

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 MMM 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 MMM 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 11 222222222 666666666 444 AAAAAAAAAA
JJJJJJJJJJ 111 22222222222 66666666666 4444 AAAAAAAAAA
JJ 1111 22 22 66 66 44 44 AA AA
JJ 11 22 66 44 44 AA AA
JJ 11 22 66 44 44 AA AA
JJ 11 22 6666666666 44444444444 AAAAAAAAAA
JJ 11 22 66666666666 44444444444 AAAAAAAAAA
JJ 11 22 66 66 44 AA AA
JJ JJ 11 22 66 66 44 AA AA
JJ JJ 11 22 66 66 44 AA AA
JJJJJJJJ 1111111111 22222222222 66666666666 44 AA AA
JJJJJJ 1111111111 22222222222 6666666666 44 AA AA

****A	START	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	START	A****
****A	START	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	START	A****
****A	START	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	START	A****
****A	START	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	START	A****

J E S 2 J O B L O G

18.31.36 JOB 1264 IEF677I WARNING MESSAGE(S) FOR JOB MAND#PAS ISSUED
18.31.36 JOB 1264 \$HASP373 MAND#PAS STARTED - INIT 1 - CLASS A - SYS TK4-
18.31.36 JOB 1264 IEF403I MAND#PAS - STARTED - TIME=18.31.36
18.31.37 JOB 1264 IEFACRT - STEPNAME PROCSTEP PROGRAM RETCODE
18.31.37 JOB 1264 MAND#PAS COMPILE PASCAL RC= 0000
18.31.37 JOB 1264 MAND#PAS POSTPROC ASMPCODE RC= 0000
18.31.37 JOB 1264 MAND#PAS GO LOADER RC= 0000
18.31.37 JOB 1264 IEF404I MAND#PAS - ENDED - TIME=18.31.37
18.31.37 JOB 1264 \$HASP395 MAND#PAS ENDED

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

16 MAY 20 JOB EXECUTION DATE

4 CARDS READ

305 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.00 MINUTES EXECUTION TIME

1	//MAND#PAS	JOB CLASS=A,MSGCLASS=A,MSGLEVEL=(1,1),NOTIFY=HERC01,	JOB 1264
	//	USER=HERC01,PASSWORD=	GENERATED BY IKJEFF10
2	// EXEC PASC	CG,PARM.COMPILE='D-,K+',PARM.GO=MAP	
3	XXPASC	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 SYSOUT=&SOUT	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=HERC01.TEST.CNTL(MAND#PAS),DISP=SHR	
12	XXPOSTPROC	EXEC PGM=ASMPCODE,COND=(0,LT,COMPILE),REGION=2048K	00160000
13	XXSTEPLIB	DD DSN=PASCAL.PASLIB,DISP=SHR	00170000
14	XXINPUT	DD DSN=*.COMPILE.PRR,DISP=(OLD,DELETE)	00180000
15	XXPRD	DD DSN=*.COMPILE.QRR,DISP=(OLD,PASS)	00190000
16	XXOUTPUT	DD SYSOUT=&SOUT	00200000
17	XXPRR	DD DSN=&&OBJECT,UNIT=&WORK,DCB=RECFM=FB,	00210000
	XX	SPACE=(TRK,(10,5),RLSE),DISP=(,PASS)	00220000
	***		00230000
	***		00240000
18	XXGO	EXEC PGM=LOADER,COND=((0,LT,COMPILE),(0,LT,POSTPROC)),	00250000
	XX	PARM='//TIME=&GOTIME,&GOPARM',REGION=&GOREG	00260000
19	XXSTEPLIB	DD DSN=PASCAL.PASLIB,DISP=SHR (NEEDED FOR K+ ONLY)	00270000
20	XXSYSLIN	DD DSN=*.POSTPROC.PRR,DISP=(OLD,DELETE)	00280000
21	XXSYSLOUT	DD SYSOUT=&SOUT	00290000
22	XXSYSLIB	DD DISP=SHR,DSN=PASCAL.PASLIB	00300000
23	XX	DD DISP=SHR,DSN=SYS1.FORTLIB	00310000
24	XXINPUT	DD DDNAME=SYSIN	00320000
25	XXPRD	DD DUMMY	00330000
26	XXQRR	DD DSN=*.COMPILE.QRR,DISP=(OLD,DELETE)	00340000
27	XXFT06F001	DD SYSOUT=&SOUT	00350000
28	XXOUTPUT	DD SYSOUT=&SOUT	00360000
29	XXQRR	DD UNIT=&WORK,SPACE=(TRK,(2,2))	00370000
30	XXSYSUDUMP	DD &DUMP.SYSOUT=&SOUT	00380000
	***		00390000

