```
000001                                                      MM        MM  FFFFFFFFFFFF       11
000002                                                     MMM      MMM  FFFFFFFFFFFF      111
000003                                                    MMMM    MMMM  FF               1111
000004                                                   MM MM  MM MM  FF                 11
000005                                                  MM  MMMM  MM  FF                 11
000006                                                 MM   MM   MM  FFFFFFFF           11
000007                                                MM        MM  FFFFFFFF           11
000008                                               MM        MM  FF                 11
000009                                              MM        MM  FF                 11
000010                                             MM        MM  FF                 11
000011                                            MM        MM  FF             1111111111
000012                                           MM        MM  FF             1111111111


000013                     SSSSSSSSSS    6666666666         444                                                AAAAAAAAAA
000014                    SSSSSSSSSSSS  666666666666       4444                                               AAAAAAAAAAAA
000015                    SS        SS  66        66      44 44                                               AA        AA
000016                    SS            66        66     44  44                                               AA        AA
000017                    SSS           66              44   44                                               AA        AA
000018                     SSSSSSSSS    66666666666    44444444444                                            AAAAAAAAAAAA
000019                      SSSSSSSSS   666666666666  444444444444                                            AAAAAAAAAAAA
000020                             SSS  66        66         44                                               AA        AA
000021                              SS  66        66         44                                               AA        AA
000022                    SS        SS  66        66         44                                               AA        AA
000023                    SSSSSSSSSSSS  666666666666         44                                               AA        AA
000024                     SSSSSSSSSS    6666666666          44                                               AA        AA


000025                   PPPPPPPPPPP   RRRRRRRRRRR    IIIIIIIIII   MM        MM  FFFFFFFFFFFF  OOOOOOOOOOOO  RRRRRRRRRRR   HH
000026                  PPPPPPPPPPPP  RRRRRRRRRRRR   IIIIIIIIII   MMM      MMM  FFFFFFFFFFFF  OOOOOOOOOOOO  RRRRRRRRRRRR  HH        H
000027                 PP        PP  RR        RR       II       MMMM    MMMM  FF            OO        OO  RR        RR  HH        HH
000028                PP        PP  RR        RR       II       MM MM  MM MM  FF            OO        OO  RR        RR  HH        HH
000029               PP        PP  RR        RR       II       MM  MMMM  MM  FF            OO        OO  RR        RR  HH        HH
000030              PPPPPPPPPPPP  RRRRRRRRRRRR       II       MM   MM   MM  FFFFFFFF      OO        OO  RRRRRRRRRRRR  HHHHHHHHHHHH
000031             PPPPPPPPPPP   RRRRRRRRRRR        II       MM        MM  FFFFFFFF      OO        OO  RRRRRRRRRRR   HHHHHHHHHHHH
000032            PP            RR    RR           II       MM        MM  FF            OO        OO  RR    RR      HH        HH
000033           PP            RR     RR          II       MM        MM  FF            OO        OO  RR     RR     HH        HH
000034          PP            RR      RR         II       MM        MM  FF            OO        OO  RR      RR    HH        HH
000035         PP            RR       RR    IIIIIIIIII   MM        MM  FF            OOOOOOOOOOOO  RR       RR   HH        HH
000036        PP            RR        RR   IIIIIIIIII   MM        MM  FF            OOOOOOOOOOOO  RR        RR  HH        HH


000037                      JJJJJJJJJJ       11        3333333333                                              AAAAAAAAAA
000038                      JJJJJJJJJJ      111       333333333333                                            AAAAAAAAAAAA
000039                          JJ         1111       33        33                                            AA        AA
000040                          JJ           11                 33                                            AA        AA
000041                          JJ           11                 33                                            AA        AA
