK 12 NOV 62;	00550000
6	BEGIN	00550010
7	INTEGER ARRAY INT[1:2];	00550020
8	ARRAY A, B, D, R[1:2], C[1:5], MATRIX[1:3,1:3];	00550030
9	INTEGER I, J, V;	00550040
10	STREAM PROCEDURE FLAGCHK (DUM1, DUM2, DUM3);	00550050
11	BEGIN	00550060
12	SI←DUM1;	00550070
13	DI←DUM3;	00550080
14	DI← DI+7;	00550090
15	IF SB THEN DS← 1 SET;	00550100
16	SI ← DUM2;	00550110
17	IF SB THEN DS← 1 SET;	00550120
18	SI← DUM3; SI← SI+ 7;	00550130
19	DI←DUM1; IF SB THEN DS← 1 RESET;	00550140
20	DI←DUM2; IF SB THEN DS← 1 RESET;	00550150
21	END;	00550160
22	FILL INT[*] WITH 549755813887, -549755813887;	00550170
23	FILL A[*] WITH 4.3@63, 7.8@56;	00550180
24	FILL B[*] WITH "EDW", "KEH";	00550190
25	FILL C[*] WITH 1,0, "TWO", 0.3@1,0,0;	00550200
26	FILL MATRIX[1,*] WITH "DIA", 0,0;	00550210
27	FILL MATRIX[2,*] WITH 0, "GDN",0;	00550220
28	FILL MATRIX[3,*] WITH 0,0,"AL";	00550230
29	FILL D[*] WITH OCT777, 111,	00550240
30	FILL R[*] WITH OCT140C0000000000001, OCT7777777777777777;	00550250
31	V←0;	00550260
32	FLAGCHK(R[1],R[2],V);	00550270
33	TEMP[23]← R[1];	00550280
34	TEMP[24] ← R[2];	00550290
35	TEMP[25] ← V;	00550300
36	TEMP[1] ← INT[1];	00550310
37	TEMP[2] ← INT [2];	00550320
38	TEMP[3] ← A[1];	00550330
39	TEMP[4] ← A[2];	00550340
40	TEMP[5] ← B[1];	00550350
41	TEMP[6] ← B[2];	00550360
42	FOR I←1 STEP 1 UNTIL 5 DO TEMP[1+6] ← C[1];	00550370
43	TEMP[12] ← D[1];	00550380
44	TEMP[13]←D[2];	00550390
45	FOR J ← 1 STEP 1 UNTIL 3 DO TEMP[J+13] ← MATRIX[1,J];	00550400
46	FOR J ← 1 STEP 1 UNTIL 3 DO TEMP[J+16] ← MATRIX[2,J];	00550410
47	FOR J ← 1 STEP 1 UNTIL 3 DO TEMP[J+19] ← MATRIX[3,J];	00550420
48	FILL ANS[*] WITH OCT7777777777777777, OCT2007777777777777,	00550430
49	OCT722471745413117, OCT627747624362477, OCT252466,	00550440
50	OCT422530, OCT1, OCT636646, OCT3, OCT0, OCT0, OCT777,	00550450
51	OCT157, OCT243121, OCT0, OCT0, OCT0, OCT274645, OCT0,	00550460
52	OCT0, OCT0, OCT2143, OCT1, OCT3777777777777777, OCT60;	00550470
53	CVN ← 25;	00550480
54	PNO ← 55;	00550490
55	VERIFY	00550500
56	END;	00550510
57	PROCEDURE P57; COMMENT TYPE DECLARTION UWN;	00570000

BEGIN

INTEGER INDEX, TIME; LABEL INITIAL ;  
TIME+1; INDEX + 1;

00570010

00570020

00570030

INITIAL: BEGIN

00570040

OWN REAL FLOATONE, FLOATTWO;

00570050

OWN BOOLEAN TRUU, FALSS;

00570060

OWN INTEGER ONE, TWO, THREE;

00570070

OWN ALPHA ALPHA, BETA;

00570080

IF TIME = 1 THEN

00570090

BEGIN

00570100

FLOATONE+5; TIME+TIME+1;

00570110

TRUU + TRUE;

00570120

ONE + 1;

00570130

ALPH + "ABC"

00570140

END;

00570150

TEMP[INDEX] + FLOATONE; INDEX + INDEX + 1;

00570160

TEMP[INDEX] + REAL(TRUU);

00570170

TEMP[INDEX + 1] + ONE;

00570180

TEMP[INDEX + 2] + ALPH; INDEX + INDEX + 3

00570190

END;

00570200

BEGIN

00570210

OWN REAL FLOATONE, TRUU, ONE, ALPH ;

00570220

FLOATONE + 1.0;

00570230

TRUU + 22 ;

00570240

ONE + 24;

00570250

ALPH + 29

00570260

END;

00570270

IF TIME=2 THEN BEGIN TIME+TIME+1; GO TO INITIAL END;

00570280

FILL ANS[\*] WITH OCT5, OCT1, OCT1, OCT212223,

00570290

OCT5, OCT1, OCT1, OCT212223;

00570300

CVN + 8; PNC + 57 ; VERIFY

00570310

END;

00570320

PROCEDURE P60; COMMENT 5,2,3,3 TYPE ARRAY ,HARRY, NOV 27,;

00600000

BEGIN

00600010

ARRAY ONE, TWO[1:10];

00600020

REAL ARRAY THREE, FOUR, FIVE, SIX[1:5, 2:8];

00600030

INTEGER ARRAY SEVEN, EIGHT[1:5], NINE[1:9];

00600040

BOOLEAN ARRAY ELEVEN[1:1023] ;

00600050

ALPHA ARRAY TWELVE[1:10];

00600060

INTEGER I, N; BOOLEAN B, BOL;

00600070

I+4; N+15; B+ TRUE; BOL + FALSE ;

00600080

BEGIN COMMENT DYNAMIC;

00600090

OWN REAL ARRAY R1 [ I-3:N+5];

00600100

OWN INTEGER ARRAY I1 [ I : I x N ];

00600110

OWN BOOLEAN ARRAY B1 [1:IF B THEN I+N ELSE N-9 ];

00600120

OWN ALPHA ARRAY A1, A2, A3[1:10] ;

00600130

ONE[1] + 1;

00600140

THREE[I, I]+I;

00600150

SEVEN[I+1] + NINE[I+4]+EIGHT[N-3xI] + 2;

00600160

FOR I + 1 STEP 4 UNTIL 1024 DO ELEVEN [I] + B ;

00600170

TWELVE[1]+ "HARRY";

00600180

I + 4; R1[1] + R1 [18] + I1[4] + I1[60] + 1;

00600190

B1[19]+ TRUE;

00600200

A1[1] + "HARRY";

00600210

TEMP[1]+ ONE[1];

00600220

TEMP[2]+ THREE[I, I];

00600230

TEMP[3]+ SEVEN[I+1];

00600240

TEMP[4]+ REAL(ELEVEN[5]);

00600250

TEMP[5]+ TWELVE[1];

00600260

TEMP[6]+ R1[18];

00600270

	TEMP[7]+REAL (B1[19]);	00600280
	TEMP[8]+A1[1];	00600290
	FILL ANS[*] WITH OCT1, OCT4, OCT2, OCT, OCT3021515170,	00600300
1	OCT1, OCT1, OCT3021515170;	00600310
2	CVN + 8; PNC + 60; VERIFY	00600320
3	END END;	00600330
4	PROCEDURE P61; COMMENT BOUND PATR LIST ;	00610000
5	BEGIN	00610010
6	INTEGER I,J,K;	00610020
7	ARRAY BOUND[1:1],MINUS[-10:-10],MONUS[ -15:-10],	00610030
8	SPLIT[-15:14],LIMIT[2:1023];	00610040
9	I + 1; J+6 ;K+ 6;	00610050
10	BEGIN	00610060
11	ARRAY DYNAMIC[I:JJ,EXP[I:15],UPPER[ 5:I+J],	00610070
12	DIMI[ I:1+1,J:J+1,K:K+1,1:1,1:1 ];	00610080
13	BOUND[1] +1;MINUS[-10] + 10; MONUS [-13] + 13;	00610090
14	SPLIT[ 11] + 11; LIMIT[ 1023] + 24;	00610100
15	TEMP[1] + 1; TEMP[2] + 10;TEMP[3] +13;TEMP[4] + 11;	00610110
16	TEMP[5] + 24 ;	00610120
17	TEMP[6] + DYNAMIC[6] + 6;	00610130
18	TEMP[7] + EXP[15] + 15;	00610140
19	TEMP[8] + UPPER[7] + 7;	00610150
20	TEMP[9] + DIMI[2,7,7,1,1]+277;	00610160
21	END ;	00610170
22	FILL ANS[*] WITH OCT1, OCT12, OCT15, OCT13, OCT30,	00610180
23	OCT6, OCT17, OCT7, OCT425;	00610190
24	PNO +61;CVN + 9; VERIFY	00610200
25	END;	00610210
26	PROCEDURE P62; COMMENT SWITCH DECLARATION EK NOV 26 62;	00620000
27	BEGIN	00620010
28	INTEGER X1, X2, X3, X4, X5;	00620020
29	LABEL L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L14,LL1,LL2,LL3,	00620030
30	LL4,LL5,LAB,LAB1;	00620040
31	SWITCH S2 FORWARD;	00620050
32	SWITCH S1 +L1,L1,L1,L1,L1,L2,L2,L2,L2,L2,L3,L3,L3,L3,L3,L4,L4,	00620060
33	L4,L4,L4,L5,L5,L5,L5,L5,IF X1=X2 THEN L6 ELSE L7,	00620070
34	L6,L6,L6,L7,L7,L7,L7,S2[X1+2],S2[3],L8,L8,L8,L8,L8,	00620080
35	L9,L9,L9,L9,L9,L9,L10,L10,L10,L10,S2[4],S2[4],L11,	00620090
36	L11,L11,L11,L11,L12,L12,L12,L14,L14,L14,L14;	00620100
37	SWITCH S2 + LL1,LL2,LL3,LL4,S1[X4*13+1];	00620110
38	X1 + 1;	00620120
39	X2 + 2;	00620130
40	X3 + 3;	00620140
41	X4 + 4;	00620150
42	X5+5;	00620160
43	GO TO S1[1];	00620170
44	L1: TEMP[1] + 1;	00620180
45	IF X1 > 1 THEN GO TO LAB;	00620190
46	X1 + X1+1;	00620200
47	TEMP[2] + TEMP[1]+1;	00620210
48	GO TO S1[X1];	00620220
49	LAB: GO TO S1[6];	00620230
50	L2: TEMP[3] + 3;	00620240
51	GO TO S1[X3*2+X5];	00620250
52	L3: TEMP[4] + 4;	00620260
53	GO TO S1[23];	00620270
54	L5: TEMP[5] + 5;	00620280
55	GO TO S1[16];	00620290
56	L4: TEMP[6] + 6;	00620300
57	GO TO S1[26];	00620310



	L6: TEMP[7] + 7;	00620320
	X1 + X1-1;	00620330
	GO TO S1[26];	00620340
1	L7: TEMP[8]+8;	00620350
2	GO TO S1[34];	00620360
3	LL3: TEMP[9] + 9;	00620370
4	IF X1 > 1 THEN GO TO LAB1;	00620380
5	X1 + X1+1;	00620390
6	TEMP[10] + TEMP[9] +1;	00620400
7	GO TO S1[35];	00620410
8	LAB1: GO TO S1[37];	00620420
9	L8: GO TO S1[42];	00620430
10	L9: TEMP[11] + 11;	00620440
11	GO TO S1[48];	00620450
12	L10: GO TO S1[51];	00620460
13	LL4: TEMP[12] + 12;	00620470
14	GO TO S2[5];	00620480
15	L11: TEMP[13] + 13;	00620490
16	GO TO S1[59];	00620500
17	L12: GO TO S1 [64];	00620510
18	L14: TEMP[14]+14;	00620520
19	LL1: LL2:	00620530
20	FILL ANS [*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7,	00620540
21	OCT10, OCT11, OCT12, OCT13, OCT14, OCT15, OCT16;	00620550
22	CVN + 14;	00620560
23	PNU + 62;	00620570
24	VERIFY	00620580
25	END;	00620590
26	PROCEDURE P63; COMMENT SWITCH LIST EXPRESSION EVALUATION, 5.3.4 CCZ;	00630000
27	BEGIN	00630010
28	LABEL L1, L2, L3, L4, L5;	00630020
29	INTEGER I1;	00630030
30	SWITCH SW1+IF I1=1 THEN L1 ELSE IF I1=2 THEN L2 ELSE IF I1=3	00630040
31	THEN L3 ELSE L4;	00630050
32	INTEGER PROCEDURE F(I1);	00630060
33	INTEGER I1;	00630070
34	BEGIN F+I1+TEMP[I1]+I1-1 END;	00630080
35		00630090
36	SWITCH SW2 FORWARD;	00630100
37	SWITCH SW2+L5, SW2[F(I1)], SW2[F(I1)];	00630110
38	I1+2; GO TO SW2[I1]; L5: TEMP[I1]+I1+1;	00630120
39	FOR I1+1 STEP 1 UNTIL 3 DO	00630130
40	BEGIN GO TO SW1[I1];	00630140
41	L1: BEGIN TEMP[3]+I1; GO TO L4 END;	00630150
42	L2: BEGIN TEMP[4]+I1; GO TO L4 END;	00630160
43	L3: TEMP[5]+I1;	00630170
44	L4: END;	00630180
45	FILL ANS[*] WITH 2, 1, 2, 3;	00630190
46	CVN+5;	00630200
47	PNU+63;	00630210
48	VERIFY	00630220
49	END;	00630230
50	PROCEDURE P64; COMMENT 5.3.5 SWITCH SCOPE, C. ZETHRAEUS, 11/23/62 ;	00640000
51	BEGIN LABEL L1, L2, L3; INTEGER I1, I2, I3; BOOLEAN B1;	00640010
52	SWITCH SW1 + L1, L2, L3;	00640020
53	SWITCH SW2 + SW1[I1], IF B1 THEN SW1[I2] ELSE SW1[I3];	00640030
54	LABEL L4;	00640040
55	I1 + 1; I2 + 2; I3 + 3; B1 + TRUE;	00640050
56	BEGIN INTEGER I1, I2, I3; BOOLEAN B1;	00640060
57	I1 + 2; I2 + 3; I3 + 1; B1 + FALSE;	00640070

	GO TO SW2[I1];	00640080
	GO TO L3;	00640090
	END;	00640100
1	L1: TEMP[1] + 1; GO TO L4;	00640110
2	L2: TEMP[1] + 2; GO TO L4;	00640120
3	L3: TEMP[1] + 3;	00640130
4	L4: FILL ANS[*] WITH OCT2;	00640140
5	CVN + 1; PNC + 64; VERIFY;	00640150
6	END;	00640160
7	PROCEDURE P66; COMMENT LABEL DECLARATION EK 17 JAN 63;	00660000
8	BEGIN	00660010
9	INTEGER X1,I,Y;	00660020
10	LABEL L1,L2,L3,LAST,LA1,LA2,LB1;	00660030
11	SWITCH SW1 + LA1,LA2;	00660040
12	PROCEDURE P1(FP1);	00660050
13	INTEGER FP1;	00660060
14	BEGIN	00660070
15	LABEL LL1,LL2;	00660080
16	INTEGER PQR;	00660090
17	PQR+0;	00660100
18	LL1: IF FP1 = 1 THEN GO TO LL2;	00660110
19	FOR PQR+PQR+1 STEP 1 UNTIL 5 DO	00660120
20	TEMP[PQR+1]+PQR+1;	00660130
21	FP1 + FP1+1;	00660140
22	GO TO LL1;	00660150
23	LL2:	00660160
24	END;	00660170
25	LA2: I+0;	00660180
26	P1(I);	00660190
27	X1 + 1;	00660200
28	BEGIN	00660210
29	LABEL LA1;	00660220
30	GO TO SW1[I];	00660230
31	LA1: TEMP[13] + 511	00660240
32	END;	00660250
33	GO TO LB1;	00660260
34	LA1: TEMP[12] + 12;	00660270
35	LB1: X1 + 1;	00660280
36	GO TO L3;	00660290
37	L2: BEGIN	00660300
38	INTEGER Y1;	00660310
39	LABEL L4,L5,L6, LST;	00660320
40	GO TO L4;	00660330
41	TEMP[14] + 100;	00660340
42	L4: Y1 + 2;	00660350
43	GO TO L6;	00660360
44	L5: BEGIN	00660370
45	LABEL L7;	00660380
46	GO TO L7;	00660390
47	TEMP[15] + 101;	00660400
48	L7: TEMP[7] + 7	00660410
49	END;	00660420
50	GO TO LST;	00660430
51	L6: TEMP[6] + Y1*3;	00660440
52	GO TO L5;	00660450
53	LST: END;	00660460
54	GO TO LAST;	00660470
55	L3: TEMP[8] + 8;	00660480
56	GO TO L2;	00660490
57	LAST:TEMP[9] + 9;	00660500

