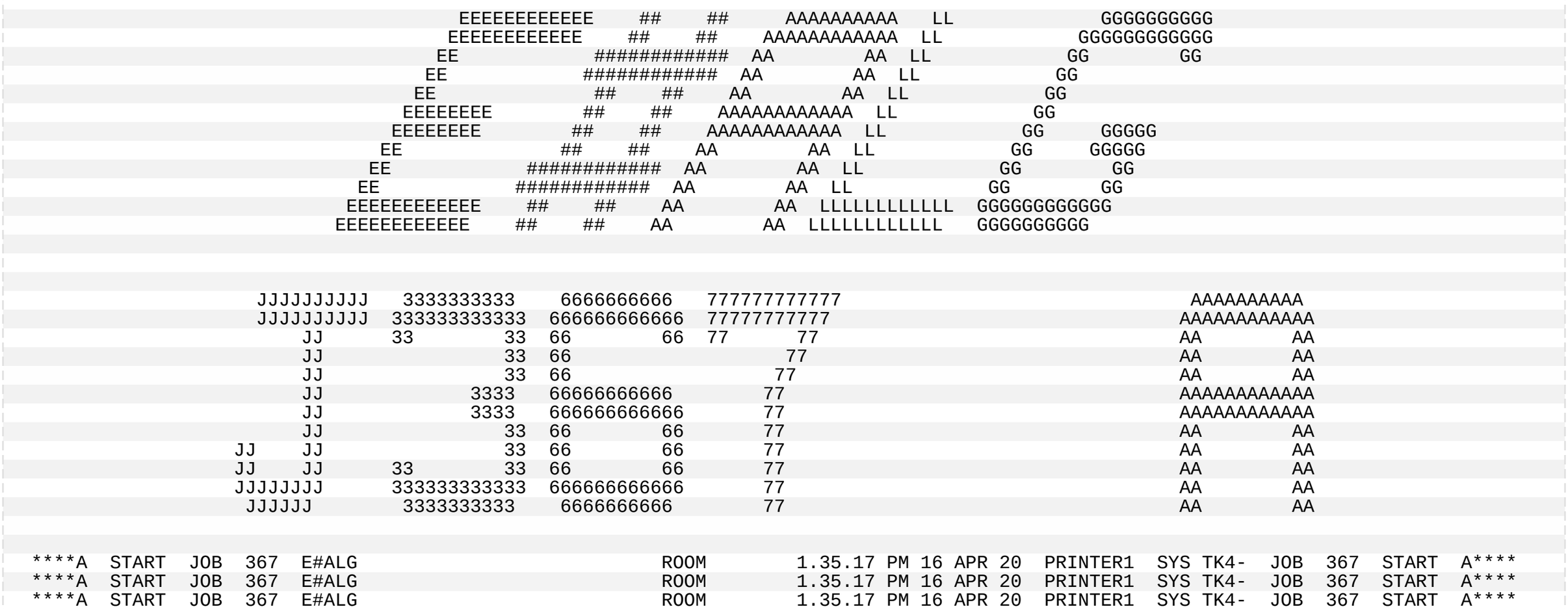


****A START JOB 367 E#ALG ROOM 1.35.17 PM 16 APR 20 PRINTER1 SYS TK4- JOB 367 START A****

****A START JOB 367 E#ALG ROOM 1.35.17 PM 16 APR 20 PRINTER1 SYS TK4- JOB 367 START A****
****A START JOB 367 E#ALG ROOM 1.35.17 PM 16 APR 20 PRINTER1 SYS TK4- JOB 367 START A****