STMT NO. MESSAGE

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4 IEF653I SUBSTITUTION JCL - PGM=PASCAL,REGION=8192K,PARM='M+'
8 IEF653I SUBSTITUTION JCL - SYSOUT=*
9 IEF653I SUBSTITUTION JCL - DSN=%%PCODE,UNIT=VIO,DCB=RECFM=VB,
10 IEF653I SUBSTITUTION JCL - DSN=%%TABLES,UNIT=VIO,DCB=RECFM=VB,
16 IEF653I SUBSTITUTION JCL - SYSOUT=*
17 IEF653I SUBSTITUTION JCL - DSN=%%OBJECT,UNIT=VIO,DCB=RECFM=FB,
18 IEF653I SUBSTITUTION JCL - PARM='//TIME=299,',REGION=2048K
21 IEF653I SUBSTITUTION JCL - SYSOUT=*
27 IEF653I SUBSTITUTION JCL - SYSOUT=*
28 IEF653I SUBSTITUTION JCL - SYSOUT=*
29 IEF653I SUBSTITUTION JCL - UNIT=VIO,SPACE=(TRK,(2,2))
30 IEF653I SUBSTITUTION JCL - DUMMY,SYSOUT=*
30 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 SYS00222
IEF237I 280 ALLOCATED TO INPUT
IEF237I 240 ALLOCATED TO SYS00224
IEF237I 290 ALLOCATED TO PRD
IEF237I JES2 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 HERC01.TEST.CNTL KEPT *-----2
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.UCAT.TSO KEPT *-----0
IEF285I VOL SER NOS= PUB000.
IEF285I PASCAL.PASOBJ KEPT *-----0
IEF285I VOL SER NOS= PUB003.
IEF285I JES2.JOB01264.S00101 SYSOUT
IEF285I SYS20137.T183136.RA000.MAND#PAS.PCODE PASSED *-----1
IEF285I SYS20137.T183136.RA000.MAND#PAS.TABLES PASSED *-----1
IEF373I STEP /COMPILE / START 20137.1831
IEF374I STEP /COMPILE / STOP 20137.1831 CPU OMIN 00.06SEC SRB OMIN 00.00SEC VIRT 4148K SYS 252K
*****
* 1. JOBSTEP OF JOB: MAND#PAS STEPNAME: COMPILE PROGRAM NAME: PASCAL EXECUTED ON 16.05.20 FROM 18.31.36 TO 18.31.37 *
* ELAPSED TIME 24:00:00,14 CPU-IDENTIFIER: TK4- PAGE-IN: 0 *
* CPU TIME 00:00:00,06 VIRTUAL STORAGE USED: 4148K PAGE-OUT: 0 *
* CORR. CPU: 00:00:00,06 CPU TIME HAS BEEN CORRECTED BY 1 / 1,0 MULTIPLIER *
* *
* I/O OPERATION *
* NUMBER OF RECORDS READ VIA DD * OR DD DATA: 0 *
* 280.....0 191.....0 280.....2 240.....0 290.....0 DMY.....0 FFF.....1 FFF.....1 *
* *
* CHARGE FOR STEP (W/O SYSOUT): 0,10 *
*****
IEF236I ALLOC. FOR MAND#PAS POSTPROC
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00226
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
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IEF285I VOL SER NOS= MVSCAT.
IEF285I SYS20137.T183136.RA000.MAND#PAS.PCODE DELETED *-----2