	BEGIN	00660510
	LABEL LC1;	00660520
	BEGIN	00660530
1	LABEL LC1;	00660540
2	GO TO LC1;	00660550
3	TEMP[16] + 102;	00660560
4	LC1: TEMP[10] + 10	00660570
5	END;	00660580
6	GO TO LC1;	00660590
7	TEMP[17] + 104;	00660600
8	LC1: TEMP[11] + 11	00660610
9	END;	00660620
10	FILL ANS[*] WITH OCT0, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7,	00660630
11	OCT10, OCT11, OCT12, OCT13, OCT14, OCT0, OCT0, OCT0,	00660640
12	OCT0, OCT0;	00660650
13	CVN + 17;	00660660
14	PND + 66;	00660670
15	VERIFY	00660680
16	END;	00660690
17	PROCEDURE P74; COMMENT USE OF INPUT FORMAT PHRASE A. DEC 11 1963;	00740000
18	BEGIN	00740010
19	INTEGER D;	00740020
20	FORMAT IN FIA(2A2,2(2A2),1("KASTUR",2A5)),	00740030
21	FIB(2(2A3),2A1,A5);	00740040
22	LIST LIN(A(FOR D+1 STEP 1 UNTIL 8 DO TEMP[D])),	00740050
23	LIN(B(FOR D+9 STEP 1 UNTIL 15 DO TEMP[D]));	00740060
24	STREAM PROCEDURE FORMATAFILLE(FILLA);	00740070
25	BEGIN	00740080
26	LOCAL QS, QR, Q;	00740090
27	LABEL L1,L6;	00740100
28	COMMENT MAKE 3 BUFFERS OF FILE FDUMMY PRESENT;	00740110
29	L1: SI+ FILLA; SKIP 2 SB; COMMENT POINT TO PR BIT;	00740120
30	IF SB THEN BEGIN SKIP 48 SB;	00740130
31	IF SB THEN BEGIN SKIP 48 SB;	00740140
32	IF SB THEN GO TO L6; GO TO L1	00740150
33	END; GO TO L1	00740160
34	END; GO TO L1 ;	00740170
35	COMMENT FILES ARE NOW VERIFIED AS PRESENT;	00740180
36	L6: SI+ FILLA; DI + LOC Q; DS + 3 WDS;	00740190
37	DI+Q; COMMENT FILL BUFFER 1;	00740200
38	DS+40 LIT "B";	00740210
39	DS+40 LIT "C";	00740220
40	DI + QR; COMMENT FILL BUFFER 2;	00740230
41	DS+28 LIT "AABBIAA2AAACXXXXXA11232AAA5";	00740240
42	DI+ QS; COMMENT FILL BUFFER 3;	00740250
43	DS+19 LIT "123123222222210*3/+";	00740260
44	END;	00740270
45		00740280
46	FORMATAFILLE(FDUMMY);	00740290
47	READ(FDUMMY[1,*],FIA,LINA);	00740300
48	READ(FDUMMY[2,*],FIB,LINB);	00740310
49	FILL ANS[*] WITH OCT2121, OCT2222, OCT3121, OCT2102, OCT2121,	00740320
50	OCT2123, OCT2101010203, OCT0221212105,	00740330
51	OCT010203, OCT010203, OCT020202, OCT170217,	00740340
52	OCT17, OCT1, OCT0053036120;	00740350
53	CVN+15;	00740360
54	PND + 74;	00740370
55	VERIFY	00740380
56	END;	00740390
57	PROCEDURE P75; COMMENT INPUT FORMAT PHRASE D. KM. DEC 10 1963;	00750000

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BEGIN
INTEGER D;
FORMAT IN FORMD(D,I3,2D,I6,1(1(D)),2("KASTUH")),
LIST
LD(FOR D+1 STEP 1 UNTIL 2 DO TEMP[D]);
STREAM PROCEDURE FORMATFILLD (FID);
BEGIN
LOCAL QS, QR, Q;
LABEL L1,L6;
COMMENT MAKE 3 BUFFERS OF FILE FDUMMY PRESENT;
L1: SI+ FID; SKIP 2 SB; COMMENT POINT TO PR BIT;
IF SB THEN BEGIN SKIP 48 SB;
IF SB THEN BEGIN SKIP 48 SB;
IF SB THEN GO TO L6; GO TO L1
END; GO TO L1;
COMMENT FILES ARE NOW VERIFIED AS PRESENT;
L6: SI+ FID; DI+LOC Q; DS+ 3 WDS;
DI+ Q; COMMENT FILL BUFFER 1;
DS + 33 LIT "ABCDEFGH1231BCDEFGHIJKLMNOP1234561";
DS+ 10 LIT "PQRSTUVWXYZ";
DS+ 37 LIT "X";
DI+QR; COMMENT FILL SECOND BUFFER;
DS+ 27 LIT "123456781234567812345678000";
DS+10 LIT "A";
DI+QS; COMMENT FILL BUFFER 3;
DS+ 23 LIT "1234567AAAAAAAAA1A2B3C64";
END;
FORMATFILLD (FDUMMY); COMMENT FILL BUFFERS WITH INFO;
READ(FDUMMY[0,*],FORMD,LD);
READ(FDUMMY[1,*],FORME,TEMP[3]);
READ(FDUMMY[2,*],FORMF,TEMP[4]);
FILL ANS [*] WITH 231, 234561, 000, 1234567;
CVN+ 4;
PNQ + 75;
VERIFY
END;
PROCEDURE P76; COMMENT FORMAT PHASE E EK 2 JAN 63;
BEGIN
ARRAY A[0:1], B[0:1], C[0:2];
REAL X,Y,Z,R,W,X1,Y1,Y2,Y3;
INTEGER I;
FORMAT IN FORM1(E8.1, 2E8.1, 2(E8.1,2E10.3));
FORMAT IN FORM2(E11.4,3E13.6,E12.5,E10.3,E8.1);
LIST L1(X,Y,Z,R, FOR I+0 STEP 1 UNTIL 1 DO A[I], W, FOR I+0
STEP 1 UNTIL 1 DO B[I]);
LIST L2 ( X1, FOR I + 0 STEP 1 UNTIL 2 DO C[I], Y1, Y2, Y3);
STREAM PROCEDURE STP1(F1, X);
VALUE X;
BEGIN
LABEL A, B, C;
DI+F1; SI+LOC X; SI+SI+7; IF SC="A" THEN GO TO A;
IF SC="B" THEN GO TO B; GO TO C;
A: DS+38 LIT "-0.1e+08 0.8e+01 0.5e+00-0.1e 03 0.645";
DS+38 LIT "e 02+0.165e 02-0.1e-04-0.173e+07-0.200";
DS+ 4 LIT "e 04"; GO TO C;
B: DS+34 LIT "-0.2525e+02 0.888520e+03 0.735125e";
DS+38 LIT " 03 0.136421e+06 0.16250e 02-0.625e+01" ;
DS+8 LIT " 0.1e 01";

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C: END;                                00760220
STP1(FDUMMY[0,*],"A");                  00760230
READ(FDUMMY[0,*],FORM1,L1);             00760240
1 STP1(FDUMMY[0,*],"B");                 00760250
2 READ(FDUMMY[0,*],FORM2,L2);           00760260
3 TEMP[1] + X;                           00760270
4 TEMP[2] + Y;                           00760280
5 TEMP[3] + Z;                           00760290
6 TEMP[4] + R;                           00760300
7 TEMP[7] + W;                           00760310
8 FOR I + 0 STEP 1 UNTIL 1 DO            00760320
9 BEGIN                                  00760330
10 TEMP[I+5] + A[I];                    00760340
11 TEMP[I+8] + B[I];                   00760350
12 END;                                  00760360
13 TEMP[10] + X1;                        00760370
14 FOR I + 0 STEP 1 UNTIL 2 DO TEMP[I+11] + C[I]; 00760380
15 TEMP[14] + Y1;                        00760390
16 TEMP[15] + Y2;                        00760400
17 TEMP[16] + Y3;                        00760410
18 FILL ANS[*] WITH OCT3054611320000000, OCT1131000000000000,
19 OCT1010000000000004, OCT2000000000000144, 00760430
20 OCT1121004000000000, OCT1132040000000000, 00760440
21 OCT3222476132610707, OCT3066462720000000, 00760450
22 OCT3113720000000000, OCT3010000000000312, 00760460
23 OCT1111570412172703, OCT1010000000013371, 00760470
24 OCT1074123450000000, OCT1132020000000000, 00760480
25 OCT3146200000000000, OCT1141000000000000; 00760490
26 CVN + 16;                             00760500
27 PNO + 76;                             00760510
28 VERIFY                                00760520
29 END;                                  00760530
30 PROCEDURE P78; COMMENT INPUT FORMAT PHRASE I. KM OCT 23 63; 00780000
31 BEGIN                                  00780010
32 INTEGER D;                             00780020
33 FORMAT IN FORM1(1(2I1),1(2I2,I2),2I2,2(2I2,2(2(1(2I2))))), 00780030
34 FORM2(2I2,I6,2(2(2(I1)))));           00780040
35 LIST L1(FOR D+1 STEP 1 UNTIL 27 DO TEMP[D]), 00780050
36 L2(FOR D+28 STEP 1 UNTIL 38 DO TEMP[D]); 00780060
37 STREAM PROCEDURE F8MATIC(FI);         00780070
38 BEGIN                                  00780080
39 LOCAL QS,QR, Q;                        00780090
40 COMMENT MAKE THE 3 BUFFERS OF FDUMMY PRESENT; 00780100
41 LABEL L1, L6;                          00780110
42 L1: SI+FI; SKIP 2 SB; COMMENT POINT TO THE PR BIT; 00780120
43 IF SB THEN BEGIN SKIP 48 SB;           00780130
44 IF SB THEN BEGIN SKIP 48 SB;           00780140
45 IF SB THEN GO TO L6; GO TO L1;        00780150
46 END; GO TO L1;                         00780160
47 END; GO TO L1;                         00780170
48 L6: SI+FI; DI+LOC Q; DS+ 3 WDS;       00780180
49 DI+ Q;                                  00780190
50 DS+40 LIT "A";                          00780200
51 DS+40 LIT "A";                          00780210
52 DI +QR;                                  00780220
53 DS +36 LIT "1++2-3+2+3-4-5+6+3+44546535455566162"; 00780230
54 DS+16 LIT "6364656665644647"; DS+ 28 LIT "0"; 00780240
55 DI+QS;                                  00780250
56 DS + 18 LIT "1516+12345213766"5";    00780260
57 END;                                  00780270

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	FORMATI(FDUMMY); COMMENT FILL BUFFERS WITH INFORMATION;	00780280
	READ(FDUMMY[1,*],FORM1,L1);	00780290
	READ(FDUMMY[2,*],FORM2,L2);	00780300
1	FILL ANS[*] WITH 1, 0, 2, -3, 2, 3, -4, -5, 6, 3, 4, 45, 46,	00780310
2	53, 54, 55, 56, 61, 62, 63, 64, 65, 66,	00780320
3	65, 64, 46, 47, 15, 16, 12345, 2, 1, 3,	00780330
4	7, 6, 6, 0, 5;	00780340
5		00780350
6	CVN + 38;	00780360
7	PNO + 78;	00780370
8	VERIFY	00780380
9	END;	00780390
10	PROCEDURE P79; COMMENT INPUT PHRASE L. JAN 9. 1964;	00790000
11	BEGIN	00790010
12	INTEGER D;	00790020
13	FORMAT IN    F1(2(L5),L15),F2(2L5,"KASTUR",L5,L7,1(1(2L5))),	00790030
14	F3(2L5,"KASTUR",L5,L7,1(1(2L5)));	00790040
15	LIST          L1(FOR D+1 STEP 1 UNTIL 3 DO TEMP[D]),	00790050
16	L2(FOR D+4 STEP 1 UNTIL 9 DO TEMP[D]),	00790060
17	L3(FOR D+10 STEP 1 UNTIL 15 DO TEMP[D]);	00790070
18	STREAM PROCEDURE FILLLOGIC(FLOG);	00790080
19	BEGIN	00790090
20	LOCAL QS,QR,Q;	00790100
21	LABEL L1, L6;	00790110
22	COMMENT MAKE 3 BUFFERS OF FILE FDUMMY PRESENT;	00790120
23	L1: SI+FLOG; SKIP 2 SB; COMMENT POINT TO THE PR BIT;	00790130
24	IF SB THEN BEGIN SKIP 48 SB;	00790140
25	IF SB THEN BEGIN SKIP 48 SB;	00790150
26	IF SB THEN GO TO L6; GO TO L1;	00790160
27	END; GO TO L1	00790170
28	END; GO TO L1;	00790180
29	COMMENT FILES ARE VERIFIED AS PRESENT;	00790190
30	L6: SI + FLOG; DI+LOC Q; DS + 3 WDS;	00790200
31	DI+Q; COMMENT FILL BUFFER 1;	00790210
32	DS+25 LIT " TRUEFALSETRUE FALSE TRUE";	00790220
33	DI+QR; COMMENT FILL BUFFER 2;	00790230
34	DS+36 LIT"TTTTT1111KASTUR TRUE01234FALSE TRUE";	00790240
35	DI+QS; COMMENT FILL BUFFER 3;	00790250
36	DS+39 LIT" TRXEFALSXKASTUR TRXX TRUE TRUE12345123";	00790260
37	END;	00790270
38		00790280
39	FILLLOGIC (FDUMMY);	00790290
40	READ(FDUMMY[0,*],F1,L1);	00790300
41	READ(FDUMMY[1,*],F2,L2);	00790310
42	READ(FDUMMY[2,*],F3,L3);	00790320
43	FILL ANS[*] WITH 1,0,1,0,0,1,0,0,0,0,0,0,0,0,1,0;	00790330
44	CVN + 15;	00790340
45	PNO+79;	00790350
46	VERIFY	00790360
47	END;	00790370
48	PROCEDURE P80; COMMENT USE OF FORMAT INPUT PHRASE D;	00800000
49	BEGIN	00800010
50	INTEGER D;	00800020
51	FORMAT IN    F01(0,20,2(1(0))),F02(1(1(2(20))));	00800030
52	LIST          L1(FOR D+1 STEP 1 UNTIL 5 DO TEMP[D]),	00800040
53	L2(FOR D+6 STEP 1 UNTIL 9 DO TEMP[D]);	00800050
54	STREAM PROCEDURE FORMATOFILL (FO);	00800060
55	BEGIN	00800070
56	LOCAL QS,QR,Q;	00800080
57	LABEL L1, L6;	00800090