000042                          JJ           11              3333                                             AAAAAAAAAAAA
000043                          JJ           11              3333                                             AAAAAAAAAAAA
000044                          JJ           11                 33                                            AA        AA
000045                    JJ    JJ           11                 33                                            AA        AA
000046                    JJ    JJ           11       33        33                                            AA        AA
000047                    JJJJJJJJ       1111111111   333333333333                                            AA        AA
000048                     JJJJJJ        1111111111    3333333333                                             AA        AA
000049
000050  ****A  START  JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13  START
000051  ****A  START  JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13  START
000052  ****A  START  JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13  START
000053  ****A  START  JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13  START
```

```
000054                                                    J E S 2   J O B   L O G
000055
000056
000057  21.17.20 JOB   13  $HASP373 PRIMFORH STARTED - INIT  1 - CLASS A - SYS TK4-
000058  21.17.20 JOB   13  IEF403I PRIMFORH - STARTED - TIME=21.17.20
000059  21.17.20 JOB   13  IEFACTRT - Stepname  Procstep  Program   Retcode
000060  21.17.20 JOB   13  PRIMFORH   PRIMES    FORT      IEKAA00   RC= 0000
000061  21.17.21 JOB   13  PRIMFORH   PRIMES    GO        LOADER    RC= 0000
000062  21.17.21 JOB   13  IEF404I PRIMFORH - ENDED - TIME=21.17.21
000063  21.17.21 JOB   13  $HASP395 PRIMFORH ENDED
000064
000065
000066  ------ JES2 JOB STATISTICS ------
000067
000068
000069   26 NOV 21 JOB EXECUTION DATE
000070
000071
000072         204 CARDS READ
000073
000074
000075         339 SYSOUT PRINT RECORDS
000076
000077
000078           0 SYSOUT PUNCH RECORDS
000079
000080
000081        0.00 MINUTES EXECUTION TIME
```

```
000082      1     //PRIMFORH JOB (FORTRAN),                                               JOB   13
000083            //             'Eratosthenes Sieve',
000084            //             CLASS=A,
000085            //             MSGCLASS=A,
000086            //             REGION=9000K,TIME=1440,
000087            //             MSGLEVEL=(1,1),
000088            //            USER=HERC01,PASSWORD=            GENERATED BY GDL
000089            **********************************************************************
000090            ***
000091            *** Name: SYS2.JCLLIB(PRIMFORH)
000092            ***
000093            *** Desc: Sieve of Eratosthenes programmed in FORTRAN,
000094            ***       compiled using the IBM OS/360 FORTRAN H Level 21.8 compiler.
000095            ***       All prime numbers up to the value entered via
000096            ***       //GO.SYSIN DD are computed.
000097            ***
000098            **********************************************************************
000099      2     //PRIMES    EXEC FORTHCLD,PARM.GO='SIZE=9000000'
000100      3     XXFORTHCLD PROC SOUT='*'                                                00000100
000101      4     XXFORT     EXEC PGM=IEKAA00,PARM=(SOURCE,MAP)                           00000200
000102      5     XXSYSPRINT DD SYSOUT=&SOUT                                              00000300
000103      6     XXSYSPUNCH DD SYSOUT=B                                                  00000400
000104      7     XXSYSLIN   DD DSNAME=&LOADSET,UNIT=SYSDA,DISP=(MOD,PASS),               00000500
000105            XX            SPACE=(400,(200,50),RLSE)                                 00000600
000106      8     //FORT.SYSIN DD *
000107      9     XXGO       EXEC PGM=LOADER,PARM=(MAP),COND=(4,LT,FORT)                  00000700
000108     10     XXSYSLIB   DD DSNAME=SYS1.FORTLIB,DISP=SHR                              00000800
000109     11     XXSYSLOUT  DD SYSOUT=&SOUT                                              00000900
000110     12     XXSYSLIN   DD DSNAME=*.FORT.SYSLIN,DISP=(OLD,PASS)                      00001000
000111     13     XXFT05F001 DD DDNAME=SYSIN                                              00001100
000112     14     //GO.FT06F001 DD SYSOUT=*,DCB=(RECFM=FBA,LRECL=166,BLKSIZE=16600)
000113            X/FT06F001 DD SYSOUT=&SOUT                                              00001200
000114     15     XXFT07F001 DD SYSOUT=B                                                  00001300
000115     16     //GO.SYSIN DD *
```

