

MM MM AAAAAAAAAA NN NN DDDDDDDDD ## ## P P P P P P P P P P AAAAAAAAAA S S S S S S S S S S
MMM MMM AAAAAAAAAA NNN NN DDDDDDDDD ## ## P P P P P P P P P P AAAAAAAAAA S S S S S S S S S S
MMMM MMMM AA AA NNNN NN DD DD ##### PP PP AA AA SS SS
MM MM MM MM AA AA NN NN NN DD DD ##### PP PP AA AA SS
MM MMMM MM AA AA NN NN NN DD DD ## ## PP PP AA AA SSS
MM MM MM AAAAAAAAAA NN NN NN DD DD ## ## P P P P P P P P P P AAAAAAAAAA S S S S S S S S S S
MM MM MM AAAAAAAAAA NN NN NN DD DD ## ## P P P P P P P P P P AAAAAAAAAA S S S S S S S S S S
MM MM AA AA NN NN NN DD DD ## ## PP AA AA SSS
MM MM AA AA NN NNNN DD DD ##### PP AA AA SS
MM MM AA AA NN NNN DD DD ##### PP AA AA SS
MM MM AA AA NN NN DDDDDDDDD ## ## PP AA AA SSSSSSSSSSSS
MM MM AA AA NN N DDDDDDDDD ## ## PP AA AA SSSSSSSSSS

JJJJJJJJJ 444 11 333333333 AAAAAAAAAA
JJJJJJJJJJ 4444 111 33333333333 AAAAAAAAAA
JJ 44 44 1111 33 33 AA AA
JJ 44 44 11 33 AA AA
JJ 44 44 11 33 AA AA
JJ 44444444444 11 3333 AAAAAAAAAA
JJ 4444444444444 11 3333 AAAAAAAAAA
JJ 44 11 33 AA AA
JJ JJ 44 11 33 AA AA
JJ JJ 44 11 33 AA AA
JJJJJJJJ 44 111111111 33333333333 AA AA
JJJJJJ 44 111111111 333333333 AA AA

****A	START	JOB	413	MAND#PAS	ROOM	10.51.40	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	START	A****
****A	START	JOB	413	MAND#PAS	ROOM	10.51.40	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	START	A****
****A	START	JOB	413	MAND#PAS	ROOM	10.51.40	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	START	A****
****A	START	JOB	413	MAND#PAS	ROOM	10.51.40	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	START	A****

J E S 2 J O B L O G

10.51.38 JOB 413 IEF677I WARNING MESSAGE(S) FOR JOB MAND#PAS ISSUED
10.51.38 JOB 413 \$HASP373 MAND#PAS STARTED - INIT 1 - CLASS A - SYS TK4-
10.51.38 JOB 413 IEF403I MAND#PAS - STARTED - TIME=10.51.38
10.51.38 JOB 413 CCI001C COMPILE /PASCAL /00:00:00.07/00:00:00/00000/ /MAND#PAS
10.51.38 JOB 413 CCI001C XREF /PASCREF /00:00:00.05/00:00:00/00000/ /MAND#PAS
10.51.38 JOB 413 CCI001C POSTPROC/ASMPCODE/00:00:00.04/00:00:00/00000/ /MAND#PAS
10.51.40 JOB 413 CCI001C GO /LOADER /00:00:02.21/00:00:02/00000/ /MAND#PAS
10.51.40 JOB 413 IEF404I MAND#PAS - ENDED - TIME=10.51.40
10.51.40 JOB 413 \$HASP395 MAND#PAS ENDED

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

09 JUN 20 JOB EXECUTION DATE

4 CARDS READ

1,555 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.04 MINUTES EXECUTION TIME