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COMMENT MAKE 3 BUFFERS OF FILE PRESENT;          00800100
L1: SI+FO; SKIP 2 SB; COMMENT POINT TO THE PR BIT; 00800110
IF SB THEN BEGIN SKIP 48 SB;                     00800120
      IF SB THEN BEGIN SKIP 48 SB;               00800130
      IF SB THEN GO TO L6; GO TO L1;            00800140
      END; GO TO L1;                             00800150
      END; GO TO L1;                             00800160
COMMENT FILES ARE NOW VERIFIED AS PRESENT;       00800170
L6: SI+FO; DI+LUC Q; DS+ 3 WDS;                  00800180
      DI+Q; COMMENT FILL BUFFER 1;              00800190
      DS+32 LIT "00012345000234560006789000078901"; 00800200
      DS+8 LIT "00023456";                      00800210
      DI+Q; COMMENT FILL BUFFER 2;              00800220
      DS+40 LIT "A";                            00800230
      DS+40 LIT "A";                            00800240
      DI+Q; COMMENT FILL BUFFER 3;              00800250
      DS+32 LIT "00011111000222220003333300044444"; 00800260
      END;                                       00800270
      END;                                       00800280
FORMATOFILL (FDUMMY); COMMENT FILL BUFFERS WITH INFO; 00800290
READ(FDUMMY[0,*],FO1,L1);READ(FDUMMY[2,*],FO2,L2); 00800300
FILL ANS[*] WITH OCT0000000102030405,          00800310
      OCT0000000203040506, OCT0000000607101100, 00800320
      OCT0000000710110001, OCT0000000203040506, 00800330
      OCT0000000101010101, OCT0000000202020202, 00800340
      OCT0000000303030303, OCT0000000404040404; 00800350
      CVN+9;                                    00800360
      PND+80;                                    00800370
      VERIFY                                    00800380
      END;                                       00800390
PROCEDURE P81; COMMENT FORMAT IN PHRASE X, JAN 17 1963, KM.; 00810000
BEGIN                                           00810010
      FORMAT IN FORM1 (1(A6), 1X6, 14, X1, X1,E9.2, 3(1X1), 00810020
      1(1(F4.1)), 2(X1), F4.2, L5, 2(1(1(X1))),L5); 00810030
      COMMENT CHANGE INPUT INFORMATION TO REFLECT CHANGE OF L4 TO L5 00810040
      CHANGE WAS MADE BECAUSE L4 IS NOT ACCEPTABLE TO COMPILER 00810050
      NOTE MADE OF THIS;                        00810060
      INTEGER I;                                00810070
      STREAM PROCEDURE TRANSTOBUFF(STRT);       00810080
      BEGIN                                     00810090
          DI ← STRT;                             00810100
          DS ← 32 LIT "ABCDEFGH$$$$1416$$+0,95e+02$$$+2"; 00810110
          DS ← 24 LIT ".3$$+.25 TRLE$$FALSE "    00810120
      END ;                                     00810130
      TRANSTOBUFF(FDUMMY[0,*]),                 00810140
      READ(FDUMMY[0,*],FORM1,FOR I+1 STEP 1 UNTIL 8 DO TEMP[I]); 00810150
      COMMENT *** VALUE OF TEMP 4 CHANGED TO MATCH THE CONVERT ROUTINE 00810160
      FROM OCT1142234163146314 TO OCT1142231463146314 ; 00810170
      FILL ANS[*] WITH OCT0000212223242526, OCT2610, OCT137, 00810180
      OCT1142231463146315, OCT1152000000000000, 00810190
      OCT1, OCT0;                               00810200
      CVN+7;                                    00810210
      PND+81;                                    00810220
      VERIFY                                    00810230
      END;                                       00810240
PROCEDURE P91; COMMENT FORWARD REFERENCE DECLARATION, KM. NOV 28 62.; 00910000
BEGIN                                           00910010
      LABEL L1,L2,L3,L4,L5,L6,L7;              00910020
      INTEGER J,K;                              00910030
      PROCEDURE FORW (FOR1,FOR2); INTEGER FOR1, FOR2; FORWARD; 00910040

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Data Documents/Inc.

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INTEGER PROCEDURE FOWD (FWD1);
  INTEGER FWD1;
  BEGIN
1     INTEGER I ;
2     I+0; IF FWD1=5 THEN FORW(FWD1,I);
3     FOWD+ FWD1 + 1;
4     END;
5     PROCEDURE FORW(FOR1,FOR2);
6     INTEGER FOR1, FOR2;
7     BEGIN
8       FOR1+ FOR2 +3 ;   FOR2 + FOWD(FOR1);
9     END;
10    SWITCH FOVRD FORWARD;
11    SWITCH FORVD ← L1, L2, FOVRD[J], L3;
12    SWITCH FOVRD ← L4,L5 , FORVD[K], FORVD[K];
13    BOOLEAN BOOL ;
14    BOOL+ TRUE;
15    J+1; K+2;
16    FORW(J,K); TEMP[1] ← J; TEMP[2] ←K;
17    J+3; K+1;
18    GO TO IF BOVL THEN FORVD[3] ELSE FOVRD[K];
19    L1: TEMP[3]+5 ; GO TO L7;
20    L4: TEMP[3] +10;
21    L7: J+4; K+2; GO TO IF FALSE THEN L5 ELSE FORVD[K+1];
22    L2: TEMP[4] ← 4; GO TO L3;
23    L5: TEMP[4] +44;
24    L3:
25    FILL ANS[*] WITH OCT3, OCT4, OCT5, OCT4;
26    CVN ← 4 ;
27    PNU ← 91;
28    VERIFY
29    END;
30    PROCEDURE P94; COMMENT PROCEDURE HEADING      EK      28 NOV 62;
31    BEGIN
32    INTEGER I,J,K;
33    ARRAY A[0:2];
34    INTEGER ARRAY IA[0:5];
35    ALPHA ARRAY AA[0:2];
36    BOOLEAN ARRAY BA[0:1];
37    BOOLEAN T;
38    REAL X;
39    PROCEDURE P1(FP1,FP2)"FP2"(FP3,FP4,FP5,FP6)"FP6"(FP7);
40    VALUE FP1,FP2;
41    INTEGER FP1;
42    REAL FP2;
43    ARRAY FP3[0];
44    INTEGER ARRAY FP4[*];
45    ALPHA ARRAY FP5[0];
46    BOOLEAN ARRAY FP6[0];
47    BOOLEAN FP7;
48    BEGIN
49      TEMP[1] ← FP1;
50      TEMP[2] ← FP2;
51      FP3[0] ← FP3[1] + FP3[2] + 3;
52      FP4[4] ← 4;
53      FP5[0] ← "ONE";
54      FP5[1] ← "TWO";
55      FP5[2] ← "THREE";
56      FP6[0] ← FP6[1] + TRUE;
57      FP7 ← FALSE;

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	END;	00940280
	I ← 1;	00940290
	X ← 100;	00940300
1	COMMENT CLUGE CARD REMOVE LATER *****; A[0] ← A[0] ;	00940310
2	COMMENT CLUGE CARD REMOVE LATER *****; IA[0] ← IA[0] ;	00940320
3	COMMENT CLUGE CARD REMOVE LATER *****; AA[0] ← AA[0] ;	00940330
4	COMMENT CLUGE CARD REMOVE LATER *****; BA[0] ← BA[0] ;	00940340
5	COMMENT THE ABOVE CARDS WERE INCLUDED TO GET AROUND PRESENCE BIT	00940350
6	WHEN AN ARRAY WAS PASSED AS AN ACTUAL PARAMETER TO A PROCEDURE;	00940360
7	P1(I,X, A,IA,AA,BA,T);	00940370
8	TEMP[3] ← A[1];	00940380
9	TEMP[4] ← IA[4];	00940390
10	TEMP[5] ← AA[1];	00940400
11	IF BA[0] THEN TEMP[6] ← "TRU";	00940410
12	IF T THEN TEMP[7] ← "ERR";	00940420
13	TEMP[8] ← "F";	00940430
14	FILL ANS[*] WITH OCT1, OCT14, OCT3, OCT4, OCT636646,	00940440
15	OCT635164, OCT0, OCT26;	00940450
16	CVN ← 8;	00940460
17	PNO ← 94;	00940470
18	VERIFY	00940480
19	END;	00940490
20	PROCEDURE P95; COMMENT 5.12.3.1 STREAM VALUE PART. C. ZETHRAEUS, 12/3;	00950000
21	BEGIN REAL STREAM PROCEDURE GETVAL(V); VALUE V;	00950010
22	BEGIN SI ← LOC V; DI ← LOC GETVAL; DS ← 1 WDS END;	00950020
23	REAL A,B,C; BOCLEAN D, E, F; ARRAY MATRIX [1:3]; INTEGER I;	00950030
24	REAL PROCEDURE IDENTITY(X); REAL X; IDENTITY ← X;	00950040
25	BOOLEAN PROCEDURE EQUIVALENCE (A);	00950050
26	BOOLEAN A; EQUIVALENCE ← A;	00950060
27	TEMP[1] ← GETVAL (1);	00950070
28	A ← 2; TEMP[2] ← GETVAL(A);	00950080
29	B ← 3; TEMP[3] ← GETVAL(IDENTITY(B));	00950090
30	TEMP[4] ← GETVAL(AXA +B);	00950100
31	FOR I ← 1 STEP 1 UNTIL 3 DO MATRIX[I] ← I;	00950110
32	I ← 2; TEMP[5] ← GETVAL(MATRIX[I]);	00950120
33	TEMP[6] ← GETVAL((119).[43:3]);	00950130
34	D ← E ← TRUE; F ← FALSE;	00950140
35	TEMP[7] ← GETVAL(D);	00950150
36	TEMP[8] ← GETVAL(TRUE);	00950160
37	TEMP[9] ← GETVAL(NOT F OR E ); TEMP[9] ← TEMP[9].[47:1];	00950170
38	TEMP[10] ← GETVAL(EQUIVALENCE(D));	00950180
39	FILL ANS[*] WITH OCT1, OCT2, OCT3, OCT7, OCT2, OCT5, OCT1,	00950190
40	OCT1, OCT1, OCT1;	00950200
41	CVN ← 10; PNO ← 95;	00950210
42	VERIFY	00950220
43	END;	00950230
44	PROCEDURE P96; COMMENT STREAM PROCEDURE DECLARATIONS.	00960000
45	5.12.3.2, DEC 6, 62, KM.;	00960010
46	BEGIN	00960020
47	INTEGER A, C;	00960030
48	ARRAY SRCE[0:5], DEST[1:9];	00960040
49	STREAM PROCEDURE CHECKDECLARATIONS (ARY1, AROUT, A, C);	00960050
50	VALUE A, C;	00960060
51	BEGIN	00960070
52	LOCAL AA, BB, STR, STRSRC, CC, DD;	00960080
53	LABEL LBL1, LBL2;	00960090
54	SI ← ARY1; DI ← AROUT;	00960100
55	TALLY ← A; AA ← TALLY; TALLY ← TALLY + AA; AA ← TALLY;	00960110
56	DS ← AA WDS;	00960120
57	STR ← DI; DI ← LOC BB; DI ← DI + 7; DS ← 1 CHR; DI ← STR;	00960130

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US+BB CHR; DI+DI+BB; SI+SI+BB; STR+DI; DI+LOC CC; 00960140
DI+DI+7; STRSRC+SI; SI+LOC C; SI+SI+7; US+1 CHR; 00960150
DI+STR; SI+STRSRC; DS+CC OCT; 00960160
DS+BB DEC; DI+DI+CC; TALLY+BB; TALLY+TALLY+CC; 00960170
DD+TALLY; DS+ DD ADD; DS+ DD NUM; SI+SI-DD; 00960180
DI+DI-DD; DS+DD ZUN; DS+DD RESET; DS+BB RESET; 00960190
DS+DD SET; US+CC SET; DI+DI+AA; 00960200
IF BB SC = UC THEN DS+BB ADD; 00960210
IF TOGGLE THEN DS+AA SUB; 00960220
IF TOGGLE THEN GO TO LBL1; 00960230
DS+3 LIT "BAD"; DS+5 LIT "A"; 00960240
LBL1: DS+3 LIT "COR"; DS+5 LIT "A"; 00960250
LBL2: 00960260
END; 00960270
FILL SRCE[*] WITH OCT2424242424242424, OCT124242424242424, 00960280
OCT0333333333333301, OCT2000000000017763, 00960290
OCT0102030405060700, OCT0102030707000000; 00960300
FILL DESTIN[*] WITH OCT0000000000000000, OCT0000000000000000, 00960310
OCT3333330000000000, OCT01, 00960320
OCT0107510001020304, OCT0506070077153427, 00960330
OCT0102030505000000; 00960340
A + 1; C + 1; 00960350
CHECKDECLARATIONS(SRCE[0], DESTIN[1], A, C); 00960360
FOR C+ 1 STEP 1 UNTIL 9 DO TEMP[C]+ DESTIN[C]; 00960370
FILL ANS[*] WITH OCT2424242424242424, OCT2424242424242424, 00960380
OCT3333330000000000, OCT01, 00960390
OCT0107510002040610, OCT0506070000373427, 00960400
OCT0102030302000000, OCT221242121212121, 00960410
OCT2346512121212121; 00960420
CVN+9; 00960430
PND+96; 00960440
VERIFY 00960450
END; 00960460
PROCEDURE P97; COMMENT 5.12.5.3 SET ADDRESS STATEMENT, CC2, 12/4/62; 00970000
BEGIN INTEGER A; INTEGER ARRAY B[1:2]; 00970010
INTEGER STREAM PROCEDURE SETLOC(A); VALUE A; 00970020
BEGIN SI + LOC A; DI+ LOC SETLOC; DS + 1 WDS END; 00970030
INTEGER STREAM PROCEDURE SETSC(A); VALUE A; 00970040
BEGIN SI + LOC A; SI + SC; SETSC + SI END; 00970050
INTEGER STREAM PROCEDURE SETDC(A); VALUE A; 00970060
BEGIN DI + LOC A; DI + DC; SETDC + DI END; 00970070
A+1023; FILL B[*] WITH OCT3777700000000000, OCT3123450000000000; 00970080
TEMP[1] + SETLOC(A); 00970090
TEMP[2] + SETSC(B[1]); 00970100
TEMP[3] + SETDC(B[2]); 00970110
FILL ANS [*] WITH OCT1777, OCT377777, OCT312345; 00970120
CVN + 3; 00970130
PND + 97; 00970140
VERIFY 00970150
END; 00970160
PROCEDURE P98; COMMENT STORE ADDRESS 5.12.5.4, C. ZETHRAEUS, 12/4/62; 00980000
BEGIN INTEGER STREAM PROCEDURE STOSI(A); VALUE A; 00980010
BEGIN SI + A; STOSI + SI END; 00980020
INTEGER STREAM PROCEDURE STODI(A); VALUE A; 00980030
BEGIN DI + A; STODI + DI END; 00980040
INTEGER STREAM PROCEDURE STOCI(A); VALUE A; 00980050
BEGIN LABEL L1, L2; LOCAL EXIT; 00980060
SI + A; 00980070
EXIT + CI; 00980080
GO TO L1; 00980090