J E S 2 J O B L O G

```
13.35.16 JOB  367  $HASP373 E#ALG    STARTED - INIT  1 - CLASS A - SYS TK4-
13.35.16 JOB  367  IEF403I E#ALG - STARTED - TIME=13.35.16
13.35.16 JOB  367  IEFACTRT - Stepname  Procstep  Program   Retcode
13.35.16 JOB  367  E#ALG      ALGOL               ALGOL     RC= 0000
13.35.17 JOB  367  E#ALG      GO                  LOADER    RC= 0000
13.35.17 JOB  367  IEF404I E#ALG - ENDED - TIME=13.35.17
13.35.17 JOB  367  $HASP395 E#ALG    ENDED

------ JES2 JOB STATISTICS ------

 16 APR 20 JOB EXECUTION DATE

         5 CARDS READ

       197 SYSOUT PRINT RECORDS

         0 SYSOUT PUNCH RECORDS

      0.01 MINUTES EXECUTION TIME
```

```
 1     //E#ALG JOB CLASS=A,MSGCLASS=A,MSGLEVEL=(1,1),NOTIFY=HERC01,            JOB  367
       //            USER=HERC01,PASSWORD=         GENERATED BY IKJEFF10
 2     // EXEC ALGOFCG,PARM.ALGOL=LONG,PARM.GO=NOPRINT
       ***                                                                    00001001
       ********************************************************************** 00002001
       ***                                                                    00003001
       ***       IBM ALGOL F LEVEL 2.1                                        00004001
       ***                                                                    00005001
       ***       360S-AL-531 ALGOL F COMPILER                                 00006001
       ***            AND                                                     00007001
       ***       360S-LM-532 ALGOL F LIBRARY                                  00008001
       ***                                                                    00009001
       ***       COMPILE AND EXECUTE A PROGRAM                                00010001
       ***                                                                    00011001
       ********************************************************************** 00012001
       ***                                                                    00013001
 3     XXALGOL   EXEC PGM=ALGOL,REGION=1024K                                  00014001
 4     XXSYSPRINT DD  SYSOUT=*                                                00015001
 5     XXSYSPUNCH DD  DUMMY                                                   00016001
 6     XXSYSLIN   DD  DSN=&&OBJECT,UNIT=VIO,SPACE=(3200,(20,10)),             00017001
       XX             DISP=(,PASS)                                            00018001
 7     XXSYSUT1   DD  UNIT=VIO,SPACE=(2048,(50,10))                           00019001
 8     XXSYSUT2   DD  UNIT=VIO,SPACE=(2048,(50,10))                           00020001
 9     XXSYSUT3   DD  UNIT=VIO,SPACE=(2048,(40,10))                           00021001
10     //SYSIN DD DSN=E.TEST.SOURCE(E#ALG),DISP=SHR
11     XXGO      EXEC PGM=LOADER,PARM='MAP,LET,PRINT',COND=(5,LT,ALGOL)       00022001
12     XXSYSLIN   DD  DSN=&&OBJECT,DISP=(OLD,DELETE)                          00023001
13     XXSYSLIB   DD  DSN=SYS1.ALGLIB,DISP=SHR                                00024001
14     XXSYSLOUT  DD  SYSOUT=*                                                00025001
15     XXSYSPRINT DD  SYSOUT=*                                                00026001
16     XXALGLDD01 DD  SYSOUT=*                                                00027001
17     XXSYSUT1   DD  UNIT=VIO,SPACE=(1024,(20,10))                           00028001
18     //GO.SYSIN DD DSN=E.TEST.DATA(E),DISP=SHR
```

```
IEF236I ALLOC. FOR E#ALG ALGOL
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY  ALLOCATED TO SYSPUNCH
IEF237I VIO  ALLOCATED TO SYSLIN
IEF237I VIO  ALLOCATED TO SYSUT1
IEF237I VIO  ALLOCATED TO SYSUT2
IEF237I VIO  ALLOCATED TO SYSUT3
IEF237I 242  ALLOCATED TO SYSIN
IEF142I E#ALG ALGOL - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00367.SO0101                          SYSOUT
IEF285I   SYS20107.T133516.RA000.E#ALG.OBJECT           PASSED       *--------2
IEF285I   SYS20107.T133516.RA000.E#ALG.R0000001         DELETED      *--------0
IEF285I   SYS20107.T133516.RA000.E#ALG.R0000002         DELETED      *--------0
IEF285I   SYS20107.T133516.RA000.E#ALG.R0000003         DELETED      *-------25
IEF285I   E.TEST.SOURCE                                 KEPT         *--------2
IEF285I   VOL SER NOS= MV0001.
IEF373I STEP /ALGOL   / START 20107.1335
IEF374I STEP /ALGOL   / STOP  20107.1335 CPU    0MIN 00.07SEC SRB    0MIN 00.01SEC VIRT   192K SYS   292K
*********************************************************************************************************
*     1. Jobstep of job: E#ALG       Stepname: ALGOL       Program name: ALGOL      Executed on 16.04.20 from 13.35.16 to 13.35.16 *
*         elapsed time  24:00:00,21                    CPU-Identifier:  TK4-           Page-in:      0                          *
*             CPU time  00:00:00,08              Virtual Storage used:    192K         Page-out:     0                          *
*           corr. CPU:  00:00:00,08   CPU time has been corrected by  1 / 1,0  multiplier                                      *
*                                                                                                                               *
*     I/O Operation                                                                                                             *
*     Number of records read via DD * or DD DATA:      0                                                                        *
*     DMY.......0 DMY.......0 FFF.......2 FFF.......0 FFF.......0 FFF......25 242.......2                                       *