1	//MAND#PAS	JOB CLASS=A,MSGCLASS=A,MSGLEVEL=(1,1),NOTIFY=HERC01,	JOB 413
	//	USER=HERC01,PASSWORD=	GENERATED BY IKJEFF10
2	// EXEC PAXCG,	PARM.COMPILE='D-,K+',PARM.GO=MAP	
3	XXPAXCG PROC	GOTIME=299,GOPARM=,GOREG=2048K,DUMP='DUMMY,',	00010000
	XX	SOUT='*',WORK=VIO,OPT='M+' 1..72 MARGINS	00020000
	***		00030000
	***		00040000
4	XXCOMPILE EXEC	PGM=PASCAL,REGION=8192K,PARM='&OPT'	00050000
5	XXSTEPLIB DD	DSN=PASCAL.PASLIB,DISP=SHR	00060000
6	XXINPUT DD	DDNAME=SYSIN	00070000
7	XXPRD DD	DSN=PASCAL.PASOBJ(PASMSG),DISP=SHR	00080000
8	XXOUTPUT DD	UNIT=&WORK,DSN=&&XIN,SPACE=(TRK,(19,19)),DISP=(,PASS)	00090000
9	XXPRR DD	DSN=&&PCODE,UNIT=&WORK,DCB=RECFM=VB,	00100000
	XX	SPACE=(TRK,(20,5),RLSE),DISP=(,PASS)	00110000
10	XXQRR DD	DSN=&&TABLES,UNIT=&WORK,DCB=RECFM=VB,	00120000
	XX	SPACE=(TRK,(5,2),RLSE),DISP=(,PASS)	00130000
	***		00140000
	***		00150000
11	//SYSIN DD	DSN=MANDEL.TEST.SOURCE(MAND#PAS),DISP=SHR	
12	XXXREF EXEC	PGM=PASCREF,REGION=2048K,COND=EVEN	00160000
13	XXSTEPLIB DD	DISP=SHR,DSN=PASCAL.PASLIB	00170000
14	XXINPUT DD	DISP=(OLD,DELETE),DSN=*.COMPILE.OUTPUT	00180000
15	XXOUTPUT DD	SYSOUT=&SOUT	00190000
	***		00200000
	***		00210000
16	XXPOSTPROC EXEC	PGM=ASMPCODE,COND=(0,LT,COMPILE),REGION=2048K	00220000
17	XXSTEPLIB DD	DSN=PASCAL.PASLIB,DISP=SHR	00230000
18	XXINPUT DD	DSN=*.COMPILE.PRR,DISP=(OLD,DELETE)	00240000
19	XXPRD DD	DSN=*.COMPILE.QRR,DISP=(OLD,PASS)	00250000
20	XXOUTPUT DD	SYSOUT=&SOUT	00260000
21	XXPRR DD	DSN=&&OBJECT,UNIT=&WORK,DCB=RECFM=FB,	00270000
	XX	SPACE=(TRK,(10,5),RLSE),DISP=(,PASS)	00280000
	***		00290000
	***		00300000
22	XXGO EXEC	PGM=LOADER,COND=((0,LT,COMPILE),(0,LT,POSTPROC)),	00310000
	XX	PARM='//TIME=&GOTIME,&GOPARM',REGION=&GOREG	00320000
23	XXSTEPLIB DD	DSN=PASCAL.PASLIB,DISP=SHR (NEEDED FOR K+ ONLY)	00330000
24	XXSYSLIN DD	DSN=*.POSTPROC.PRR,DISP=(OLD,DELETE)	00340000
25	XXSYSLOUT DD	SYSOUT=&SOUT	00350000
26	XXSYSLIB DD	DISP=SHR,DSN=PASCAL.PASLIB	00360000
27	XX DD	DISP=SHR,DSN=SYS1.FORTLIB	00370000
28	XXINPUT DD	DDNAME=SYSIN	00380000
29	XXPRD DD	DUMMY	00390000
30	XXQRD DD	DSN=*.COMPILE.QRR,DISP=(OLD,DELETE)	00400000
31	XXFT06F001 DD	SYSOUT=&SOUT	00410000
32	XXOUTPUT DD	SYSOUT=&SOUT	00420000
33	XXQRR DD	UNIT=&WORK,SPACE=(TRK,(2,2))	00430000
34	XXSYSUDUMP DD	&DUMP.SYSOUT=&SOUT	00440000
	***		00450000