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	EXIT + CI;	00980100
	GO TO L1;	00980110
	EXIT + CI;	00980120
1	GO TO L1;	00980130
2	GO TO L2;	00980140
3	L1: SI+SI+8; CI+EXIT;	00980150
4	L2: STOCI + SI	00980160
5	END;	00980170
6	ARRAY A[1:3];	00980180
7	FILL A[*] WITH OCT777777, OCT666666, OCT555555;	00980190
8	TEMP[1] +STOSI(A[1]); TEMP[2]+STODI(A[2]); TEMP[3]+STOCI(A[3]);	00980200
9	FILL ANS[*] WITH OCT777777, OCT666666, OCT555560;	00980210
10	CVN+3; PNO + 98; VERIFY	00980220
11	END;	00980230
12	PROCEDURE P99; COMMENT USE OF THE STREAM ADD STATEMENT. 5.12.5.5;	00990000
13	BEGIN	00990010
14	INTEGER I;	00990020
15	STREAM PROCEDURE CHECKADSTATEMENT (ARAYTEMP, ARAYTEMP25, FUNC,	00990030
16	TWO);	00990040
17	VALUE FUNC,TWO;	00990050
18	BEGIN	00990060
19	LOCAL A,B;	00990070
20	DI+ARAYTEMP25; SI+LOC ARAYTEMP; DS + 1 WDS;	00990080
21	SI+ARAYTEMP25; DI+LOC ARAYTEMP25; DS+ 1 WDS;	00990090
22	DI+ARAYTEMP25; DS+8 LIT "A";	00990100
23	DI+ARAYTEMP; DI+DI+8; SKIP 24 DB; DS + 24 SET;	00990110
24	A+DI; 3(TALLY+TALLY+1);2(TALLY+TALLY+1; B+ TALLY;	00990120
25	SI+LOC B; IF SC= "A" THEN JUMP OUT; DI+B); JUMP OUT);	00990130
26	DI+A; DS+ 8 LIT "B"; A+DI;	00990140
27	DI+A; DS+8 LIT "B";	00990150
28	DI+DI+ FUNC; SI+ LOC FUNC; SI+SI+ FUNC; DS+ 6 CHR ;	00990160
29	END;	00990170
30	INTEGER PROCEDURE X(A);	00990180
31	INTEGER A;	00990190
32	BEGIN X + A END;	00990200
33	CHECKADSTATEMENT(TEMP, TEMP[25], X(2),2);	00990210
34	FILL ANS[*] WITH OCT21212121212121, OCT77777777,	00990220
35	OCT2222222222222222, OCT2222222222222222,	00990230
36	OCT2;	00990240
37	CVN +5;	00990250
38	PNO+99;	00990260
39	VERIFY	00990270
40	END;	00990280
41	PROCEDURE P100; COMMENT SKIP ADDRESS STATEMENT H N B ;	01000000
42	BEGIN	01000010
43	INTEGER I;	01000020
44	INTEGER STREAM PROCEDURE SKIPP(NO); VALUE NO;	01000030
45	BEGIN	01000040
46	SI +NO;COMMENT M REG AND G REG ARE SET TO VALUE OF NO;	01000050
47	NO(SI + SI +NO);	01000060
48	SKIPP + SI	01000070
49	END;	01000080
50	FOR I + 1 STEP 1 UNTIL 10 DO TEMP[I] + SKIPP(I);	01000090
51	FILL ANS[*] WITH OCT100001, OCT400002, OCT100004, OCT6,	01000100
52	OCT100010, OCT400012, OCT100015,	01000110
53	OCT20, OCT100023, OCT400026;	01000120
54	CVN+10; PNO+100; VERIFY	01000130
55	END ;	01000140
56	PROCEDURE P101; COMMENT TRANSFER WORDS 5. 12. 6. 3 H N B ;	01010000
57	BEGIN	01010010

Data Documents/Inc.

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REAL ARRAY SRCE,DESTNT,DESTINTN[1:64];          01010020
STREAM PROCEDURE MVEWD(FROM,TOW,NUMBER),VALUE NUMBER; 01010030
BEGIN                                             01010040
  SI ← FROM; SI ← SI +2;                          01010050
  DI ← TOW; DI ← DI +4;                            01010060
  DS ← NUMBER WDS ; COMMENT PLEASE ADJUST POINTERS TO 01010070
                                                    START OF NEXT WORD; 01010080
END;                                              01010090
INTEGER I, N;                                     01010100
FOR I ← 1 STEP 1 UNTIL 64 DO                      01010110
BEGIN                                             01010120
  SRCE[I]+I ;                                       01010130
  DESTNT[I]+633                                     01010140
END;                                              01010150
MVEWD(SRCE[1],DESTNT[1],63); COMMENT BLOCK TRANSFER ; 01010160
DESTINTN [2]+7;                                    01010170
MVEWD(DESTINTN[1],DESTINTN[2],10); COMMENT CHAIN ; 01010180
TEMP[1] ← DESTNT[ 64];                             01010190
TEMP[2] ← DESTINTN[12];                            01010200
FILL ANS[*] WITH OCT100, OCT7;                     01010210
CVN ← 2; PNO ← 101; VERIFY                         01010220
END;                                              01010230
PROCEDURE P102; COMMENT 5.12.6.4 TRANSFER CHARACTERS H N B ; 01020000
BEGIN                                             01020010
  STREAM PROCEDURE PRMT(SRC,DEST,S,D,C);          01020020
  VALUE S, D, C;                                   01020030
BEGIN                                             01020040
  SI ← SRC; SI ← SI + S;                           01020050
  DI ← DEST;DI ← DI +D;                             01020060
  DS ← C CHR                                        01020070
END;                                              01020080
INTEGER I,NN,DUCC,VAR,VAR2;                       01020090
VAR← VAR2 + 1;                                     01020100
FOR I ← 3 STEP 1 UNTIL 6 DO                        01020110
PRMT(VAR,VAR2, 7,I, 1); TEMP[1]+VAR2;             01020120
PRMT(VAR2, VAR, 3, 6, 2); TEMP[2]+VAR;           01020130
FILL ANS[*] WITH OCT0101010101, OCT0101;         01020140
CVN ← 2;PNO ←102; VERIFY                          01020150
END;                                              01020160
PROCEDURE P103; COMMENT STREAM PROCEDURE INPUT CONVERT, KM, DEC 3.; 01030000
BEGIN                                             01030010
  ARRAY SRCE[0:6], DESTN[1:8];                    01030020
  INTEGER C;                                       01030030
  STREAM PROCEDURE INP (A,B, X, Y, Z, Q);         01030040
  VALUE X,Y,Z,Q;                                   01030050
  BEGIN                                           01030060
    SI ← A ; DI ← B ;                              01030070
    DS ← 1 OCT ; SI ← SI +6; DS ← 4 OCT; SI ← SI +5; 01030080
    DS ← 8 OCT;                                     01030090
    DS+Y OCT; SI+SI+6; DS+X OCT;SI+SI+X; SI+SI+Y; 01030100
    DS ← Z OCT;                                     01030110
    DS← OCT; DS ← Q OCT;                           01030120
  END;                                            01030130
  FILL SRCE[*] WITH OCT5100000000000001, OCT0203040000000000, 01030140
    OCT0102030405060750, OCT1100000000000001, 01030150
    OCT0203440000000000, OCT0102030405060710, 01030160
    OCT1010101010101010;                          01030170
  INP(SRCE[0], DESTN[1], 4, 1, 8, 0);            01030180
  FOR C+1 STEP 1 UNTIL 8 DO TEMP[C]+DESTN[C];    01030190
  FILL ANS[*] WITH OCT20000000000000011, OCT2322, 01030200

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Data Documents/Inc.

1		OCT2000000057060516, OCT11, OCT2000000000002322,	01030210
2		OCT57060516, OCT10, OCT0;	01030220
3		CVN+8;	01030230
4		PND+ 103;	01030240
5		VERIFY	01030250
6		END;	01030260
7		PROCEDURE P104; COMMENT STREAM PROCEDURE OUTPUT CONVERT, KM, DEC 3;	01040000
8		BEGIN	01040010
9		ARRAY SRCE[0:8], DESTN[1:8];	01040020
10		INTEGER C, F, GH;	01040030
11		STREAM PROCEDURE DUP(A, B, X, Y, Z, Q, STV);	01040040
12		VALUE X, Y, Z, Q;	01040050
13		BEGIN	01040060
14		LOCAL PQR;	01040070
15		SI+A; DI+B; TALLY+0;	01040080
16		DS+ 2 DEC; DI+DI + 5; DS+4 DEC; DI+ DI+5;	01040090
17		DS+ 8 DEC ;	01040100
18		DS+Y DEC; DI+DI+X; DI+DI+Y; DS+X DEC; DI+DI+X;	01040110
19		DI+DI+Y;	01040120
20		DS+Z DEC;	01040130
21		DS + DEC; DS + Q DEC; DI+DI+8; DS+ 3 DEC;	01040140
22		IF TOGGLE THEN TALLY+5; PQR+TALLY;	01040150
23		SI+LOC PQR; DI+STV; DS+1 WDS;	01040160
24		END;	01040170
25		COMMENT DS+ DEC WILL CONVERT 1 OCTAL WORD TO 1 DEC CHR. DS+0 DEC WILL	01040180
26		* *****NOT EFFECT THE SOURCE OR DESTINATION STRING NOR CONVERT ;	01040190
27		FILL SRCE [*] WITH OCT2000000000000011, OCT2000000000003434,	01040200
28		OCT2000000056740516, OCT11, OCT3434,	01040210
29		OCT56740516, OCT7, OCT2450, OCT7777777777777777;	01040220
30		F + 4;	01040230
31		DUP(SRCE[0], DESTN[1], F, 1, 8, 0, GH);	01040240
32		FOR C+1 STEP 1 UNTIL 8 DO TEMP[C]+ DESTN[C];	01040250
33		IF GH=0 THEN TEMP[9]+5 ELSE TEMP[9]+0;	01040260
34		FILL ANS [*] WITH OCT0051000000000001, OCT1002400000000000,	01040270
35		OCT0102030004070150, OCT1100000000000110,	01040280
36		OCT0200000000000001, OCT0203000407011007,	01040290
37		OCT0, OCT0302000000000000, OCT5;	01040300
38		CVN + 9;	01040310
39		PND + 104;	01040320
40		VERIFY	01040330
41		END;	01040340
42		PROCEDURE P105; COMMENT STREAM PROCEDURE TRANSFER AND ADD STATEMENT	01050000
43		5.12.6.7 DEC 4. 1962 KM. ;	01050010
44		BEGIN	01050020
45		ARRAY SRCE [1:13], DESTN [1:13];	01050030
46		INTEGER C, QR, QRS;	01050040
47		STREAM PROCEDURE TRADD (A,B,X,Y,Z,Q,R);	01050050
48		VALUE X, Y, Z;	01050060
49		BEGIN	01050070
50		LOCAL QQ, RR;	01050080
51		SI+Q; DI+LOC QQ; DS+1 WDS; SI+R; DI+LOC RR; DS+1 WDS;	01050090
52		SI+ A; DI+B; TALLY+0;	01050100
53		DS + 2 ADD; SI+ SI+5; DI+DI+5; SKIP 4 SB; SKIP 4 DB;	01050110
54		DS+X ADD; SI+SI+2; DI+DI+2; DS+3 ADD ;SI+A; DI+B;	01050120
55		SI+SI+10; DI+DI+10;	01050130
56		DS+ Y ADD; DS+ Z ADD;	01050140
57		SI + A; DI+B; SI+SI+40; DI+DI+40;	01050150
58		DS+2 SUB; SI+SI+5; DI+DI+RR; SKIP 4 SB; SKIP 4 DB;	01050160
59		DS+X SUB; SI+SI+2; DI+DI+2; DS+3 SUB; SI+A; DI+B;	01050170
60		DI+DI+50; SI+SI+50;	01050180

```

DS+ 1 ADD; IF TOGGLE THEN Q+TALLY;
DI+ DI+5; SI+SI+5; DS+5 ADD;
IF TOGGLE THEN RR+TALLY;
DI+DI+5; SI+SI+5; DS+ADD; DS+SUB;
DI+R; SI+LOC RR; DS+1 WDS;

```

```

01050190
01050200
01050210
01050220
01050230

```

END;

```

FILL SRCE[*] WITH OCT0411000000000077, OCT2706450000672747,
OCT2345103123450704, OCT4527274700000000,
OCT0000000000000000, OCT0407000000000077,
OCT0607071111020344, OCT1160000000001111,
OCT1111110000000000, OCT2222222222222222;

```

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01050240
01050250
01050260
01050270
01050280
01050290

```

```

FILL DESTN[*] WITH OCT0411000000000077, OCT2706650000274327,
OCT2727274510442345, OCT1031234527312731,
OCT2741000000000000, OCT0207000000000077,
OCT1107471111030404, OCT5100000000001111,
OCT1111110000000000, OCT0000000000000000;

```

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01050300
01050310
01050320
01050330
01050340

```

```

QR+5; QRS+ 5;
TRADD(SRCE[1], DESTN[1], 3, 12, 6, QR, QRS);
FOR C+1 STEP 1 UNTIL 10 DO TEMP[C]+ DESTN[C];
IF QR=0 THEN TEMP[11]+1 ELSE TEMP[11]+5;
IF QRS=0 THEN TEMP[12]+2;

```

```

01050350
01050360
01050370
01050380
01050390

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```

FILL ANS[*] WITH OCT1110000000000077, OCT440,
OCT0103060502000100, OCT0407014207110711,
OCT0741000000000000, OCT0240000000000077,
OCT0605441111050710, OCT1111,
OCT1111100000000000, OCT0242000000000000,
OCT5, OCT2;

```

```

01050400
01050410
01050420
01050430
01050440
01050450

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```

CVN+ 12;
PNO + 105;
VERIFY

```

```

01050460
01050470
01050480

```

```

END;
PROCEDURE P106; COMMENT STREAM DESTINATION STATEMENT TRANSFER
CHARACTER PORTIONS EK 5 DEC 62;

```

```

01050490
01060000
01060010

```

BEGIN

```

ALPHA ARRAY A, B, C, D[1:6];
ALPHA X, Y;
INTEGER I, J;
STREAM PROCEDURE STPROC(F1, F2, F3, F4, F5, F6);
BEGIN

```

```

01060020
01060030
01060040
01060050
01060060

```

```

LABEL L1, L2, L3, L4, L5;
LOCAL C1, C2, C3, C4;
SI+F1;

```

```

01060070
01060080
01060090
01060100

```

```

DI+F2;
DS + 1 ZON;
DS + 3 ZON;
DS + 8 ZON;
DS + 4 ZON;
DS + 32 ZON;

```

```

01060110
01060120
01060130
01060140
01060150
01060160

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SI+F3;
DI+F4;

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01060170
01060180

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DS+ 1 NUM;
DS+ 1 NUM;

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```

01060190
01060200

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```

IF TOGGLE THEN GO TO L1;
L2: DS + 3 NUM;
DS + 8 NUM;
DS + 4 NUM;
IF TOGGLE THEN GO TO L3;

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01060210
01060220
01060230
01060240
01060250

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GO TO L4;
L3: DS + 32 NUM;
GO TO L5;

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01060260
01060270
01060280