IEF285I SYS20137.T183136.RA000.MAND#PAS.TABLES PASSED *-----2
IEF285I JES2.JOB01264.S00102 SYSOUT
IEF285I SYS20137.T183136.RA000.MAND#PAS.OBJECT PASSED *-----1
IEF373I STEP /POSTPROC/ START 20137.1831
IEF374I STEP /POSTPROC/ STOP 20137.1831 CPU OMIN 00.04SEC SRB OMIN 00.00SEC VIRT 2064K SYS 292K
*****
* 2. JOBSTEP OF JOB: MAND#PAS STEPNAME: POSTPROC PROGRAM NAME: ASMPCODE EXECUTED ON 16.05.20 FROM 18.31.37 TO 18.31.37 *
* ELAPSED TIME 24:00:00,07 CPU-IDENTIFIER: TK4- PAGE-IN: 0 *
* CPU TIME 00:00:00,04 VIRTUAL STORAGE USED: 2064K PAGE-OUT: 0 *
* CORR. CPU: 00:00:00,04 CPU TIME HAS BEEN CORRECTED BY 1 / 1,0 MULTIPLIER *
* *
* I/O OPERATION *
* NUMBER OF RECORDS READ VIA DD * OR DD DATA: 0 *
* 280.....0 191.....0 FFF.....2 FFF.....2 DMY.....0 FFF.....1 *
* *
* CHARGE FOR STEP (W/O SYSOUT): 0,06 *
*****
IEF236I ALLOC. FOR MAND#PAS GO
IEF237I 280 ALLOCATED TO STEPLIB
IEF237I 191 ALLOCATED TO SYS00228
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 SYS20137.T183136.RA000.MAND#PAS.OBJECT DELETED *-----2
IEF285I JES2.JOB01264.S00103 SYSOUT
IEF285I PASCAL.PASLIB KEPT *-----14
IEF285I VOL SER NOS= PUB002.
IEF285I SYS1.FORTLIB KEPT *-----1
IEF285I VOL SER NOS= MVSRES.
IEF285I SYS20137.T183136.RA000.MAND#PAS.TABLES DELETED *-----2
IEF285I JES2.JOB01264.S00104 SYSOUT
IEF285I JES2.JOB01264.S00105 SYSOUT
IEF285I SYS20137.T183136.RA000.MAND#PAS.R0000001 DELETED *-----3
IEF373I STEP /GO / START 20137.1831
IEF374I STEP /GO / STOP 20137.1831 CPU OMIN 00.16SEC SRB OMIN 00.00SEC VIRT 2052K SYS 292K
*****
* 3. JOBSTEP OF JOB: MAND#PAS STEPNAME: GO PROGRAM NAME: LOADER EXECUTED ON 16.05.20 FROM 18.31.37 TO 18.31.37 *
* ELAPSED TIME 24:00:00,21 CPU-IDENTIFIER: TK4- PAGE-IN: 0 *
* CPU TIME 00:00:00,16 VIRTUAL STORAGE USED: 2052K PAGE-OUT: 0 *
* CORR. CPU: 00:00:00,16 CPU TIME HAS BEEN CORRECTED BY 1 / 1,0 MULTIPLIER *
* *
* I/O OPERATION *
* NUMBER OF RECORDS READ VIA DD * OR DD DATA: 0 *
* 280.....0 191.....0 FFF.....2 DMY.....0 280.....14 148.....1 DMY.....0 DMY.....0 FFF.....2 DMY.....0 *
* DMY.....0 FFF.....3 DMY.....0 *
* *
* CHARGE FOR STEP (W/O SYSOUT): 0,26 *
*****
IEF375I JOB /MAND#PAS/ START 20137.1831
IEF376I JOB /MAND#PAS/ STOP 20137.1831 CPU OMIN 00.26SEC SRB OMIN 00.00SEC
```