STMT NO. MESSAGE

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4      IEF653I SUBSTITUTION JCL - PGM=PASCAL,REGION=8192K,PARM='M+'
8      IEF653I SUBSTITUTION JCL - UNIT=VIO,DSN=XXIN,SPACE=(TRK,(19,19)),DISP=(,PASS)
9      IEF653I SUBSTITUTION JCL - DSN=XXPCODE,UNIT=VIO,DCB=RECFM=VB,
10     IEF653I SUBSTITUTION JCL - DSN=XXTABLES,UNIT=VIO,DCB=RECFM=VB,
15     IEF653I SUBSTITUTION JCL - SYSOUT=*
20     IEF653I SUBSTITUTION JCL - SYSOUT=*
21     IEF653I SUBSTITUTION JCL - DSN=XXOBJECT,UNIT=VIO,DCB=RECFM=FB,
22     IEF653I SUBSTITUTION JCL - PARM='//TIME=299,',REGION=2048K
25     IEF653I SUBSTITUTION JCL - SYSOUT=*
31     IEF653I SUBSTITUTION JCL - SYSOUT=*
32     IEF653I SUBSTITUTION JCL - SYSOUT=*
33     IEF653I SUBSTITUTION JCL - UNIT=VIO,SPACE=(TRK,(2,2))
34     IEF653I SUBSTITUTION JCL - DUMMY,SYSOUT=*
34     IEF686I DDNAME REFERRED TO ON DDNAME KEYWORD IN PRIOR STEP WAS NOT RESOLVED
IEF236I ALLOC. FOR MAND#PAS COMPILE
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00274
IEF237I 242 ALLOCATED TO INPUT
IEF237I 290 ALLOCATED TO PRD
IEF237I VIO ALLOCATED TO OUTPUT
IEF237I VIO ALLOCATED TO PRR
IEF237I VIO ALLOCATED TO QRR
IEF142I MAND#PAS COMPILE - STEP WAS EXECUTED - COND CODE 0000
IEF285I PASCAL.PASLIB KEPT *-----0
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.UCAT.MVS KEPT *-----0
IEF285I VOL SER NOS= MVSCAT.
IEF285I MANDEL.TEST.SOURCE KEPT *-----2
IEF285I VOL SER NOS= MV0001.
IEF285I PASCAL.PASOBJ KEPT *-----0
IEF285I VOL SER NOS= PUB003.
IEF285I SYS20161.T105138.RA000.MAND#PAS.XIN PASSED *-----2
IEF285I SYS20161.T105138.RA000.MAND#PAS.PCODE PASSED *-----2
IEF285I SYS20161.T105138.RA000.MAND#PAS.TABLES PASSED *-----1
IEF373I STEP /COMPILE / START 20161.1051
IEF374I STEP /COMPILE / STOP 20161.1051 CPU OMIN 00.07SEC SRB OMIN 00.00SEC VIRT 4148K SYS 272K
**** JOBCARD READ 20161 10:51:38 ****
* PRC-CCI 370/033 VS2 R03.8 TK4- STEP STATISTICS *
* STEP NAME COMPILE USER CORE 4148K TAPES USED/IO 000/000000000 START TIME 10:51:38 TCB TIME 00:00:00.07 *
* PGM NAME PASCAL SYSTEM CORE 272K DISKS USED/IO 004/000000002 STOP TIME 10:51:38 SRB TIME 00:00:00.00 *
* COND CODE 0000 PRIVATE AREA SZ 8192K ALLOC TIME 10:51:38 ELAPSED TIME 00:00:00 PGM LOAD 10:51:38 *
** PGNO * NR SRV UNITS * ACTIVE TIME *** PAGES IN *** PAGES OUT * # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
* 004 1026 00:00:00.08 0 0 0 0 0 0 0 0 0 6 *
***** VIO IO 000000005 *****
* CPU $ ( 0.02) + EXCP $ ( 0.00) + MEMORY $ ( 0.82) = TOTAL $ ( 0.84) *
*****
IEF236I ALLOC. FOR MAND#PAS XREF
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00276
IEF237I VIO ALLOCATED TO INPUT
IEF237I JES2 ALLOCATED TO OUTPUT
IEF142I MAND#PAS XREF - STEP WAS EXECUTED - COND CODE 0000
IEF285I PASCAL.PASLIB KEPT *-----0
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.UCAT.MVS KEPT *-----0
IEF285I VOL SER NOS= MVSCAT.
IEF285I SYS20161.T105138.RA000.MAND#PAS.XIN DELETED *-----3
IEF285I JES2.JOB00413.S00101 SYSOUT
IEF373I STEP /XREF / START 20161.1051
IEF374I STEP /XREF / STOP 20161.1051 CPU OMIN 00.05SEC SRB OMIN 00.00SEC VIRT 2048K SYS 252K
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* PRC-CCI 370/033 VS2 R03.8 TK4- STEP STATISTICS *
* STEP NAME XREF USER CORE 2048K TAPES USED/IO 000/000000000 START TIME 10:51:38 TCB TIME 00:00:00.05 *
* PGM NAME PASCREF SYSTEM CORE 252K DISKS USED/IO 002/000000000 STOP TIME 10:51:38 SRB TIME 00:00:00.00 *
* COND CODE 0000 PRIVATE AREA SZ 2048K ALLOC TIME 10:51:38 ELAPSED TIME 00:00:00 PGM LOAD 10:51:38 *
** PGNO * NR SRV UNITS * ACTIVE TIME *** PAGES IN *** PAGES OUT * # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
* 004 512 00:00:00.05 0 0 0 0 0 0 0 0 0 0 *
***** VIO IO 000000003 *****
* CPU $ ( 0.01) + EXCP $ ( 0.00) + MEMORY $ ( 0.29) = TOTAL $ ( 0.30) *
*****
IEF236I ALLOC. FOR MAND#PAS POSTPROC
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00278
IEF237I VIO ALLOCATED TO INPUT
IEF237I VIO ALLOCATED TO PRD
IEF237I JES2 ALLOCATED TO OUTPUT
IEF237I VIO ALLOCATED TO PRR
IEF142I MAND#PAS POSTPROC - STEP WAS EXECUTED - COND CODE 0000
IEF285I PASCAL.PASLIB KEPT *-----0
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.UCAT.MVS KEPT *-----0
IEF285I VOL SER NOS= MVSCAT.
IEF285I SYS20161.T105138.RA000.MAND#PAS.PCODE DELETED *-----3
IEF285I SYS20161.T105138.RA000.MAND#PAS.TABLES PASSED *-----2
IEF285I JES2.JOB00413.S00102 SYSOUT
IEF285I SYS20161.T105138.RA000.MAND#PAS.OBJECT PASSED *-----1
IEF373I STEP /POSTPROC/ START 20161.1051
IEF374I STEP /POSTPROC/ STOP 20161.1051 CPU OMIN 00.04SEC SRB OMIN 00.00SEC VIRT 2064K SYS 296K
*****
* PRC-CCI 370/033 VS2 R03.8 TK4- STEP STATISTICS *
* STEP NAME POSTPROC USER CORE 2064K TAPES USED/IO 000/000000000 START TIME 10:51:38 TCB TIME 00:00:00.04 *
* PGM NAME ASMPCODE SYSTEM CORE 296K DISKS USED/IO 002/000000000 STOP TIME 10:51:38 SRB TIME 00:00:00.00 *
* COND CODE 0000 PRIVATE AREA SZ 2048K ALLOC TIME 10:51:38 ELAPSED TIME 00:00:00 PGM LOAD 10:51:38 *
** PGNO * NR SRV UNITS * ACTIVE TIME *** PAGES IN *** PAGES OUT * # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
* 004 400 00:00:00.05 0 0 0 0 0 0 0 0 2 *
***** VIO IO 000000006 *****
* CPU $ ( 0.01) + EXCP $ ( 0.00) + MEMORY $ ( 0.23) = TOTAL $ ( 0.24) *
*****
IEF236I ALLOC. FOR MAND#PAS GO
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00280
IEF237I VIO ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO SYSLOUT
IEF237I 280 ALLOCATED TO SYSLIB
IEF237I 148 ALLOCATED TO
IEF237I DMY ALLOCATED TO INPUT
IEF237I DMY ALLOCATED TO PRD
IEF237I VIO ALLOCATED TO QRD
IEF237I JES2 ALLOCATED TO FT06F001
IEF237I JES2 ALLOCATED TO OUTPUT
IEF237I VIO ALLOCATED TO QRR
IEF237I DMY ALLOCATED TO SYSUDUMP
IEF142I MAND#PAS GO - STEP WAS EXECUTED - COND CODE 0000
IEF285I PASCAL.PASLIB KEPT *-----0
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.UCAT.MVS KEPT *-----0
IEF285I VOL SER NOS= MVSCAT.
IEF285I SYS20161.T105138.RA000.MAND#PAS.OBJECT DELETED *-----2
IEF285I JES2.JOB00413.S00103 SYSOUT
IEF285I PASCAL.PASLIB KEPT *-----14
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.FORTLIB KEPT *-----1
IEF285I VOL SER NOS= MVSRES.
IEF285I SYS20161.T105138.RA000.MAND#PAS.TABLES DELETED *-----2
IEF285I JES2.JOB00413.S00104 SYSOUT
IEF285I JES2.JOB00413.S00105 SYSOUT
IEF285I SYS20161.T105138.RA000.MAND#PAS.R0000001 DELETED *-----3