```

```

L1: C1 + D1;
DI + F5; DI ← D1+3;
DS + 5 LIT "MINUS";
DI ← C1;
GO TO L2;
L4: C2+DI;
DI←F6; DI← DI+4;
DS + 4 LIT "PLUS";
DI ← C2;
GO TO L3;
L5:
END;
FILL A[*] WITH OCT2122232425262730, OCT2122232425262730,
OCT2142434445464750, OCT2142434445464750,
OCT2162636465666770, OCT2162636465666770;
FILL B[*] WITH OCT0102030405060710, OCT0102030405060710,
OCT02030405060710, OCT0102030405060710,
OCT02030405060710, OCT0102030405060710;
FILL C[*] WITH OCT4142434445464750, OCT6162636465666770,
OCT2122232425262730, OCT2122232425262730,
OCT4142434445464750, OCT6162636465666770;
FILL D[*] WITH OCT7777777777777777, OCT7777777777777777,
OCT7777777777777777, OCT7777777777777777,
OCT7777777777777777, OCT7777777777777777;
STPROC(A[1], B[1], C[1], D[1], X, Y);
FOR I ← 1 STEP 1 UNTIL 6 DO
  BEGIN
    TEMP[I] ← B[I];
    TEMP[I+6] ←D[I];
  END;
TEMP[13] ← X;
TEMP[14] ← Y;
FILL ANS[*] WITH OCT2122232425262730, OCT2122232425262730,
OCT2042434445464750, OCT2142434445464750,
OCT2062636465666770, OCT2162636465666770,
OCT0102030405060710, OCT0102030405060710,
OCT0102030405060710, OCT0102030405060710,
OCT0102030405060710, OCT0102030405060710,
OCT4431456462, OCT47436462;
CVN ← 14;
PNO ← 106;
VERIFY
END;
PROCEDURE P107; COMMENT STREAM DESTINATIONAL STATEMENT LITERAL
CHARACTERS EK 5 DEC 62;
BEGIN
ALPHA ARRAY A[1:6], B[1:3];
INTEGER I,J;
STREAM PROCEDURE STPR1( F1,F2);
BEGIN
DI←F1;
DS← 1 LIT "A";
DS← 3 LIT "BCD";
DS ← 8 LIT "EFGHI/*=" ;
DS← 4 LIT "KEH";
DS← 8 LIT "AY";
DS← 16 LIT "B";
DS←1 LIT "ASTU";
DS ← 7 LIT "JKLMNPOQ";
DI←F2;

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01060290
01060300
01060310
01060320
01060330
01060340
01060350
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01060400
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01060420
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01060470
01060480
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01060500
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01060700
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01070040
01070050
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DS+16 LIT "APASADENA,CALIL.";
DS+8 LIT "AUSA";
END;
STPR1(A[1],B[1]);
FOR I + 1 STEP 1 UNTIL 6 DO TEMP[I] + A [I];
FOR J + 1 STEP 1 UNTIL 3 DO TEMP[J+6] + B[J];
FILL ANS[*] WITH OCT2122232425262730, OCT3161537542253042,
OCT2170217021702170, OCT2222222222222222,
OCT2222222222222222, OCT2141424344454647,
OCT2147216221242545, OCT2172232143314332,
OCT2164622121646221;
CVN + 9;
PNO + 107;
VERIFY
END;
PROCEDURE P108; COMMENT LITERAL BITS EK G DEC 62;
BEGIN
ALPHA ARRAY A, B [1:4];
INTEGER I;
STREAM PROCEDURE STPP2(F1,F2);
BEGIN
DI + F1;
DS + 24 SET;
DS + 48 SET;
DS+60 SET; DS+ 60 SET;
DI + F2;
DS + 1 RESET;
DS + 48 RESET;
DS+60 RESET; DS+36 RESET;
DS + 47 RESET;
SI+F1; DI+F1; 4(IF SC="" THEN DS+1 RESET; DI+DI+7;
SI+SI+8);
END;
FILL ANS[*] WITH OCT0, OCT0, OCT0, OCT0;
FILL B[*] WITH OCT7777777777777777, OCT7777777777777777,
OCT7777777777777777, OCT7777777777777777;
STPP2(A,B);
FOR I + 1 STEP 1 UNTIL 4 DO
BEGIN
TEMP[I]+ A[I];
TEMP[I+4] + B[I];
END;
FILL ANS[*] WITH OCT3777777777777777, OCT3777777777777777,
OCT3777777777777777, OCT3777777777777777,
OCT0, OCT0, OCT0, OCT0;
CVN + 8;
PNO + 108;
VERIFY
END;
PROCEDURE P109; COMMENT 5.12.7 STREAM GO TO STATEMENT H N B ;
BEGIN
STREAM PROCEDURE GOTO (SRC,DST,SRS,DSN);
BEGIN
LABEL H;
SI + SRC ;
DI + DST;
DS + 1 WDS;
GO TO H ;
SI + SRS;
DI + DSN;

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01070180
01070190
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01070290
01070300
01070310
01080000
01080010
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01080070
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	DS + 1 WDS;	01090110
	H:END;	01090120
	TEMP[1]←63;	01090130
1	TEMP[2]← 63;	01090140
2	TEMP[3]← 17;	01090150
3	TEMP[4]← 17;	01090160
4	GOTO(TEMP[1],TEMP[3],TEMP[2],TEMP[4]);	01090170
5	FILL ANS[*] WITH OCT77, OCT77, OCT77, OCT21;	01090180
6	CVN ←4; PNO←109;VERIFY	01090190
7	END;	01090200
8	PROCEDURE P110; COMMENT 5.12.8 SKIP BIT H N B;	01100000
9	BEGIN	01100010
10	STREAM PROCEDURE SKBITS(SRC,DST,S,D,N);	01100020
11	VALUE S, D, N;	01100030
12	BEGIN	01100040
13	SI ← SRC; DI← DST;	01100050
14	SKIP S SB; SKIP D DB;	01100060
15	DS ← N CHR	01100070
16	END;	01100080
17	FILL TEMP[*] WITH OCT1030507;	01100090
18	SKBITS (TEMP[1], TEMP[2], 30,36,1);	01100100
19	FILL ANS[*] WITH OCT1030507, OCT0300;	01100110
20	CVN ←2; PNO ←110; VERIFY	01100120
21	END;	01100130
22	PROCEDURE P111; COMMENT 5.12.9 STREAM TALLY H N B;	01110000
23	BEGIN	01110010
24	INTEGER I;	01110020
25	INTEGER STREAM PROCEDURE SQUART(N);VALUE N;	01110030
26	BEGIN	01110040
27	TALLY←0;	01110050
28	N(N(TALLY←TALLY+1));	01110060
29	SQUART ← TALLY	01110070
30	END;	01110080
31	FOR I ← 1 STEP 1 UNTIL 10 DO	01110090
32	TEMP[I] ← SQUART(I); COMMENT I*2 ;	01110100
33	FILL ANS[*] WITH OCT1, OCT4, OCT11, OCT20, OCT31, OCT44,	01110110
34	OCT61, OCT0, OCT21, OCT44;	01110120
35	CVN←10; PNO←111; VERIFY	01110130
36	END;	01110140
37	PROCEDURE P112; COMMENT STREAM NEST STATEMENT EK 11 DEC 62;	01120000
38	BEGIN	01120010
39	INTEGER A,B,E,F,G,J,K;	01120020
40	ARRAY C[0:19],D[0:19], H[0:8], I[0:8];	01120030
41	STREAM PROCEDURE STPRN (F1,F2,F3,F4,F5,F6,F7,F8,F9,F10);	01120040
42	BEGIN	01120050
43	LABEL L1,L2,L3,L5,L6,L7;	01120060
44	LOCAL V1,V2,V3,V4;	01120070
45	TALLY ← 0;	01120080
46	8(SI←LOC F1; DI ← LOC F2;	01120090
47	V1 ← SI; V2←DI; DI←V2; SI←V1;	01120100
48	TALLY ← TALLY +1);	01120110
49	DI ← F2;	01120120
50	F2 ← TALLY;	01120130
51	SI ← LOC F2;	01120140
52	DS ← 1 WDS;	01120150
53	TALLY← 1;	01120160
54	V1←TALLY;	01120170
55	SI ← F3;	01120180
56	DI ← F4 ;	01120190
57	8(DI←DI+V1;SI←SI+V1);	01120200

```

2 (DS+1 WDS; DS+3 CHR; DS+8 OCT; DS+8 DEC; 01120210
GO TO L1; DS+ 1 WDS; L1: DS +8 ADD; DS +8 SUB; 01120220
DS + 8 ZON; DS+ 8 NUM) ; 01120230
1 GO TO L2; 01120240
2 TALLY + TALLY +1; 01120250
3 L2: 3 (DS +2 LIT "E"; DS + 6 SET; DS + 6 RESET; 01120260
4 GO TO L3; JUMP OUT; L3: SKIP 6 DB; SKIP 6 SB; 01120270
5 DS + 3 LIT "EK"); 01120280
6 TALLY + 0; 01120290
7 DI + F5; 01120300
8 2 (TALLY + TALLY+1); 2 (TALLY + TALLY+1); 2 (TALLY + 01120310
9 TALLY+1; JUMP OUT); JUMP OUT; TALLY + TALLY+1); TALLY 01120320
10 + TALLY +1) ; 01120330
11 F5 + TALLY; 01120340
12 SI + LOC F5; 01120350
13 DS + 1 WDS; 01120360
14 TALLY + 0; DI + F6; 01120370
15 8 (TALLY + TALLY+1; 2(TALLY + TALLY+1); F6 + TALLY); 01120380
16 SI + LOC F6; 01120390
17 DS + 1 WDS; 01120400
18 TALLY + 0; DI + F7; 01120410
19 3(3(TALLY + TALLY+1); TALLY + TALLY+1); 01120420
20 F7 + TALLY; 01120430
21 SI+ LOC F7; 01120440
22 DS + 1 WDS; 01120450
23 DI + F9 ; 01120460
24 SI + F8 ; 01120470
25 8 (IF SC = "A" THEN JUMP OUT; DS + 1 WDS); 01120480
26 4 (IF 1 SC = DC THEN BEGIN IF 1 SC = DC THEN 01120490
27 DS + 2 CHR END); 01120500
28 2( SKIP 1 SB; SKIP 1 DB; 01120510
29 IF SB THEN 2 (4(DS + 1 CHR);));) 01120520
30 DI + DI-2; SI + SI-2; 01120530
31 2 (IF SC = ALPHA THEN BEGIN IF TOGGLE THEN 01120540
32 DS + 4 CHR END) ; 01120550
33 TALLY + 0; 01120560
34 3 (IF 8 SC = DC THEN 8 (IF SC = ALPHA THEN 01120570
35 JUMP OUT 2 TO L5; 01120580
36 TALLY + TALLY+1); TALLY + TALLY +1); 01120590
37 L6: DI + F10; 01120600
38 F10 + TALLY; 01120610
39 SI + LOC F10; 01120620
40 DS + 1 WDS; GO TO L7; 01120630
41 L5: DS + 5 LIT "0"; DS + 3 LIT "SWD"; 01120640
42 GO TO L6 ; L7: 01120650
43 END; 01120660
44 FILL C[*] WITH OCT212223, OCT12345670, OCT3654321012345670, 01120670
45 OCT207, OCT33, OCT01010101010101, OCT02020202020202, 01120680
46 OCT2040606060404020, OCT0102030405060700, OCT313233, 01120690
47 OCT1020304055627377, OCT604, OCT22, OCT0102030405060710, 01120700
48 OCT111111111111111, OCT006020, OCT01020304, OCT0, OCT0, OCT0; 01120710
49 FILL D[*] WITH OCT2223, OCT0, OCT0, OCT0, OCT0, OCT10101010101010, 01120720
50 OCT04040404040404, OCT0101010101010101, OCT0, OCT10, 01120730
51 OCT0, OCT0, OCT0, OCT111111111111111, OCT01010101010101, 01120740
52 OCT0, OCT0, OCT0, OCT0, OCT0; 01120750
53 FILL H [*] WITH OCT2421222324212223, OCT2122777723247777, 01120760
54 OCT2526777723247777, OCT3011213150604423, 01120770
55 OCT3766554433221100, OCT2101020322040506, OCT0, 01120780
56 OCT2021212121000000, OCT2100000000000000; 01120790
57 FILL I [*] WITH OCT0, OCT2122000023240000, OCT2526000023240000, 01120800

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Data Documents/Inc.

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OCT3700000000000000, OCT3700000000000000, OCT0, OCT0, 01120810
OCT2021212121000000, OCT2100000000000000; 01120820
STPRN (A,B,C,D,E,F,G,H,I,J); 01120830
1 TEMP[1] + B; 01120840
2 FOR K + 0 STEP 1 UNTIL 19 DO TEMP[K+2] + D[K]; 01120850
3 TEMP[22] + E; 01120860
4 TEMP[23] + F; 01120870
5 TEMP[24] + G; 01120880
6 FOR K + 0 STEP 1 UNTIL 8 DO TEMP[K+25] + I[K]; 01120890
7 TEMP[34] + J; 01120900
8 FILL ANS [*] WITH OCT10, OCT2223, OCT12345670, 01120910
9 OCT3654321012345670, OCT33, OCT207, OCT1111111111111111, 01120920
10 OCT02020202020202, OCT2141616161414121, 01120930
11 OCT0102030405060700, OCT313233, OCT1020304055627377, 01120940
12 OCT100, OCT110, OCT0102030405060707, OCT1010101010101050, 01120950
13 OCT006020, OCT01020304, OCT2525770000254225, 01120960
14 OCT2525770000254225, OCT2525770000254225, OCT10, OCT11, 01120970
15 OCT14, OCT2421222324212223, OCT2122777723247777, 01120980
16 OCT2526777723247777, OCT3711213150604423, OCT3700554433221100, 01120990
17 OCT2101020322040506, OCT0, OCT2021212121000000, 01121000
18 OCT626624, OCT11; 01121010
19 CVN + 34; 01121020
20 PNO + 112; 01121030
21 VERIFY 01121040
22
23 END; 01121050
24 PROCEDURE P113; COMMENT JUMP OUT STATEMENT EK 10 DEC 62; 01130000
25 BEGIN 01130010
26 INTEGER A,B,C,D,E; 01130020
27 STREAM PROCEDURE STPRJ (F1,F2,F3,F4,F5); 01130030
28 BEGIN 01130040
29 LABEL L1,L2,L3; 01130050
30 DI + F1; 01130060
31 TALLY + 0; 01130070
32 4 ( TALLY + TALLY + 1; JUMP OUT) ; 01130080
33 F1 + TALLY; 01130090
34 SI + LOC F1; 01130100
35 DS + 1 WDS; 01130110
36 TALLY + 0; 01130120
37 DI + F2; 01130130
38 4 ( 8 ( TALLY + TALLY + 1; JUMP OUT); TALLY + TALLY + 1; 01130140
39 GO TO L1; TALLY + TALLY + 1; L1: JUMP OUT) ; 01130150
40 TALLY + TALLY + 1; 01130160
41 F2 + TALLY; 01130170
42 SI + LOC F2; 01130180
43 DS + 1 WDS; 01130190
44 DI + F3; 01130200
45 TALLY + 0; 01130210
46 8 ( 8 ( TALLY + TALLY + 1; JUMP OUT); 8 ( TALLY + TALLY + 1; 01130220
47 JUMP OUT); JUMP OUT TO L2; TALLY + TALLY + 1; JUMP OUT); 01130230
48 TALLY + TALLY + 1; 01130240
49 L2: F3 + TALLY; 01130250
50 SI + LOC F3; 01130260
51 DS + 1 WDS; 01130270
52 DI + F4; 01130280
53 TALLY + 0; 01130290
54 3 ( GO TO L3; 3 ( TALLY + TALLY + 1); L3: JUMP OUT; TALLY + TALLY + 1); 01130300
55 TALLY + TALLY + 1; 01130310
56 F4 + TALLY; 01130320
57 SI + LOC F4; 01130330
DS + 1 WDS; 01130340