```
000116    STMT NO. MESSAGE
000117  -
000118      5     IEF653I SUBSTITUTION JCL - SYSOUT=*
000119     11     IEF653I SUBSTITUTION JCL - SYSOUT=*
000120     14     IEF653I SUBSTITUTION JCL - SYSOUT=*
000121  IEF236I ALLOC. FOR PRIMFORH FORT PRIMES
000122  IEF237I JES2 ALLOCATED TO SYSPRINT
000123  IEF237I JES2 ALLOCATED TO SYSPUNCH
000124  IEF237I 180  ALLOCATED TO SYSLIN
000125  IEF237I JES2 ALLOCATED TO SYSIN
000126  IEF142I PRIMFORH FORT PRIMES - STEP WAS EXECUTED - COND CODE 0000
000127  IEF285I   JES2.JOB00013.SO0103                         SYSOUT
000128  IEF285I   JES2.JOB00013.SO0104                         SYSOUT
000129  IEF285I   SYS21330.T211720.RA000.PRIMFORH.LOADSET      PASSED        *-------39
000130  IEF285I   VOL SER NOS= WORK02.
000131  IEF285I   JES2.JOB00013.SI0101                         SYSIN
000132  IEF373I STEP /FORT    / START 21330.2117
000133  IEF374I STEP /FORT    / STOP  21330.2117 CPU    0MIN 00.05SEC SRB    0MIN 00.01SEC VIRT  9064K SYS   232K

000134  ******************************************************************************************************************************
000135  *     1. Jobstep of job: PRIMFORH    Stepname: FORT        Program name: IEKAA00    Executed on 26.11.21 from 21.17.20 to 21.
000136  *         elapsed time  00:00:00,12                      CPU-Identifier:  TK4-           Page-in:      0
000137  *             CPU time  00:00:00,06               Virtual Storage used:   9064K         Page-out:      0
000138  *           corr. CPU:  00:00:00,06   CPU time has been corrected by  1 / 1,0  multiplier
000139  *
000140  *     I/O Operation
000141  *     Number of records read via DD * or DD DATA:    180
000142  *     DMY.......0 DMY.......0 180......39 DMY.......0
000143  *
000144  *                                          Charge for step (w/o SYSOUT):          0,10
000145  ******************************************************************************************************************************
000146  IEF236I ALLOC. FOR PRIMFORH GO PRIMES
000147  IEF237I 148  ALLOCATED TO SYSLIB
000148  IEF237I JES2 ALLOCATED TO SYSLOUT
000149  IEF237I 180  ALLOCATED TO SYSLIN
000150  IEF237I JES2 ALLOCATED TO FT05F001
000151  IEF237I JES2 ALLOCATED TO FT06F001
000152  IEF237I JES2 ALLOCATED TO FT07F001
000153  IEF142I PRIMFORH GO PRIMES - STEP WAS EXECUTED - COND CODE 0000
000154  IEF285I   SYS1.FORTLIB                                 KEPT          *-------65
000155  IEF285I   VOL SER NOS= MVSRES.
000156  IEF285I   JES2.JOB00013.SO0105                         SYSOUT
000157  IEF285I   SYS21330.T211720.RA000.PRIMFORH.LOADSET      PASSED        *-------40
000158  IEF285I   VOL SER NOS= WORK02.
000159  IEF285I   JES2.JOB00013.SI0102                         SYSIN
000160  IEF285I   JES2.JOB00013.SO0106                         SYSOUT
000161  IEF285I   JES2.JOB00013.SO0107                         SYSOUT
000162  IEF373I STEP /GO      / START 21330.2117
000163  IEF374I STEP /GO      / STOP  21330.2117 CPU    0MIN 00.04SEC SRB    0MIN 00.01SEC VIRT  8824K SYS   224K

000164  ******************************************************************************************************************************
000165  *     2. Jobstep of job: PRIMFORH    Stepname: GO          Program name: LOADER     Executed on 26.11.21 from 21.17.20 to 21.