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```
IEF373I STEP /GO / START 20161.1051
IEF374I STEP /GO / STOP 20161.1051 CPU OMIN 02.21SEC SRB OMIN 00.00SEC VIRT 2052K SYS 316K
*****
* PRC-CCI 370/033 VS2 R03.8 TK4- STEP STATISTICS *
* STEP NAME GO USER CORE 2052K TAPES USED/IO 000/000000000 START TIME 10:51:38 TCB TIME 00:00:02.21 *
* PGM NAME LOADER SYSTEM CORE 316K DISKS USED/IO 003/000000015 STOP TIME 10:51:40 SRB TIME 00:00:00.00 *
* COND CODE 0000 PRIVATE AREA SZ 2048K ALLOC TIME 10:51:38 ELAPSED TIME 00:00:02 PGM LOAD 10:51:38 *
** PGNO * NR SRV UNITS * ACTIVE TIME *** PAGES IN *** PAGES OUT * # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
* 004 24606 00:00:02.26 0 0 0 0 0 0 0 0 0 2 *
***** VIO IO 000000007 *****
* CPU $ ( 0.79) + EXCP $ ( 0.02) + MEMORY $ ( 12.92) = TOTAL $ ( 13.73) *
*****
IEF375I JOB /MAND#PAS/ START 20161.1051
IEF376I JOB /MAND#PAS/ STOP 20161.1051 CPU OMIN 02.37SEC SRB OMIN 00.00SEC
```