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DI + F5; 01130350
TALLY + 0; 01130360
2(TALLY+TALLY+1; 3(TALLY+TALLY+1; 4 (TALLY +
TALLY+1; JUMP OUT); TALLY+TALLY+1; JUMP OUT); JUMP OUT; 01130370
TALLY + TALLY+1) ; 01130380
F5 + TALLY; 01130390
SI + LOC F5; 01130400
DS + 1 WDS; 01130410
END; 01130420
STPRJ (A,B,C,D,E); 01130430
TEMP[1] + A; 01130440
TEMP[2] + B; 01130450
TEMP[3] + C; 01130460
TEMP[4] + D; 01130470
TEMP[5] + E; 01130480
FILL ANS[*] WITH OCT1, OCT3, OCT2, OCT1, OCT4; 01130490
CVN + 5; 01130500
PND + 113; 01130510
VERIFY 01130520
END; 01130530
PROCEDURE P115; COMMENT 5.12.12 COMPOUND STREAM STATEMENT 8/5/63 LG; 01130540
BEGIN 01150000
INTEGER ARRAY STRM [0:20]; 01150010
INTEGER I,A,B,C,D; 01150020
STREAM PROCEDURE CSS (DEST,SRCE,A,B,C,D); 01150030
VALUE A,B,C,D; 01150040
BEGIN 01150050
LOCAL T14,T15,T16,T17,T1; 01150060
LABEL L1,L2,L3,L4,L5,L6,L7,LA,LB; 01150070
SI + SRCE ; DI + DEST ; 01150080
BEGIN COMMENT DUMMY STATEMENT DS+ 1 WDS END;END; 01150090
BEGIN END; 01150100
BEGIN 01150110
BEGIN 01150120
BEGIN SI + SI+8; DS + 1 WDS END 01150130
END 01150140
END; 01150150
DS + 1 WDS; 01150160
BEGIN DS + 1 WDS END; 01150170
BEGIN DS + 1 WDS END; 01150180
GO TO L1; 01150190
BEGIN DS + 1 WDS; L1: DS + 1 WDS; DS + 1 WDS END; 01150200
BEGIN DS + 1 WDS; GO TO L2; DS + 1 WDS END; 01150210
L2: DS + 1 WDS; 01150220
BEGIN 01150230
GO TO LA; 01150240
DS + 1 WDS ; 01150250
LA: DS + 1 WDS ; 01150260
GO TO LB; 01150270
DS + 1 WDS; 01150280
LB: DS + 1 WDS; 01150290
GO TO L3 ; DS + 1 WDS 01150300
END; 01150310
DS + 1 WDS; DS + 1 WDS; 01150320
L4: BEGIN DS + 1 WDS; 01150330
DS + 1 WDS; GO TO L5; 01150340
DS + 1 WDS 01150350
END; BEGIN DS + 1 WDS; 01150360
L3: DS + 1 WDS; 01150370
01150380
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		GO TO L4; DS + 1 WDS	01150400
	END;		01150410
1	L5:	T14 ← DI; DI ← DI + 8;	01150420
2		T15 ← DI; DI ← DI + 8;	01150430
3		T16 ← DI; DI ← DI + 8;	01150440
4		T17 ← DI;	01150450
5	L6:	TALLY ← A ; T1 ← TALLY; SI ← LOC T1; DI ← LOC A;	01150460
6		IF 8 SC= DC THEN	01150470
7		BEGIN SI ← LOC A;	01150480
8		DI ← T14 ;	01150490
9		DS ← 1 WDS	01150500
10		END	01150510
11		ELSE	01150520
12		BEGIN SI ← LOC B;	01150530
13		DI ← T15 ;	01150540
14		DS ← 1 WDS	01150550
15		END ;	01150560
16		IF TOGGLE THEN	01150570
17		BEGIN SI ← LOC C;	01150580
18		DI ← T16 ;	01150590
19		DS ← 1 WDS;	01150600
20		SI ← LOC A;	01150610
21		DI ← LOC B;	01150620
22		GO TO L6	01150630
23		END	01150640
24		ELSE	01150650
25		BEGIN SI ← LOC D ;	01150660
26		DI ← T17;	01150670
27		DS ← 1 WDS	01150680
28		END ;	01150690
29		END STREAMPROCEDURE CSS ;	01150700
30		COMMENT START OF EXECUTE OF P115;	01150710
31		A ← 14; B ← 15; C ← 16; D ← 17;	01150720
32		FOR I ← 0 STEP 1 UNTIL 20 DO STRM [I] ← I ;	01150730
33		CSS (TEMP, STRM, A, B, C, D);	01150740
34		FOR I ← 1 STEP 1 UNTIL 19 DO ANS[I] ← STRM[I];	01150750
35		CVN ← 17;	01150760
36		PNO ← 115;	01150770
37		VERIFY ;	01150780
38		END P115 ;	01150790
39		PROCEDURE P116; COMMENT 5.12.13.4 SOURCE COMPARE WITH LITERAL;	01160000
40		BEGIN	01160010
41		STREAM PROCEDURE CHECKSORCELIT(INARAY);	01160020
42		BEGIN	01160030
43		LOCAL P, Q;	01160040
44		LABEL A, B, C, D, E, F, G, H, NED;	01160050
45		DI ← LOC P; DS ← 8 LIT "19AZ* 2";	01160060
46		DI ← LOC Q; DS ← 7 LIT "0. (/+)" DS+1 LIT "";	01160070
47		DI ← INARAY; DI ← DI+7;	01160080
48		SI ← LOC P;	01160090
49		IF SC = "1" THEN BEGIN DS ← 1 LIT "1"; DI ← DI+7;	01160100
50		SI ← SI+2 END; IF TOGGLE THEN GO TO A; GO TO NED;	01160110
51	A:	IF SC > "+" THEN BEGIN DS ← 1 LIT "2"; DI ← DI+7;	01160120
52		SI ← SI+2 END; IF TOGGLE THEN GO TO B; GO TO NED;	01160130
53	B:	IF SC ≤ "*" THEN BEGIN DS ← 1 LIT "3"; DI ← DI+7;	01160140
54		SI ← SI+1 END; IF TOGGLE THEN GO TO C; GO TO NED;	01160150
55	C:	IF SC ≤ " " THEN BEGIN DS ← 1 LIT "4"; DI ← DI+7;	01160160
56		SI ← SI+1 END; IF TOGGLE THEN GO TO D; GO TO NED;	01160170
57	D:	IF SC = " " THEN BEGIN DS ← 1 LIT "5"; DI ← DI+7; END;	01160180
		SI ← LOC Q; IF TOGGLE THEN GO TO E; GO TO NED;	01160190

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E:  IF SC# "+" THEN BEGIN DS+ 1 LIT "6"; DI+DI+7;          01160200
    SI+SI+1 END; IF TOGGLE THEN GO TO F; GO TO NED;        01160210
F:  IF SC# "." THEN BEGIN DS+1 LIT "7"; DI+DI+7;          01160220
    SI+SI+6 END; IF TOGGLE THEN GO TO G; GO TO NED;        01160230
G:  IF SC = "" THEN BEGIN DS+1 LIT "7";DI+DI+7 END;        01160240
    IF TOGGLE THEN GO TO H; GO TO NED;                    01160250
H:  IF SC= "" THEN 2(IF SC= "" THEN 2(IF SC>"0" THEN      01160260
    JUMP OUT 2 TO NED); IF TOGGLE THEN                    01160270
    JUMP OUT TO NED; DS+1 LIT "1";                        01160280
    DI+DI+7);                                             01160290
NED:  END;                                                01160300
CHECKSORCELIT(TEMP[1]);                                  01160310
FILL ANS[*] WITH 1, 2, 3, 4, 5, 6, 7, 7, 1;             01160320
CVN+9;                                                    01160330
PND+116;                                                  01160340
VERIFY                                                    01160350
END;                                                       01160360
PROCEDURE P117; COMMENT STREAM SOURCE AND DESTINATION COMPARE. 01170000
    5.12.13.5      JUNE 24 1963;                          01170010
BEGIN                                                      01170020
    LABEL DAB;                                             01170030
    INTEGER I;                                             01170040
    STREAM PROCEDURE SOURCEDESTINCOMPARE(ARAYIN1, ARAYIN2, SIXTY4, 01170050
    ARAYIN15, ARAYINEND);                                  01170060
    VALUE SIXTY4;                                          01170070
    BEGIN                                                  01170080
        LCCAL Q, R;                                        01170090
        LABEL A, B, C, D, E, BAD;                          01170100
        DI+ARAYIN1 ; DS+20 LIT "ABCD4444IJKLMNOPQRST";    01170110
        DS+20 LIT "+9/+0..25 ";                            01170120
        DS+20 LIT "1234567891 ";                           01170130
        DS+20 LIT " ";                                     01170140
        DS+20 LIT " ";                                     01170150
        DS+20 LIT "*****";                                01170160
        DS+20 LIT "ABCDEFGHJKLMNOPQRST";                    01170170
        DI+LOC R; SI+LOC ARAYINEND; DS+1 WDS; SI+ARAYIN1; 01170180
        DI+LOC Q; DS+8 LIT "ABCD4444"; DI+LOC Q;           01170190
        IF 8 SC=DC THEN BEGIN DI+R; SI+SI-8; DS+8 CHR ;   01170200
        SI+SI-8; R+DI END; IF TOGGLE THEN GO TO A;        01170210
        GO TO BAD;                                         01170220
    A:  DI+LOC Q; DS+8 LIT "AACD4444"; DI+LOC Q;           01170230
        IF 4 SC#DC THEN BEGIN TALLY+0; DI+R; DS+4 OCT;    01170240
        R+DI END; IF TOGGLE THEN GO TO B; GO TO BAD;      01170250
    B:  DI+LOC Q; DS+8 LIT "+9/:-0.."; DI+LOC Q; SI+SI+12; 01170260
        IF 4 SC > DC THEN BEGIN IF 4 SC ≥ DC THEN BEGIN   01170270
        DI+R; DS+8 CHR ; R+DI END END; IF TOGGLE          01170280
        THEN GO TO C; GO TO BAD;                          01170290
    C:  SI+SI+4; DI+LOC Q; DS+8 LIT "ABCD5678"; DI+LOC Q; 01170300
        IF 4 SC< DC THEN GO TO D; IF TOGGLE THEN GO TO    01170310
        BAD;                                                01170320
    D:  IF 4 SC ≤ DC THEN BEGIN DI+R; DS+2 OCT; R+DI END; 01170330
        IF TOGGLE THEN GO TO E; GO TO BAD;                01170340
    E:  DI+ARAYIN15; SI+SI+10;                              01170350
        IF SIXTY4 SC > DC THEN GO TO BAD; IF TOGGLE THEN 01170360
        GO TO BAD; DI+R; DS+8 CHR ; R+DI;                 01170370
        DI+LOC Q; DS+8 LIT "Q"; DI+LOC Q;                  01170380
        IF SC = DC THEN GO TO BAD; IF TOGGLE THEN GO TO 01170390
        BAD; DI+R; DI+DI+4; DS+4 CHR ; R+DI;              01170400
        DI+LOC Q;                                           01170410
        IF 0 SC = DC THEN BEGIN DI+R; DI+DI+1; DS+3 CHR; 01170420

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	END; IF TOGGLE THEN GO TO BAD; DI+R;	01170430
	DI+DI-8; DS+3 LIT"A";	01170440
	BAD; END;	01170450
1	SORCEDESTINCOMPARE(TEMP[1], TEMP[25],63,TEMP[15], TEMP[44]);	01170460
2	DAB: FOR I+44 STEP 1 UNTIL 50 DO TEMP[I-43]+TEMP[I];	01170470
3	FILL ANS [*]WITH OCT2122232404040404, OCT10534,	01170480
4	OCT1757606060606060, OCT133,	01170490
5	OCT2425262730314142, OCT44454647,	01170500
6	OCT0050516200000000;	01170510
7	CVN+7;	01170520
8	PNO+117;	01170530
9	VERIFY	01170540
10	END;	01170550
11	PROCEDURE P118; COMMENT STREAM PROCEDURE SOURCE BIT 5.12.13.6 KM.;	01180000
12	BEGIN	01180010
13	STREAM PROCEDURE SBCHECK(UJK);	01180020
14	BEGIN	01180030
15	LOCAL Q, R, F, E, D, C, B, A;	01180040
16	LABEL L1, L2, L3;	01180050
17	DI + LOC R; DS + 8 LIT "AABBCCDH"; TALLY + 0;	01180060
18	DI + LOC Q; DS + 8 LIT "ABCDEFGH";	01180070
19	SI + LOC Q;	01180080
20	COMMENT SB IS 0;	01180090
21	IF SB THEN BEGIN A+TALLY; GO TO L1 END;	01180100
22	TALLY+2; A+ TALLY;	01180110
23	L1: SKIP 5 SB; DI+LOC R; TALLY+0;	01180120
24	COMMENT SB IS 1;	01180130
25	IF SB THEN BEGIN TALLY+TALLY+3; B+TALLY; GO TO L2	01180140
26	END; IF TOGGLE THEN BEGIN DS+3 CHR;TALLY+TALLY+2 END;	01180150
27	L2: SKIP 2 SB; TALLY + 0;	01180160
28	COMMENT SB IS 1;	01180170
29	IF SB THEN BEGIN IF 3 SC=DC THEN BEGIN C+TALLY	01180180
30	END; IF SC= "F" THEN TALLY+TALLY+4 END; TALLY+TALLY	01180190
31	+1; C+TALLY;	01180200
32	TALLY + 0;	01180210
33	SKIP 6 SB;	01180220
34	COMMENT SB IS 0;	01180230
35	IF SB THEN BEGIN D+TALLY; GO TO L3 END;	01180240
36	BEGIN SKIP 2 SB; TALLY+TALLY+6; D+TALLY END;	01180250
37	L3: SKIP 1 SB; TALLY+0;	01180260
38	COMMENT SB IS 1;	01180270
39	IF SB THEN BEGIN 8(TALLY + TALLY+7; IF SB THEN	01180280
40	JUMP OUT) END; E+TALLY;	01180290
41	TALLY+ 0;	01180300
42	COMMENT SB IS 1;	01180310
43	IF SB THEN BEGIN IF SC ="H" THEN BEGIN SI+LOC Q	01180320
44	; DI+LOC R; IF 1 SC = DC THEN TALLY+TALLY+8 END	01180330
45	END; TALLY+TALLY+1; F + TALLY;	01180340
46	SI+LOC A; DI+UJK; DS+ 6 WDS;	01180350
47	END;	01180360
48	SBCHECK(TEMP[1]);	01180370
49	FILL ANS[*] WITH OCT2, OCT3, OCT5, OCT6, OCT7, OCT11;	01180380
50	CVN+6;	01180390
51	PNO + 118;	01180400
52	VERIFY	01180410
53	END;	01180420
54	PROCEDURE P119; COMMENT STR PROC TOGGLE STATEMENT 5-12-13.7 KM.;	01190000
55	BEGIN	01190010
56	INTEGER ONE, TWO,ZERO,SIX;	01190020
57	STREAM PROCEDURE TESTTOGGLE(ARAYIN,INARAY,ONE,ZERO,TWO,SIX);	01190030