000166  *         elapsed time  00:00:00,10                      CPU-Identifier:  TK4-           Page-in:      0
000167  *             CPU time  00:00:00,05               Virtual Storage used:   8824K         Page-out:      0
000168  *           corr. CPU:  00:00:00,05   CPU time has been corrected by  1 / 1,0  multiplier
000169  *
000170  *     I/O Operation
000171  *     Number of records read via DD * or DD DATA:      1
000172  *     148......65 DMY.......0 180......40 DMY.......0 DMY.......0 DMY.......0
000173  *
000174  *                                          Charge for step (w/o SYSOUT):          0,08
000175  ******************************************************************************************************************************
000176  IEF237I 180  ALLOCATED TO SYS00001
000177  IEF285I   SYS21330.T211721.RA000.PRIMFORH.R0000001     KEPT          *--------0
000178  IEF285I   VOL SER NOS= WORK02.
```

```
000179  IEF285I   SYS21330.T211720.RA000.PRIMFORH.LOADSET      DELETED
000180  IEF285I   VOL SER NOS= WORK02.
000181  IEF375I  JOB /PRIMFORH/ START 21330.2117
000182  IEF376I  JOB /PRIMFORH/ STOP  21330.2117 CPU    0MIN 00.09SEC SRB    0MIN 00.02SEC
```

```
000183    LEVEL 21.8 ( JUN 74 )                          OS/360  FORTRAN H                                 DATE  21.330/21.17.20
000184
000185             COMPILER OPTIONS - NAME=  MAIN,OPT=00,LINECNT=50,SIZE=0000K,
000186                                SOURCE,EBCDIC,NOLIST,NODECK,LOAD,MAP,NOEDIT,NOID,NOXREF
000187                  C /*-----------------------------------------------------------------*/
000188                  C /*   Sieve of Eratosthenes.                                        */
000189                  C /*-----------------------------------------------------------------*/
000190                  C
000191                  C /*-----------------------------------------------------------------*/
000192                  C /*   Formats for output.                                           */
000193                  C /*-----------------------------------------------------------------*/
000194     ISN 0002     3     FORMAT (' ')
000195     ISN 0003     4     FORMAT (  3X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7,
000196                       11X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X, I7, 1X
000197                       1, I7, 1X, I7, 1X, I7)
000198     ISN 0004     5     FORMAT (' Sieve of Eratosthenes generated using OS/360 FORTRAN H L
000199                       1level 21.8')
000200     ISN 0005     6     FORMAT (' Upper limit of test range = ', I12)
000201     ISN 0006     7     FORMAT (' Number of primes in range = ', I12)
000202     ISN 0007     8     FORMAT (I7)
000203     ISN 0008     993   FORMAT (' DEBUG: marking as non prime: ', I4)
000204     ISN 0009     994   FORMAT (' DEBUG: starting p=', I4, '    j=', I4)
000205                  C
000206                  C /*-----------------------------------------------------------------*/
000207                  C /*   Define array of flags, one for each integer in the range      */
000208                  C /*   we will test.  If the flag is on, the corresponding           */
000209                  C /*   number is prime.  If it's off, the number is not prime.       */
000210                  C /*   We will initialize all the flags to on (assuming every        */
000211                  C /*   number is prime) and turn them off as we determine the        */
000212                  C /*   corresponding number is not prime.                            */
000213                  C /*-----------------------------------------------------------------*/
000214     ISN 0010           LOGICAL*1 FLAGS(5000002)
000215                  C
000216                  C /*-----------------------------------------------------------------*/
000217                  C /*   The PRIME array will hold all the prime numbers we have       */
000218                  C /*   identified, and CPRIME will contain the number of primes      */
000219                  C /*   we've found.                                                  */
000220                  C /*-----------------------------------------------------------------*/
000221     ISN 0011           INTEGER*4 PRIME(350000)
000222     ISN 0012           INTEGER*4 CPRIME
000223                  C
000224                  C /*-----------------------------------------------------------------*/
000225                  C /*   J is a loop counter and work variable.                        */
000226                  C /*-----------------------------------------------------------------*/
000227     ISN 0013           INTEGER*4 J
000228                  C
000229                  C /*-----------------------------------------------------------------*/
000230                  C /*   K is the step amount for crossing out prime multiples         */
000231                  C /*-----------------------------------------------------------------*/
000232     ISN 0014           INTEGER*4 K
```