```

1      ) PROGRAM MANDELBROTSET(OUTPUT); (* POSTER DELLO INSIEME DI MANDELBROT *)
2      ) CONST MAXIT=27; (* NUMERO DI "COLORI" IN REALTÀ CARATTERI *)
3      ) VAR STR:ARRAY[1..MAXIT] OF CHAR; (* TAVOLOZZA DEI COLORI/CARATTERI *)
4      331 1)
5      331 1)  PROCEDURE MANDELBROT(MINRE,MINIM,MAXRE,MAXIM:REAL; STRP:INTEGER);
6      )      LABEL 99; (* EAT YOUR HEART OUT DIJKSTRA *)
7      )      VAR STEPX,STEPY,RE,IM,ZR,ZI,A,B:REAL;
8      184 2)      XSIZE,YSIZE,X,Y,N,S:INTEGER;
9      208 2)      BEGIN
10     )      XSIZE:=131*STRP; (* LE COLONNE VENGONO CONTATE 0..131 *)
11     6 2)      YSIZE:=48*STRP; (* 0..49 RIGHE APPROSSIMANO IL RAPPORTO 3:2 *)
12     10 2)      STEPX:=(MAXRE-MINRE)/XSIZE;
13     17 2)      STEPY:=(MAXIM-MINIM)/YSIZE;
14     24 2)      FOR S:=1 TO STRP (* CICLO PRINCIPALE: QUANTE STRISCIE *)
15     26 2)      DO BEGIN
16     33 2)          FOR Y:=0 TO YSIZE (* CICLO RIGHE *)
17     35 2)          DO BEGIN
18     42 2)              IM:=MINIM+STEPY*Y;
19     49 2)              WRITE(' ');
20     55 2)              FOR X:=132*(S-1) TO 132*S-1 (* CICLO COLONNE *)
21     64 2)              DO BEGIN
22     72 2)                  RE:=MINRE+STEPX*X;
23     79 2)                  ZR:=RE;
24     81 2)                  ZI:=IM;
25     83 2)                  FOR N:=1 TO MAXIT (* CICLO COLORI/CARATTERI *)
26     85 2)                  DO BEGIN
27     92 2)                      A:=ZR*ZR;
28     96 2)                      B:=ZI*ZI;
29     100 2)                      IF(A+B)>4
30     103 2)                      THEN GOTO 99;
31     109 2)                      ZI:=ZR*ZI*2+IM;
32     118 2)                      ZR:=A-B+RE
33     121 2)                  END;
34     132 2)          99:      WRITE(STR[N]:1)
35     143 2)          END;
36     151 2)          WRITELN
37     151 2)      END;
38     163 2)      IF S<STRP (* FINITO UNA STRISCIA, SE NE SEGUONO ALTRE... *)
39     164 2)      THEN WRITELN('1') (* ...INIZIA IN UNA NUOVA PAGINA *)
40     175 2)      END
41     175 2)      END;
42     184 2)
43     ) BEGIN
44     )      STR:='ABCDEFGHIJKLMNOPQRSTUVWXYZ '; (* I COLORI/CARATTERI *)
45     10 1)      (* STAMPA UN RETTANGOLO 3:2 "SPALMATO" SU 5 STRISCIE *)
46     10 1)      MANDELBROT(-2,-1,1,1,5)
47     22 1) END.

```