*                                                                                                                               *
*                                          Charge for step (w/o SYSOUT):          0,13                                      *
*********************************************************************************************************
IEF236I ALLOC. FOR E#ALG GO
IEF237I VIO  ALLOCATED TO SYSLIN
IEF237I 148  ALLOCATED TO SYSLIB
IEF237I JES2 ALLOCATED TO SYSLOUT
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO ALGLDD01
IEF237I VIO  ALLOCATED TO SYSUT1
IEF237I 242  ALLOCATED TO SYSIN
IEF142I E#ALG GO - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS20107.T133516.RA000.E#ALG.OBJECT           DELETED      *--------3
IEF285I   SYS1.ALGLIB                                   KEPT         *-------81
IEF285I   VOL SER NOS= MVSRES.
IEF285I   JES2.JOB00367.SO0102                          SYSOUT
IEF285I   JES2.JOB00367.SO0103                          SYSOUT
IEF285I   JES2.JOB00367.SO0104                          SYSOUT
IEF285I   SYS20107.T133516.RA000.E#ALG.R0000004         DELETED      *--------0
IEF285I   E.TEST.DATA                                   KEPT         *--------2
IEF285I   VOL SER NOS= MV0001.
IEF373I STEP /GO      / START 20107.1335
IEF374I STEP /GO      / STOP  20107.1335 CPU    0MIN 00.71SEC SRB    0MIN 00.01SEC VIRT   332K SYS   268K
*********************************************************************************************************
*     2. Jobstep of job: E#ALG       Stepname: GO          Program name: LOADER     Executed on 16.04.20 from 13.35.17 to 13.35.17 *
*         elapsed time  24:00:00,78                    CPU-Identifier:  TK4-           Page-in:      0                          *
*             CPU time  00:00:00,72              Virtual Storage used:    332K         Page-out:     0                          *
*           corr. CPU:  00:00:00,72   CPU time has been corrected by  1 / 1,0  multiplier                                      *
*                                                                                                                               *
*     I/O Operation                                                                                                             *
*     Number of records read via DD * or DD DATA:      0                                                                        *
*     FFF.......3 148.....81 DMY.......0 DMY.......0 DMY.......0 FFF.......0 242.......2                                        *
*                                                                                                                               *
*                                          Charge for step (w/o SYSOUT):          1,20                                      *
*********************************************************************************************************
IEF375I  JOB /E#ALG   / START 20107.1335
```

```
IEF376I  JOB /E#ALG   / STOP  20107.1335 CPU    0MIN 00.78SEC SRB    0MIN 00.02SEC
```

```
              SC     SOURCE STATEMENT

                    'begin'
                       'comment'
                        Sale, A.H.J. (1968). The calculation of e to many significant digits
                        The Computer Journal. 11 (2): 229-230 - MODIFICATO!;

                       'procedure'ecalculation(n);
                1      'value'n;
                2      'integer'n;
                3      'begin'
                3         'integer'm;
                4         'real'test;
                5          m:=4;
                6          test:=(n+1)*2.30258509;
                7    loop: m:=m+1;
                8         'if'm*(ln(m)-1.0)+0.5*ln(6.2831852*m)<=test
                8         'then''goto'loop;
                9         'begin'
                9            'integer'i,j,carry,temp;
               10            'integer''array'coef[2:m];
               11            'for'j:=2'step'1'until'm
               11            'do'coef[j]:=1;
               12             sysact(1,6,100);
               13             sysact(1,12,1);
               14             sysact(1,2,47);
               15             outstring(1,'('e = 2.')');
               16             sysact(1,14,1);
               17            'for'i:=1'step'1'until'n
               17               'do''begin'
               17                   carry:=0;
               18                  'for'j:=m'step'-1'until'2
               18                  'do''begin'
               18                         temp:=coef[j]*10+carry;
               19                         carry:=temp'/'j;
               20                         coef[j]:=temp-carry*j
               20                     'end'of digit generation;
               21                   outdigit(1,carry);
               22              'end'having calculate n digits
               22         'end'deleting declarations
               22      'end'of ecalculation;
               23
               23      'procedure'outdigit(ds,d);
               24      'value'ds,d;
               25      'integer'ds,d;
               26      'begin'
               26         outsymbol(ds,'('0123456789')',d+1)
               26      'end'of outdigit;
               27
               27      'comment'begin main;
               27      'integer'nc;
               28       ininteger(0,nc);
               29       ecalculation(nc)
               29   'end'of main
```