```

1      ) PROGRAM MANDELBROTSET(OUTPUT);
2      ) LABEL 99;
3      ) CONST XSIZE=132; MINRE=-2; MAXRE=+1;
4      )      YSIZE= 48; MINIM=-1; MAXIM=+1;
5      ) VAR STEPX,STEPY,RE,IM,ZR,ZI,A,B:REAL;
6      368 1)      X,Y,N:INTEGER;
7      380 1)      STR:ARRAY[1..27] OF CHAR;
8      407 1) BEGIN
9      )      STR:='ABCDEFGHIJKLMNOPQRSTUVWXYZ ' ;
10     10  1)      STEPX:=(MAXRE-MINRE)/XSIZE;
11     18  1)      STEPY:=(MAXIM-MINIM)/YSIZE;
12     26  1)      FOR Y:=0 TO YSIZE
13     28  1)      DO BEGIN
14     35  1)          IM:=MINIM+STEPY*Y;
15     43  1)          FOR X:=0 TO XSIZE
16     45  1)          DO BEGIN
17     52  1)              RE:=MINRE+STEPX*X;
18     60  1)              ZR:=RE;
19     62  1)              ZI:=IM;
20     64  1)              FOR N:=0 TO 27
21     66  1)              DO BEGIN
22     73  1)                  A:=ZR*ZR;
23     77  1)                  B:=ZI*ZI;
24     81  1)                  IF (A+B)>4
25     84  1)                  THEN GOTO 99;
26     90  1)                  ZI:=ZR*ZI*2+IM;
27     99  1)                  ZR:=A-B+RE
28    102  1)              END;
29    113  1)  99:      WRITE(STR[N]:1)
30    124  1)      END;
31    132  1)      WRITELN
32    132  1)      END
33    136  1) END.
  
```

**** NO SYNTAX ERROR(S) DETECTED.

**** 33 LINE(S) READ, 0 PROCEDURE(S) COMPILED,

**** 146 P_INSTRUCTIONS GENERATED, 0.00 SECONDS IN COMPILATION.

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

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
\$MAINBLK	SD	AC010	\$PASENT *	SD	AC2C0	\$PASINT *	LR	AC828	IFYVERRM*	LR	ACEF2	IHCERRM *	LR	ACEF2
IHOERRM *	LR	ACEF2	IHNERRM *	LR	ACEF2	ERRMON *	LR	ACEF2	IFYVERRE*	LR	ACF26	IHOERRE *	LR	ACF26
IHNERRE *	LR	ACF26	IHCERRE *	LR	ACF26	\$PASCSP *	LR	ACF30	\$WRADDR *	SD	AE5A8	\$IDLEN *	SD	AE758
\$GETPNAM*	SD	AE7E8	\$ALIGN *	SD	AE978	\$ERRMSG *	SD	AE9C0	\$TRANVA*	SD	AECC8	\$CNVTNUM*	SD	AED50
\$PRNT *	SD	AEE90	\$IVSCAN *	SD	AFC20	\$PRNTVAR*	SD	B0298	\$FROMLIN*	SD	B0818	\$PRNTLNK*	SD	B09B8
\$PRNTSYS*	SD	B0B78	SNAPSHOT*	SD	B1650	#MAINBLK*	SD	B1B50						
TOTAL LENGTH 5BA8														
ENTRY ADDRESS		AC2C0												

[illegible]

LINE #	RANGE	RUN CNT	CONSTRUCT	PAGE	1
9	- 33	1	PROCEDURE: \$MAINBLK		
13	- 33	49	FOR STMT		
16	- 30	6517	FOR STMT		
21	- 28	72665	FOR STMT		
25	- 25	4746	THEN CLAUSE		
29	- 29	6517	LABELLED STMT		

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 MM AA AA NN NN NN DD DD ## ## PP PP AA AA SSS
MM MM MM AA AA NN NNNN DD DD ##### PP PP AA AA SS
MM MM MM AA AA NN NNN DD DD ##### PP PP AA AA SS
MM MM MM AA AA NN NN DDDDDDDDD ## ## PP PP AA AA SSSSSSSSSSSS
MM MM AA AA NN N DDDDDDDDD ## ## PP PP AA AA SSSSSSSSSS

JJJJJJJJJ 11 222222222 666666666 444 AAAAAAAAAA
JJJJJJJJJJ 111 222222222222 666666666666 4444 AAAAAAAAAA
JJ 1111 22 22 66 66 44 44 AA AA
JJ 11 22 66 44 44 AA AA
JJ 11 22 66 44 44 AA AA
JJ 11 22 6666666666 444444444444 AAAAAAAAAA
JJ 11 22 666666666666 444444444444 AAAAAAAAAA
JJ 11 22 66 66 44 AA AA
JJ JJ 11 22 66 66 44 AA AA
JJ JJ 11 22 66 66 44 AA AA
JJJJJJJJ 1111111111 222222222222 666666666666 44 AA AA
JJJJJJ 1111111111 222222222222 6666666666 44 AA AA

****A	END	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	END	A****
****A	END	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	END	A****
****A	END	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	END	A****
****A	END	JOB 1264	MAND#PAS	ROOM	6.31.37 PM 16 MAY 20	PRINTER1	SYS TK4-	JOB 1264	END	A****