```

**** NO SYNTAX ERROR(S) DETECTED.
**** 47 LINE(S) READ, 1 PROCEDURE(S) COMPILED,
**** 209 P_INSTRUCTIONS GENERATED, 0.00 SECONDS IN COMPILATION.

```

CROSS REFERENCE OF IDENTIFIERS, LABEL DECLARATIONS AND GOTO STATEMENTS:

A	7	27	29	32		
ARRAY	3					
B	7	28	29	32		
BEGIN	9	15	17	21	26	43
CHAR	3					
CONST	2					
DO	15	17	21	26		
END	33	35	37	40	41	47
FOR	14	16	20	25		
GOTO	30					
IF	29	38				
IM	7	18	24	31		
INTEGER	5	8				
LABEL	6					
MAXIT	2	3	25			
MAXIM	5	13				
MAXRE	5	12				
MINIM	5	13	18			
MINRE	5	12	22			
N	8	25	34			
OF	3					
OUTPUT	1					
PROCEDURE	5					
PROGRAM	1					
RE	7	22	23	32		
REAL	5	7				
S	8	14	20	20	38	
STEPX	7	12	22			
STEPLY	7	13	18			
STR	3	34	44			
STRP	5	10	11	14	38	
THEN	30	39				
TO	14	16	20	25		
VAR	3	7				
WRITE	19	34				
WRITELN	36	39				
X	8	20	22			
Y	8	16	18			
ZI	7	24	28	28	31	31
ZR	7	23	27	27	31	32
MANDELBROT	1	5	46			
XSIZE	8	10	12			
YSIZE	8	11	13	16		

LIST OF PROCEDURES AND FUNCTIONS:

PROGRAM 1

OF IDENTIFIERS: 43, # OF OCCURENCES: 126, # OF PROCEDURES: 1.