	VALUE ONE, ZERO, TWO, SIX;	01190040
	BEGIN LABEL L1, EXITRIN, L2, L3;	01190050
	LOCAL A, B, C;	01190060
1	TALLY+0;	01190070
2	DI+LOC A; DS+8 LIT "A";	01190080
3	SI + LOC A;	01190090
4	IF SC= "A" THEN GO TO L1; COMMENT SET TOGGLE TRUE;	01190100
5	GO TO EXITRIN; COMMENT TOGGLE WAS NOT SET TRUE;	01190110
6	DI + INARAY;	01190120
7	L1: IF TOGGLE THEN DI + ARAYIN;	01190130
8	IF TOGGLE THEN DI + DI+7;	01190140
9	IF TOGGLE THEN SI+LOC A;	01190150
10	IF TOGGLE THEN B+DI;	01190160
11	IF TOGGLE THEN DS+1 CHR; SI+SI-1;	01190170
12	IF TOGGLE THEN DS+ ONE WDS; SI+SI-3;	01190180
13	IF TOGGLE THEN DS+ ONE OCT;	01190190
14	IF TOGGLE THEN DS+2 ADD; COMMENT TOGGLE IS FALSE;	01190200
15	IF TOGGLE THEN GO TO EXITRIN; SI+SI-3;	01190210
16	IF SC="A" THEN GO TO L2 ; GO TO EXITRIN;	01190220
17	L2: COMMENT TOGGLE IS TRUE; DI + DI+4;	01190230
18	IF TOGGLE THEN DS + TWO ZON;	01190240
19	IF TOGGLE THEN DS+ 8 LIT "B";	01190250
20	IF TOGGLE THEN SKIP 42 DB;	01190260
21	IF TOGGLE THEN DS + SIX SET;	01190270
22	IF TOGGLE THEN 8(TALLY+TALLY+1);	01190280
23	C+TALLY; SI+LOC C; DS+1 WDS; SI+LOC A;	01190290
24	IF 8 SC = DC THEN TALLY+0;	01190300
25	IF TOGGLE THEN GO TO EXITRIN;	01190310
26	C+TALLY; SI+LOC C; DS + 1 WDS; SI+LOC A;	01190320
27	IF SB THEN GO TO EXITRIN;	01190330
28	IF TOGGLE THEN GO TO EXITRIN; IF SC= "A" THEN GO TO	01190340
29	L3;GO TO EXITRIN;	01190350
30	L3: IF TOGGLE THEN BEGIN 3( IF SC="E" THEN BEGIN IF	01190360
31	TOGGLE THEN JUMP OUT END; IF TOGGLE THEN TALLY +7;	01190370
32	JUMP OUT) END; C+TALLY; SI+LOC C; DS+1 WDS;	01190380
33	EXITRIN; END;	01190390
34	ONE + 1; TWO + 2; SIX + 6; ZERO + 0;	01190400
35	TESTTOGGLE (TEMP[1],TEMP[22],ONE,ZERO,TWO,SIX);	01190410
36		01190420
37	FILL ANS[*] WITH OCT21, OCT21212121212121, OCT1,	01190430
38	OCT0101000000002020, OCT2222222222222222,	01190440
39	OCT77, OCT10, OCT0, OCT10, OCT10;	01190450
40	CVN+10;	01190460
41	PNO+119;	01190470
42	VERIFY	01190480
43	END;	01190490
44	PROCEDURE P120; COMMENT STREAM PROCEDURE SOURCE FOR ALPHA TEST	01200000
45	5.12.13.8, FEB 6.1963 KM.;	01200010
46	BEGIN	01200020
47	STREAM PROCEDURE TESTALPHA(ARAYIN);	01200030
48	BEGIN	01200040
49	LOCAL A;	01200050
50	LABEL L1,L2,L3,L4;	01200060
51	DI+LOC A; DS+8 LIT "ABC*109*"; TALLY+0;	01200070
52	SI+LOC A; DI + ARAYIN;	01200080
53	IF SC= ALPHA THEN BEGIN IF TOGGLE THEN DS+8 LIT	01200090
54	"A"; DS+8 LIT"B"; GO TO L1 END; IF TOGGLE THEN	01200100
55	DS + 8 LIT "C" ; DS + 8 LIT "D";	01200110
56	L1: SI+SI+3;	01200120
57	IF SC= ALPHA THEN BEGIN IF TOGGLE THEN DS+8 LIT	01200130



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      "A"; DS+8 LIT "B"; GO TO L2 END; IF TOGGLE THEN 01200140
      DS + 8 LIT "C"; DS+8 LIT "D"; 01200150
L2:  SI+ SI+3; 01200160
      IF SC=ALPHA THEN BEGIN IF TOGGLE THEN DS+8 LIT 01200170
      "A";DS+8 LIT "B"; GO TO L3 END; IF TOGGLE THEN 01200180
      DS+8 LIT "C"; DS+8 LIT "D"; 01200190
L3:  SI+SI+1; 01200200
      IF SC=ALPHA THEN BEGIN IF TOGGLE THEN DS+8 01200210
      LIT "A"; DS+8 LIT "B"; GO TO L4 END; IF TOGGLE 01200220
      THEN DS+8 LIT "C";DS+8 LIT "D"; 01200230
L4:  END; 01200240
      TESTALPHA(TEMP[1]); 01200250
      FILL ANS[*] WITH OCT2121212121212121, OCT2222222222222222, 01200260
      OCT2424242424242424, OCT2121212121212121, 01200270
      OCT2222222222222222, OCT2424242424242424; 01200280
      CVN+6; 01200290
      PNO + 120; 01200300
      VERIFY 01200310
      END; 01200320
PROCEDURE P121; COMMENT FOR STATEMENT MULTIPLE LIST ELEMENTS; 01210000
      BEGIN 01210010
      REAL E,F,C; 01210020
      INTEGER D,G,H; 01210030
      BOOLEAN A,B; 01210040
      INTEGER PROCEDURE SEVEN (FML); 01210050
      INTEGER FML; 01210060
      BEGIN SEVEN+ FML MOD (FML+5) END; 01210070
      E+ 15.5; F+ 7.5; C+ 2.0; A+ TRUE; B+ FALSE ; D+ 2732 ; 01210080
      G+ 2; H+ 4; 01210090
      TEMP[1]+ 15; TEMP[2]+ 3; 01210100
      FOR C+ TEMP[1]+ TEMP[2], SEVEN(10),"AB"+ "A", 5 DO BEGIN 01210110
      G+ G+1; TEMP[G]+ C+5 END; 01210120
      FOR C+ F-E + 16 STEP 1 UNTIL SEVEN (9), 01210130
      D,[44;2] + D,[40;3] STEP D,[45;1] 01210140
      UNTIL TEMP[1]=6, SEVEN(6)+2 STEP "AB" MOD "A" UNTIL "A" = 8 , 01210150
      15 STEP 3 UNTIL 01210160
      20 DO BEGIN G+ G+1; TEMP [G]+ C END; 01210170
      FOR C+ F-E STEP (-F) WHILE G < 16, SEVEN(2) x (-4) 01210180
      WHILE A OR B, 8 01210190
      STEP(-F) UNTIL = (SEVEN(0)) DO BEGIN G+ G+1; H+ H+1; 01210200
      A+ BOOLEAN(H,[45;1]); 01210210
      TEMP[G]+ SEVEN (C) END; 01210220
      FILL ANS [*] WITH OCT17, OCT3, OCT27, OCT17, OCT2150, 01210230
      OCT12, OCT10, OCT11, OCT10, OCT11, 01210240
      OCT10, OCT11, OCT17, OCT22, OCT2000000000000002, 01210250
      OCT2000000000000005, OCT2000000000000002, 01210260
      OCT2000000000000002, OCT10, 01210270
      OCT1; 01210280
      CVN+ 20 ; 01210290
      PNO+ 121 ; 01210300
      VERIFY 01210310
      END; 01210320
PROCEDURE P122; COMMENT PRECEDENCE OF LOGICAL OPERATORS EK 01220000
      29 NOV 62; 01220010
      BEGIN 01220020
      INTEGER X1,X2,X3,X4; 01220030
      BOOLEAN A1,A2,A3,A4,A5,A6,A7; 01220040
      X1 + X2 + 1; 01220050
      X3 + 3; 01220060
      X4 + 4; 01220070

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A1 ← A2 ← A3 ← A4 ← TRUE;                                01220080
A5 ← A6 ← A7 ← FALSE;                                    01220090
  IF NOT X1≠X2 THEN TEMP[1]←7 ELSE TEMP[1]←5;            01220100
1 IF X4>X1+X2+X3 THEN TEMP[2]← 5 ELSE TEMP[2] ← 7;      01220110
2 IF A1 OR A5 AND A6 THEN TEMP[3] ← 7 ELSE TEMP[3] ← 5;  01220120
3 IF A1 EQV A5 IMP A2 OR A6 AND A5 THEN TEMP[4]←7 ELSE TEMP[4]←5;01220130
4 IF A6 EQV A5 AND A2 THEN TEMP[5]← 7 ELSE TEMP[5] ← 5;  01220140
5 IF X4 < X3 EQV X1=X2 IMP A1 THEN TEMP[6]← 5 ELSE TEMP[6]← 7; 01220150
6 IF A1 IMP A5 IMP A6 THEN TEMP[7] ← 7 ELSE TEMP [7] ← 5; 01220160
7 IF X1=X2 OR NOT X1≠X3 AND A5 IMP A6 EQV A5 OR X4>X1+X2+X3 AND 01220170
8 NOT A5 IMP A4 AND X1=X2 THEN TEMP[8] ← 5 ELSE TEMP[8] ← 7; 01220180
9 IF X4<X3 EQV NOT A1 IMP X1=X2 OR NOT X3>X4 THEN TEMP [9] ← 5 01220190
10 ELSE TEMP[9] ← 7;                                     01220200
11 IF NOT A5 OR X4<X1+X2 IMP A5 EQV X1=X2 IMP NOT X4<X1 AND A2 01220210
12 THEN TEMP[10] ← 5 ELSE TEMP[10] ← 7;                 01220220
13 IF NOT X4>X1 EQV X4>X1 AND A5 IMP NOT(A1 OR A5) THEN TEMP[11] 01220230
14 ←5 ELSE TEMP[11] ← 7;                                 01220240
15 IF A5 EQV X4>X1+X2 OR A1 IMP FALSE THEN TEMP[12] ← 7 ELSE 01220250
16 TEMP[12]← 5;                                          01220260
17 IF A4 OR A1 AND A6 AND NOT (A1 OR A5 AND A6 IMP X4<X1) THEN 01220270
18 TEMP[13] ← 7 ELSE TEMP[13] ← 5;                      01220280
19 IF NOT A1 EQV X4=X1 OR (A1 AND TRUE) AND A6 OR FALSE THEN 01220290
20 TEMP[14] ← 7 ELSE TEMP[14]← 5;                      01220300
21 FILL ANS[*] WITH OCT7, OCT7, OCT7, OCT7, OCT7, OCT7, OCT7, 01220310
22 OCT7, OCT7, OCT7, OCT7, OCT7, OCT7, OCT7;            01220320
23 CVN ← 14;                                             01220330
24 PNO ← 122;                                           01220340
25 VERIFY                                               01220350
26 END;                                                  01220360
27 PROCEDURE P123; COMMENT GO TO STATEMENT (PROCEDURE) EK 20 DEC 62; 01230000
28 BEGIN                                               01230010
29 LABEL L12, LLP, LL, L, L03, L02;                    01230020
30 INTEGER I, J, K, SUM, B, C, A;                      01230030
31 BOOLEAN T, T2, T3, T4, T5, T6, T7, T8, TEST;       01230040
32 PROCEDURE PR1( I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, 01230050
33 L02, L03, LLP, L);                                  01230060
34 INTEGER I, J, K, SUM, B, C, A;                      01230070
35 BOOLEAN T , T2, T3, T4, T5, T7, TEST;              01230080
36 LABEL L02, L03, LLP, L;                             01230090
37 BEGIN LABEL L1;                                     01230100
38 L1: BEGIN                                           01230110
39 LABEL LL1, LL2, LL3, LL4, L2, LL5, LLN, L1, L3, LM5, LL6; 01230120
40 IF TEST THEN GO TO LL1;                             01230130
41 LL2: IF T THEN GO TO L2;                             01230140
42 LL3: I ← I+1; TEMP[I] ← I;                           01230150
43 GO TO IF I< 2 THEN LL2 ELSE LL4;                    01230160
44 LL4: GO TO IF I<3 THEN LL2 ELSE LL5;                01230170
45 LL5: IF I<4 THEN GO TO LL3;                         01230180
46 GO TO L2;                                            01230190
47 L2: IF J < 10 THEN GO TO IF SUM ≥ K THEN LM5        01230200
48 ELSE L03 ELSE GO TO LL6;                             01230210
49 LM5: J ← J+1;                                        01230220
50 IF T2 THEN GO TO LLP;                                01230230
51 FOR C ← 1 STEP 1 UNTIL 10 DO SUM ← SUM + 1;         01230240
52 GO TO L2;                                            01230250
53 LL6: BEGIN                                           01230260
54 LABEL LNN, LTN, LTT;                                01230270
55 READ DBSUM;                                         01230280
56 IF T3 THEN GO LNN;                                  01230290
57 DBSUM ← SUM + SUM ;                                 01230300

```

	TEMP[B] ← DBSUM; GO TO LTT;	01230310
	LLN: TEMP[B] ← "BYPASS";	01230320
	IF T4 THEN GO TO LTN;	01230330
1	LTT: GO TO L3;	01230340
2	LTN:	01230350
3	END;	01230360
4	L3: BEGIN	01230370
5	INTEGER X1;	01230380
6	IF T7 THEN GO TO L;	01230390
7	X1 ← A;	01230400
8	IF T5 THEN GO TO LLN;	01230410
9	TEMP[X1] ← A;	01230420
10	GO TO LLN;	01230430
11	END;	01230440
12	LL1: TEMP[6] ← "TST";	01230450
13	GO TO L02;	01230460
14	LLN:	01230470
15	END; END;	01230480
16	T3 ← T4 ← T5 ← TRUE; B ← 7;	01230490
17	TEST ← T ← T2 ← T7 ← FALSE;	01230500
18	I ← J ← K ← SUM ← 0;	01230510
19	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230520
20	TEMP[5] ← SUM;	01230530
21	TEST ← TRUE;	01230540
22	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230550
23	L02: TEST ← T3 ← T5 ← FALSE;	01230560
24	T ← TRUE;	01230570
25	B ← 8;	01230580
26	A ← 9;	01230590
27	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230600
28	TEMP[10] ← "TEN";	01230610
29	K ← 1022;	01230620
30	J ← 0;	01230630
31	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230640
32	L03: TEMP[11] ← "K300";	01230650
33	J ← K ← 0;	01230660
34	T2 ← TRUE;	01230670
35	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230680
36	LLP: TEMP[12] ← "I2";	01230690
37	J ← 10;	01230700
38	T3 ← T7 ← TRUE;	01230710
39	PR1 (I, J, K, SUM, B, C, A, T, T2, T3, T4, T5, T7, TEST, L02, L03, LLP, L);	01230720
40	L: TEMP[13] ← "LUCKY";	01230730
41	FILL ANS[*] WITH OCT1, OCT2, OCT3, OCT4, OCT144, OCT636263,	01230740
42	OCT227047216262, OCT227047216262,	01230750
43	OCT11, OCT632545, OCT42030000,	01230760
44	OCT6302, OCT4364234270;	01230770
45	CVN ← 13;	01230780
46	PNO ← 123;	01230790
47	VERIFY	01230800
48	END;	01230810
49	PROCEDURE P124; COMMENT GO TO STATEMENT (SWITCHES) EK 17 DEC 62;	01240000
50	BEGIN	01240010
51	LABEL L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L14, L15, L16, L17;	01240020
52	INTEGER X1, X2, Y1, Y2, I, K, L;	01240030
53	SWITCH SW2 FORWARD ;	01240040
54	SWITCH SW3 FORWARD ;	01240050
55	SWITCH SW1 ← L1, L2, L3, SW2[Y1], SW2[Y2+7], L6, L7, L15;	01240060
56	SWITCH SW2 ← L3, L4, L5, SW1[X1], SW1[X2], L8, L9, L16;	01240070
57	SWITCH SW3 ← L10, IF I=K THEN L11 ELSE L12, SW3[4], SW1[X2+3];	01240080

Data Documents/Inc.