PBN	SC	PBN SURR	NAME	TYPE	DM PR	DSP LN	NAME	TYPE	DM PR	DSP LN	NAME	TYPE	DM PR	DSP LN
001	00000	000	ECALCU	P	01	070	NC	I		018	OUTDIG	P	02	078
002	00000	001	LOOP	L		074	M	I		020	N	I V		018
			TEST	R		028								
003	00009	002	CARRY	I		020	COEF	I A	01	028	I	I		018
			J	I		01C	TEMP	I		024				
004	00023	001	D	I V		020	DS	I V		018				

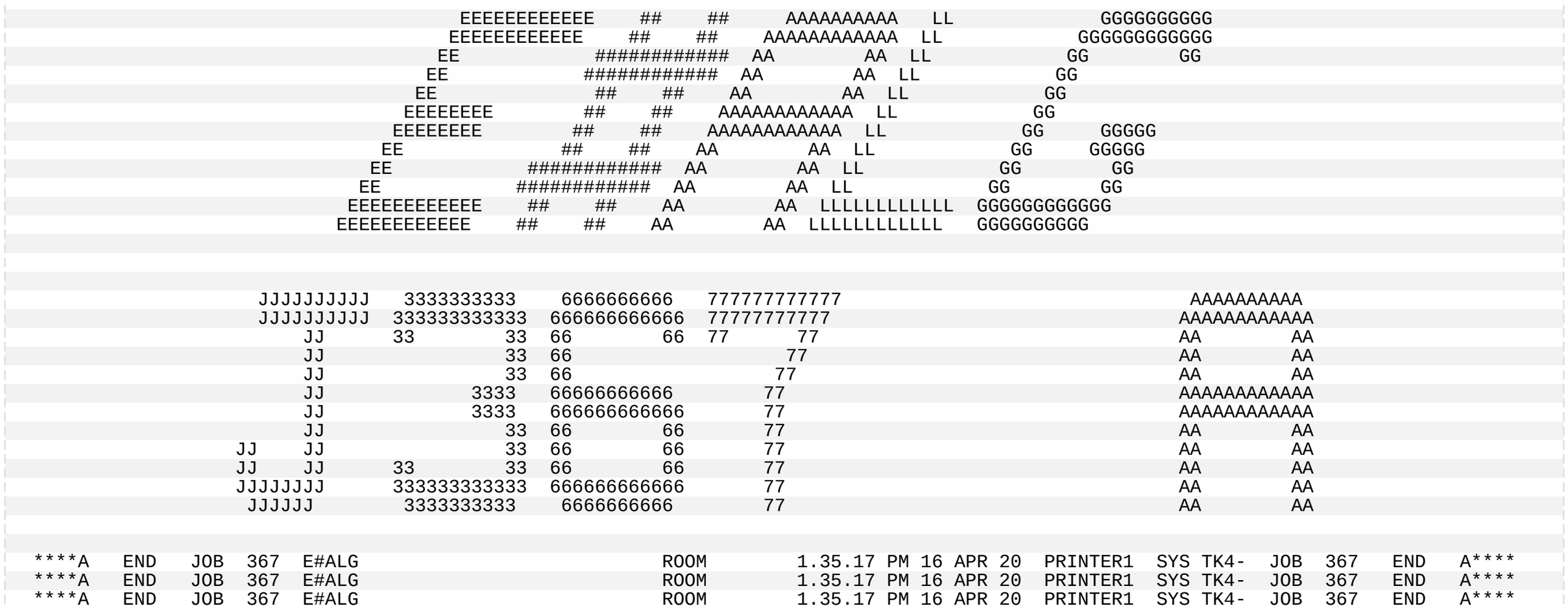
OBJECT MODULE SIZE 2460 BYTES
DATA STORAGE AREA SIZES

PBN	BYTES	PBN	BYTES	PBN	BYTES	PBN	BYTES	PBN	BYTES
001	48	002	80	003	136	004	64		

```
END OF ALGOL PROGRAM EXECUTION
```

e = 2.

7182818284590452353602874713526624977572470936999595749669676277240766303535475945713821785251664274
2746639193200305992181741359662904357290033429526059563073813232862794349076323382988075319525101901
1573834187930702154089149934884167509244761460668082264800168477411853742345442437107539077744992069
5517027618386062613313845830007520449338265602976067371132007093287091274437470472306969772093101416
9283681902551510865746377211125238978442505695369677078544996996794686445490598793163688923009879312
7736178215424999229576351482208269895193668033182528869398496465105820939239829488793320362509443117
3012381970684161403970198376793206832823764648042953118023287825098194558153017567173613320698112509
9618188159304169035159888851934580727386673858942287922849989208680582574927961048419844436346324496
8487560233624827041978623209002160990235304369941849146314093431738143640546253152096183690888707016
7683964243781405927145635490613031072085103837505101157477041718986106873969655212671546889570350354



****A END JOB 367 E#ALG ROOM 1.35.17 PM 16 APR 20 PRINTER1 SYS TK4- JOB 367 END A****
****A END JOB 367 E#ALG ROOM 1.35.17 PM 16 APR 20 PRINTER1 SYS TK4- JOB 367 END A****
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