```
****      STANFORD PASCAL POST-PROCESSOR, VERSION OF OCT.-79.  
****      NO ASSEMBLY ERROR(S) DETECTED.  
****      1056 BYTES OF CODE GENERATED,  0.00 SECONDS IN POST_PROCESSING.
```

VS LOADER

OPTIONS USED - PRINT,MAP,NOLET,CALL,RES,NOTERM,SIZE=307200,NAME=**GO

NAME	TYPE	ADDR	NAME	TYPE	ADDR	NAME	TYPE	ADDR	NAME	TYPE	ADDR	NAME	TYPE	ADDR
MANDE001	SD	AC010	\$MAINBLK	SD	AC338	\$PASENT *	SD	AC430	\$PASINT *	LR	AC998	IFYVERRM*	LR	AD062
IHCERRM *	LR	AD062	IHOERRM *	LR	AD062	IHNERRM *	LR	AD062	ERRMON *	LR	AD062	IFYVERRE*	LR	AD096
IHOERRE *	LR	AD096	IHNERRE *	LR	AD096	IHCERRE *	LR	AD096	\$PASCSP *	LR	AD0A0	\$WRADDR *	SD	AE718
\$IDLEN *	SD	AE8C8	\$GETPNAM*	SD	AE958	\$ALIGN *	SD	AEAE8	\$ERRMSG *	SD	AEB30	\$TRANSVA*	SD	AEE38
\$CNVTNUM*	SD	AEEC0	\$PRNT *	SD	AF000	\$IVSCAN *	SD	AFD90	\$PRNTVAR*	SD	B0408	\$FROMLIN*	SD	B0988
\$PRNTLNK*	SD	BOB28	\$PRNTSYS*	SD	B0CE8	SNAPSHOT*	SD	B17C0	#MAINBLK*	SD	B1CC0			

TOTAL LENGTH 5D18
ENTRY ADDRESS AC430

[illegible]

[illegible]

[illegible]

[illegible]

XW
SSTUWZ
OQRT
NPYTSTUY
MMOPQRVW

ZY

[illegible]

[illegible]

[illegible]

FFFFGGGGGGGGGHHHIIJJKKKLNONPV RNNMMMMNNR
 FFFFFFFGGGGGGGGHHIKUNRRNMNPTWS QPPPP0000PPV
 FFFGGGGGGGGGGGGHHHIIJNRU UT VUSSU TSQQRSUX
 GGGGGGGGGGGGGHHHIIJJLMQQUZ XX WTTT
 GGGGGGGGGGGGGHHHIIIIJK RW WX
 GGGGGGGGGHHHHHHHIIIIJLU QRU Z
 GGGGGGGHHHHHHHHHIIIIJJKLM UV
 GGGGGHHHHHHHHHHHIIIIJJKKLOURQRVY
 GGGGHHHHHHHHHHHIIIIJJJJKKKLMNOPW
 GGHHHHHHHHHHHHHIIIIJJJJKKKLMMNO
 HHHHHHHHHHHHHHIIIIJJJJJKKLLMMNOPQSTX
 HHHHHHHHHHHHHHIIIIJJJJJKLLLMNNNOPQRTVX
 HHHHHHHHHHHHHHIIIIJJJKL PS POOPQT
 HHHHHHHHHHIIIIJJJKKLMO SRQRT
 HHHHHHHHHIIIIJKLMMO V VV UUUX
 HHHHHHIIIIJJLS T
 HHHIIIIIIJJJCKMOT
 IIIIIIIIIJJJKKL SV
 IIIIIIIJJJJJKKLMPQ X
 IIIIIJJJJJJJKKLLMNOPQS
 IIIJJJJJJJJJKKLLMNOPQRTVZ
 IIJJJJJJJJJKKLLM TTX
 JJJJJJJJJJKKLMNOV YXY
 JJJJJJJKKKL T
 JJJJJKKKKLMN
 JKKKKKKKKLLMMO
 KKKKKKKLLLLMNNPQSUX
 KKKKLLLLLLMMNOS XY
 KKLLLLLLLLMNOQ
 LLLLLLLLMMNR
 LLLLMMMMNNNORX
 MMMMMMMMNNNOOPR Z
 MMMMNNNNNNOPR
 NNNNNNNNOOP
 00000000PQRTX
 000000PPPPQR
 QPPPPPPPPQS
 RQQQQQQQQRST
 VSRRRRRRRRTY
 VTSSSSSTUX
 ZUTTTTTTV
 WUUUUUVW
 XWVVWY
 YXXX
 ZZZ

[illegible]

Z
ZVVX
TSS YZ
RQQRT
RPPOOP X
UTQONNNNNP W TSSTVZ

[illegible]

[illegible]

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VURPONMMLKKKJJJIIHHGGGGGG
RQTOMLLKKKJJJIIHHHHGGGGG
NMLLLKJJJIIHHHHGGGG
TPONNP UJIIHHHHHHGG
XTRQT XYUNKJJJIIHHHHHH
Z KJIIHHHHHH
XNKJJJIIHHHH
X QLKKJJJIIIII
SQONLLKKKJJJIII
Y SNMMLLLLKKJJJ
ONNNNOYYOQLKK
WSQQQQQRTX WNM
VTTW PO
ZZ VUV

U
U
X S
TRQPOONML
ZPNMMLKJ
SQOOLKKJ
Z MKJJ
MLKJ
SNMLKK
SPONMLK
WTSR ZPM
P
XS

XRR
SQQ OML
ZUWMLKKJ
OMLKKJ
SPNMMLLKJ
TONMNS
R U
Y NK
Y S J
YPNNMPNKH
UPNMLKJIIH
QOOUJIIHHG
W VJIIHHGG
Y SJIIHHGG
RONMLKIIHHGGGG
TR KJIIHHGGGGG
QKJIIHHGGGGGF
ROMLJIIHHGGGGGGF
MJJIIHHGGGGGGFF
UOLKJIIHHHHGGGGGGFF
T MKJJJIIHHHHGGGGGGFF
OLKJJJIIHHHHGGGGGGFF
YQNLKKJJJIIHHHHGGGGGGFFF
XPONMLKKKJJJIIHHHHGGGGGGFFF
ZVTRPONMLLKJJJIIHHHHGGGGGGFFF
XPONMLKKKJJJIIHHHHGGGGGGFFF