```
Y1 + 1; 01240090
Y2 + Y1; 01240100
X1 + 7; 01240110
X2 + 5; 01240120
I + K + 2; 01240130
GO TO SW1[1]; 01240140
L1: TEMP[1] + 1; 01240150
L2: GO TO IF Y1= 1 THEN SW1[3] ELSE L5; 01240160
L3: TEMP[2] + 2; 01240170
Y1+Y1+1; 01240180
GO TO L2; 01240190
L5: BEGIN 01240200
      INTEGER X1,X2; 01240210
      X1 + 4; 01240220
      X2 + 6; 01240230
      GO TO SW2[X1]; 01240240
    END; 01240250
L7: TEMP[3] + 3; 01240260
GO TO SW2[X2+2]; 01240270
L9: TEMP[4] + 4; 01240280
L + 0; 01240290
L14: L + L+1; 01240300
GO TO SW3[L]; 01240310
L10: TEMP[5] + 5; 01240320
GO TO L14; 01240330
L11: TEMP[6] + 6; 01240340
K + K+1; 01240350
GO TO SW3[L]; 01240360
L12: TEMP[7] + 7; 01240370
GO TO L14; 01240380
L15: TEMP[8]+8; 01240390
GO TO SW1[(X1-1)]; 01240400
L6: BEGIN 01240410
      INTEGER X2; 01240420
      X2 + 10; 01240430
      BEGIN 01240440
        INTEGER X1; 01240450
        X2 + 8; 01240460
        GO TO SW2[X2-3] 01240470
      END 01240480
    END; 01240490
L8: L4: L16: TEMP[9]+9; 01240500
      BEGIN 01240510
        LABEL LA, LB, LC; 01240520
        SWITCH SW4 + LA, LB, LC, L17; 01240530
        Y1 + 2 ; GO TO SW4[Y1]; 01240540
        LA: TEMP[10] + 0 ; GO TO LC; 01240550
        LB: TEMP[10] + 10; 01240560
        LC: GO TO SW4[4] END; 01240570
        L17: TEMP[11] + 11; 01240580
      END 01240590
      FILL ANS[*] WITH OCT1, OCT2, OCT3, OCT4, OCT5, OCT6, OCT7,
      OCT10, OCT11, OCT12, OCT13; 01240600
      CVN +11; 01240610
      PNO + 124; 01240620
      VERIFY 01240630
    END; 01240640
PROCEDURE P125; COMMENT 5.11.3.2 PROCEDURE BODY VARIATIONS; 01250000
BEGIN 01250010
  LABEL L1,L2; 01250020
  INTEGER I,J; BOOLEAN B; 01250030
```

Data Documents/Inc.

```
I + 6; J + 12; B + TRUE; 01250040
COMMENT ASSIGNMENT STATEMENT; 01250050
TEMP[1] + 1; TEMP[2] + TEMP[2] + TEMP[2] + 1, [45:1]; 01250060
1 TEMP[3], [46:2] + 7; 01250070
2 BEGIN 01250080
3 INTEGER PROCEDURE ARITH (I); 01250090
4     INTEGER I; 01250100
5     BEGIN 01250110
6         TEMP[4] + (I+6) - (+2/(I-5)); ARITH + TEMP[4] END; 01250120
7
8     PROCEDURE BOOL (B); 01250130
9     BOOLEAN B; 01250140
10    BEGIN 01250150
11        TEMP[5] + REAL(B) END; 01250160
12    PROCEDURE GOTO; 01250170
13    BEGIN LABEL L1; GO TO L1; L1: TEMP[7] + 4 END; 01250180
14    PROCEDURE DUMMY; BEGIN END; 01250190
15    PROCEDURE CALL(I); INTEGER I; BEGIN TEMP[6] + 1 + ARITH(I) END; 01250200
16    CALL (I); BOOL(B); GOTO; DUMMY; 01250210
17    END; 01250220
18    FILL ANS[*] WITH OCT1, OCT1, OCT3, OCT12, OCT1, OCT13, OCT4; 01250230
19    CVN + 7; PNO + 125; VERIFY 01250240
20
21    END; 01250250
22    PROCEDURE P126; COMMENT 5.11.3.2 RECURSIVE PROCEDURES, CCZ, 11/28/62; 01260000
23    BEGIN INTEGER I; 01260010
24    REAL PROCEDURE FACTORIAL (N); VALUE N; INTEGER N; 01260020
25    BEGIN FACTORIAL + IF N = 0 THEN 1 ELSE N * FACTORIAL(N-1) END; 01260030
26    FOR I + 1 STEP 1 UNTIL 10 DO TEMP[I] + FACTORIAL(I); 01260040
27    FILL ANS [*] WITH OCT1, OCT2, OCT6, OCT30, OCT170, OCT1320, 01260050
28    OCT11660, OCT116600, OCT1304600, OCT15657400; 01260060
29
30    CVN + 10; 01260070
31    PNO + 126; 01260080
32    VERIFY 01260090
33    END; 01260100
34    PROCEDURE P127; COMMENT 5.11.4 TYPED PROCEDURES, C. ZETHRAEUS, 11/29; 01270000
35    BEGIN 01270010
36    REAL PROCEDURE RP(I); COMMENT RP = 4; 01270020
37    INTEGER I; 01270030
38    BEGIN 01270040
39    REAL X, Y, Z; BOOLEAN B; 01270050
40    I + I + 1; B + BOOLEAN(I, [44:1]); IF NOT B THEN Z + RP(I) + 1; 01270060
41    X + RP + Y + Z + 1; 01270070
42    END; 01270080
43    INTEGER PROCEDURE IP1; COMMENT IP1 = 6; 01270090
44    BEGIN INTEGER I; 01270100
45    FOR I + 1 STEP 1 UNTIL 6 DO IP1 + 1; 01270110
46    END; 01270120
47    INTEGER PROCEDURE IP2; COMMENT IP2 = 3; 01270130
48    BEGIN LABEL L1; INTEGER IPX; 01270140
49    FOR IPX + 1 STEP 1 UNTIL 4 DO IF IPX = 3 THEN GO TO L1; 01270150
50    L1: IP2 + IPX END; 01270160
51    INTEGER I; I + 0; 01270170
52    TEMP[1] + RP(I); TEMP[2] + IP1; TEMP[3] + IP2; 01270180
53    FILL ANS[*] WITH OCT17, OCT1, OCT3; 01270190
54    CVN + 3; 01270200
55    PNO + 127; 01270210
56    VERIFY 01270220
57    END; 01270230
58    PROCEDURE P128; COMMENT 5.11 PROCEDURE WEB, C. ZETHRAEUS, 11/29/62; 01280000
59    BEGIN PROCEDURE W66; TEMP[1] + TEMP[1] + 1; 01280010
60    PROCEDURE W56; W66; 01280020
```

```

PROCEDURE W46; W56; 01280030
PROCEDURE W36; W46; 01280040
PROCEDURE W26; W36; 01280050
PROCEDURE W16; W26; 01280060
  PROCEDURE W65; BEGIN W66; W56 END; 01280070
PROCEDURE W55; BEGIN W65; W56; W46 END; 01280080
PROCEDURE W45; BEGIN W55; W46; W36 END; 01280090
PROCEDURE W35; BEGIN W45; W36; W26 END; 01280100
PROCEDURE W25; BEGIN W35; W26; W16 END; 01280110
PROCEDURE W15; BEGIN W25; W16 END; 01280120
PROCEDURE W64; BEGIN W65; W55 END; 01280130
PROCEDURE W54; BEGIN W64; W55; W45 END; 01280140
PROCEDURE W44; BEGIN W54; W45; W35 END; 01280150
PROCEDURE W34; BEGIN W44; W35; W25 END; 01280160
PROCEDURE W24; BEGIN W34; W25; W15 END; 01280170
PROCEDURE W14; BEGIN W24; W15 END; 01280180
PROCEDURE W63; BEGIN W64; W54 END; 01280190
PROCEDURE W53; BEGIN W63; W54; W44 END; 01280200
PROCEDURE W43; BEGIN W53; W44; W34 END; 01280210
PROCEDURE W33; BEGIN W43; W34; W24 END; 01280220
PROCEDURE W23; BEGIN W33; W24; W14 END; 01280230
PROCEDURE W13; BEGIN W23; W14 END; 01280240
PROCEDURE W62; BEGIN W63; W53 END; 01280250
PROCEDURE W52; BEGIN W62; W53; W43 END; 01280260
PROCEDURE W42; BEGIN W52; W43; W33 END; 01280270
PROCEDURE W32; BEGIN W42; W33; W23 END; 01280280
PROCEDURE W22; BEGIN W32; W23; W13 END; 01280290
PROCEDURE W12; BEGIN W22; W13 END; 01280300
PROCEDURE W61; BEGIN W62; W52 END; 01280310
PROCEDURE W51; BEGIN W61; W52; W42 END; 01280320
PROCEDURE W41; BEGIN W51; W42; W32 END; 01280330
PROCEDURE W31; BEGIN W41; W32; W22 END; 01280340
PROCEDURE W21; BEGIN W31; W22; W12 END; 01280350
PROCEDURE W11; BEGIN W21; W12 END; 01280360
W11; 01280370
FILL ANS[*] WITH OCT35314; 01280380
CVN+1; PNO+128; VERIFY 01280390
END; 01280400
PROCEDURE P13; COMMENT STREAM ELSE STATEMENT 5.12.13.1 9/4/63 ; 01310000
BEGIN 01310010
BOOLEAN TRU,FLS; 01310020
INTEGER TOGT; 01310030
STREAM PROCEDURE THENELSE(TA,TB,TC,TD,TE,TF,TG,TH,TI,TJ,TK, 01310040
TOGT,TRU,FLS); 01310050
VALUE TOGT,TRU,FLS; 01310060
BEGIN 01310070
LOCAL T1; 01310080
LABEL L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13; 01310090
COMMENT SET TOGGLE TRUE ; 01310100
SI + LOC TOGT; DI + LOC T1; DS + 1 WDS ; DI + DI-1; 01310110
SI + SI-1; 01310120
COMMENT TEST THEN STMT IS EXECUTED,ELSE STMT IS IGNORED; 01310130
IF 1 SC = DC THEN GO TO L1 ELSE GO TO L2; 01310140
SI + LOC TRU; DI + TB; DS + 1 WDS; 01310150
L1: SI + LOC TRU; DI + TA; DS + 1 WDS; GO TO L3; 01310160
L2: SI + LOC FLS; DI + TA; DS + 1 WDS; 01310170
L3: IF TOGGLE THEN BEGIN SI + LOC TRU; DI + TC; DS + 1 WDS 01310180
END 01310190
ELSE GO TO L4 ; GO TO L5; 01310200
L4: SI + LOC FLS; DI + TC; DS + 1 WDS; 01310210

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L5: IF TOGGLE THEN TALLY + TOGT          01310220
      ELSE TALLY + FLS;                   01310230
      T1 + TALLY; SI + LOC T1; DI + TD; DS + 1 WDS; 01310240
COMMENT TEST THEN STMT IS IGNORED, ELSE STMT IS EXECUTED; 01310250
      SI + LOC TOGT; DI + LOC FLS; IF 8 SC = DC 01310260
      THEN TALLY + FLS                    01310270
      ELSE TALLY + TRU;                   01310280
      T1 + TALLY; SI + LOC T1; DI + TE; DS + 1 WDS; 01310290
      SI + LOC TRU; DI + TF; DS + 1 WDS; 01310300
      IF TOGGLE THEN BEGIN SI + LOC FLS; DI + TG; DS + 1 WDS 01310310
      END                                  01310320
      ELSE GO TO L6;                      01310330
      SI + LOC TRU; DI + TH; DS + 1 WDS; GO TO L7; 01310340
L6: SI + LOC TRU; DI + TG; DS + 1 WDS; 01310350
L7: IF TOGGLE THEN GO TO L8              01310360
      ELSE BEGIN SI + LOC TRU; DI + TI; DS + 1 WDS 01310370
      END; GO TO L8;                     01310380
      SI + LOC TRU; DI + TJ; DS + 1 WDS; 01310390
L8: IF TOGGLE THEN GO TO L10             01310400
      ELSE BEGIN                          01310410
      TALLY + FLS;                        01310420
      8C IF TOGGLE THEN GO TO L12         01310430
      ELSE BEGIN                          01310440
      IF TOGGLE THEN GO TO L13           01310450
      ELSE                                01310460
      TALLY + TRU;                        01310470
      JUMP OUT;                           01310480
      END;                                01310490
      L12: TALLY + FLS; JUMP OUT;         01310500
      L13: TALLY + TOGT; JUMP OUT;        01310510
      END;                                01310520
      L9: T1 + TALLY; SI + LOC T1; DI + TK; DS + 1 WDS ; 01310530
      GO TO L11;                          01310540
      L10: TALLY + FLS ; GO TO L9;        01310550
      L11: END THENELSE;                  01310560
      TRU + TRUE;                          01310570
      FLS + FALSE;                        01310580
      TOGT + 9;                            01310590
      THENELSE (TEMP[1],TEMP[2],TEMP[3],TEMP[4],TEMP[5], 01310600
      TEMP[6],TEMP[7],TEMP[8],TEMP[9],TEMP[10],TEMP[11],
      TOGT,TRU,FLS);                      01310610
      FILL ANS[*] WITH OCT1, OCT0, OCT1, OCT11, OCT1, OCT1, 01310620
      OCT1, OCT0, OCT1, OCT0, OCT1;       01310630
      CVN + 11 ;                          01310640
      PND + 131;                          01310650
      VERIFY                              01310660
      END P131 ;                          01310670
      FDUMMY[0,0]+FDUMMY[1,0]+FDUMMY[2,0]+0; 08000000
      IF COMMON = 0 THEN                   08990000
      BEGIN                                08990010
      IJ := 1 ;                            08990020
      JK := 1 ; JKK := 131 ;              08990030
      END ELSE                             08990040
      BEGIN                                08990050
      JK := COMMON MOD 1000 ;             08990060
      JKK := JK ;                         08990070
      IF JK = 0 THEN                       08990080
      BEGIN                                08990090
      JK := 1 ; JKK := 131 ;              08990100
      END ;                                08990110

```

Data Documents/Inc.

```
IJ := COMMON DIV 1000 ;
IF IJ = 0 THEN IJ := 1 ;
END ;
```

```
FOR II := 1 STEP 1 UNTIL IJ DO
FOR JJ := JK STEP 1 UNTIL JKK DO
CASE JJ OF
```

```
BEGIN
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DD;
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P1 ;
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P2 ;
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P3 ;
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P4 ;
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P5 ;
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P6 ;
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P7 ;
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DD;
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P9 ;
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P10 ;
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P11 ;
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P12 ;
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P13 ;
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P14 ;
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P15 ;
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P16 ;
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P17 ;
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P18 ;
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P19 ;
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DD;
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P21 ;
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P22 ;
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P23 ;
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P24 ;
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P46 ;
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P47 ;
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P48 ;
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DD ;
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P50 ;
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P51 ;
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DD; DD; DD;
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08990160
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08990170
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08990180
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08990190
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09990000
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09990010
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09990020
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09990030
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09990040
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09990050
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09990060
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09990062
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09990070
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09990080
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09990090
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09990100
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09990200
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09990210
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09990220
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09990230
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09990450
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09990452
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09990460
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09990470
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09990480
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Data Documents/Inc.

	P55 ;		09990490
		DD ;	09990500
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4	P61 ;		09990520
5	P62 ;		09990530
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7	P64 ;		09990550
8		DD ;	09990560
9	P66 ;		09990562
10		DQ ; DD ; DD ; DD ; DD ; DD ; DD ;	09990570
11	P74 ;		09990572
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26	P98 ;		09990690
27	P99 ;		09990700
28	P100 ;		09990710
29	P101 ;		09990720
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35	P107 ;		09990780
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43	P115 ;		09990852
44	P116 ;		09990860
45	P117 ;		09990870
46	P118 ;		09990880
47	P119 ;		09990890
48	P120 ;		09990900
49	P121 ;		09990910
50	P122 ;		09990920
51	P123 ;		09990930
52	P124 ;		09990940
53	P125 ;		09990950
54	P126 ;		09990960
55	P127 ;		09990970
56	P128 ;		09990980
57		DD ; DD ;	09990990
			09990992

P131;  
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END ; % END OF CASE STATEMENT

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LABEL 000000000PRINTEK00175099CC EX OBJECT/READ;FILE SOURCEFILE=SYMBOL/CHECKAL;END+

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