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OLKJJJIIHHHHGGGGGGFF
T MKJJJIIHHHHGGGGGGFF
UOLKJIIHHHHGGGGGGFF
MJJIIHHGGGGGGFF
ROMLJIIHHGGGGGGF

QKJIIHHGGGGGF
TR KJIIHHGGGGG
RONMLKIIHHGGGG
Y SJIHHGGG
W VJIHHGG
Q00UJIIHHG
UPNMLKJIIHH
YPNNMPNKH
Y S J
Y NK
R U
TONMNS
SPNMLLKJ
OMLKKJ
ZUWMLKKJ
SQQ OML
XRR

XS
P
WTSR ZPM
SPONMLK
SNMLKK
MLKJ
Z MKJJ
SQ00LKKJ
ZPNMMLKJ
TRQPOONML
X S
U
U

ZZ VUV
VTTW PO
WSQQQQQRTX WNM
ONNNNOYYOQLKK
Y SNMMLLLLLKKJJJ
SQONLLKKKJJJIIII
X QLKKJJJIIIIII
XNKJJJIIIIHHHH
Z KJIIHHHHHHH
XTRQT XYUNKJIIHHHHHHH
TPONNNP UJIIHHHHHHHGG
NMLLLLKJJIIHHHHHGGGG
RQTOMLLKKKJJIIHHHHHGGGGG
VURPONMMLKKKJJJIIHHHGGGGGG
YWUSRQONMMLKKKJJJIIHHHGGGGGGG
VR PNLKKJJJIIHHGGGGGGGG
QMLLKJIIHHGGGGGGGG
WSQPRUNLKIIHHHGGGGGGF
U MKJIIHHGGGGGGF
XY VR NKIIHHHGGGGF
SSZS OQVJIIHHHGGGGF
TPONMLKKJIIHHHGGG
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V VMLKKJJJIIHHG
XNLLLLMNPOMIG
TRPONMN QNYOLH
YZSPPPY KJJIH
UVY YYVZ XTT PNLKJIIH
ZYSTRQQT RQRSSUY TQOMLKJIIH
YXSPONN POONNN00Q SRW T 00 KK
U RNMLLLLLLLMMNPRTWPNNMOPPNPQ

YWW
TTT
RQQS
W U QPOOPQW
RPONNNNOPRU
PMMMMMT V
MLLLLLLLMMOPQRX
NLLKKKKKKKKLMMNOQT
XPONMMMLKKKJJJJJJKKKLM R UY

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

LINE #	RANGE	RUN CNT	CONSTRUCT	PAGE	1
10	- 41	1	PROCEDURE: MANDELBROT		
15	- 41	5	FOR STMT		
17	- 37	1205	FOR STMT		
21	- 35	159060	FOR STMT		
26	- 33	1748261	FOR STMT		
30	- 30	115291	THEN CLAUSE		
34	- 34	159060	LABELLED STMT		
39	- 40	4	THEN CLAUSE		
44	- 47	1	PROCEDURE: \$MAINBLK		

MM MM AAAAAAAAAA NN NN DDDDDDDDD ## ## P P P P P P P P P P AAAAAAAAAA SSSSSSSSSS
MMM MMM AAAAAAAAAA NNN NN DDDDDDDDD ## ## P P P P P P P P P P AAAAAAAAAA SSSSSSSSSS
MMMM MMMM AA AA NNNN NN DD DD ##### PP PP AA AA SS SS
MM MM MM MM AA AA NN NN NN DD DD ##### PP PP AA AA SS
MM MMMM MM AA AA NN NN NN DD DD ## ## PP PP AA AA SSS
MM MM MM AAAAAAAAAA NN NN NN DD DD ## ## P P P P P P P P P P AAAAAAAAAA SSSSSSSS
MM MM MM AAAAAAAAAA NN NN NN DD DD ## ## P P P P P P P P P P AAAAAAAAAA SSSSSSSS
MM MM MM AA AA NN NN NN DD DD ## ## PP AA AA SSS
MM MM MM AA AA NN NNNN DD DD ##### PP AA AA SS
MM MM MM AA AA NN NNN DD DD ##### PP AA AA SS
MM MM MM AA AA NN NN DD DDDDDDDDD ## ## PP AA AA SSSSSSSSSS
MM MM MM AA AA NN N DDDDDDDDD ## ## PP AA AA SSSSSSSSSS

JJJJJJJJJ 444 11 333333333 AAAAAAAAAA
JJJJJJJJJJ 4444 111 33333333333 AAAAAAAAAA
JJ 44 44 1111 33 33 AA AA
JJ 44 44 11 33 AA AA
JJ 44 44 11 33 AA AA
JJ 44444444444 11 3333 AAAAAAAAAA
JJ 44444444444 11 3333 AAAAAAAAAA
JJ 44 11 33 AA AA
JJ JJ 44 11 33 AA AA
JJ JJ 44 11 33 AA AA
JJJJJJJJ 44 111111111 33333333333 AA AA
JJJJJJ 44 111111111 333333333 AA AA

****A	END	JOB	413	MAND#PAS	ROOM	10.51.41	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	END	A****
****A	END	JOB	413	MAND#PAS	ROOM	10.51.41	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	END	A****
****A	END	JOB	413	MAND#PAS	ROOM	10.51.41	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	END	A****
****A	END	JOB	413	MAND#PAS	ROOM	10.51.41	AM	09	JUN	20	PRINTER1	SYS TK4-	JOB	413	END	A****