```
000233
000234
000235                  C
000236                  C /*-----------------------------------------------------------------*/
000237                  C /*   P is the number that we've most recently determined           */
000238                  C /*   definitely to be prime.                                       */
000239                  C /*-----------------------------------------------------------------*/
000240     ISN 0015           INTEGER*4 P
000241                  C
000242                  C /*-----------------------------------------------------------------*/
000243                  C /*   The DEBUG flag is set to TRUE if debugging messages are to    */
000244                  C /*   be issued and FALSE otherwise.                                */
000245                  C /*-----------------------------------------------------------------*/
000246     ISN 0016           LOGICAL*1 DEBUG
000247                  C
000248                  C /*-----------------------------------------------------------------*/
000249                  C /*   LIMIT sets the upper bound of the range of numbers we         */
000250                  C /*   will test.                                                    */
000251                  C /*-----------------------------------------------------------------*/
000252     ISN 0017           INTEGER*4 LIMIT
000253                  C
000254                  C /*-----------------------------------------------------------------*/
000255                  C /*   REPEAT is the number of times that the entire prime           */
000256                  C /*   generation process is to be repeated, and is useful           */
000257                  C /*   for benchmarking (otherwise it should be 1).                  */
000258                  C /*-----------------------------------------------------------------*/
000259     ISN 0018           INTEGER*4 REPEAT
000260                  C
000261                  C /*-----------------------------------------------------------------*/
000262                  C /*   Initialize LIMIT, DEBUG and REPEAT.                           */
000263                  C /*-----------------------------------------------------------------*/
000264     ISN 0019           READ (5, 8) LIMIT
000265                  C     DEBUG = .TRUE.
000266     ISN 0020           DEBUG = .FALSE.
000267     ISN 0021           REPEAT = 1
000268                  C
000269                  C *---------------------------------------------------------------*
000270                  C *    THIS IS THE TOP OF THE LOOP FOR BENCHMARK TESTING.
000271                  C *---------------------------------------------------------------*
000272     ISN 0022     100   CONTINUE
000273     ISN 0023           REPEAT = REPEAT - 1
000274     ISN 0024           IF (REPEAT .LT. 0) GO TO 999
000275                  C
000276                  C /*-----------------------------------------------------------------*/
000277                  C /*   Initialize all flags to on.  We optimistically assume         */
000278                  C /*   all numbers are prime, and will subsequently turn flags       */
000279                  C /*   off as reality sets in.                                       */
000280                  C /*-----------------------------------------------------------------*/
000281     ISN 0026           DO 200 J = 3, LIMIT, 2
000282     ISN 0027             FLAGS(J) = .TRUE.
```

```
000283
000284
000285     ISN 0028     200   CONTINUE
000286                  C
000287                  C /*-----------------------------------------------------------------*/
000288                  C /*   The first prime number is 3, the 2 is handled manually        */
000289                  C /*-----------------------------------------------------------------*/
000290     ISN 0029           P = 3
000291                  C
000292                  C  /*-----------------------------------------------------------------*/
000293                  C  /*   Start of the main loop.  P is the prime number we're          */
000294                  C  /*   currently working on.  If P*P is greater than the limit       */
000295                  C  /*   value, we're done (all the numbers between P and the limit    */
000296                  C  /*   inclusive have already been marked appropriately).  Any       */
000297                  C  /*   non-prime less than P*P has also already been marked          */
000298                  C  /*   appropriately, so we will start this pass marking with        */
000299                  C  /*   P*P (which we will call J).                                   */
000300                  C  /*-----------------------------------------------------------------*/
000301     ISN 0030     300   CONTINUE
000302     ISN 0031           J = P * P
000303     ISN 0032           K = 2 * P
000304     ISN 0033           IF (J .GE. LIMIT) GO TO 700
000305     ISN 0035             IF (.NOT. DEBUG) GO TO 400
000306     ISN 0037               WRITE (6, 994) P, J
000307                  C
000308                  C /*-----------------------------------------------------------------*/
000309                  C /*   By definition, all multiples of prime number P are not        */
000310                  C /*   prime.  Turn off the flags for the multiples of P to          */
000311                  C /*   mark them as non-prime. Note: Even numbers are skipped.       */
000312                  C /*-----------------------------------------------------------------*/
000313     ISN 0038     400   CONTINUE
000314     ISN 0039             IF (J .GT. LIMIT) GO TO 500
000315     ISN 0041             IF (.NOT. DEBUG) GO TO 420
000316     ISN 0043               WRITE (6, 993) J
000317     ISN 0044     420     FLAGS(J) = .FALSE.
000318     ISN 0045             J = J + K
000319     ISN 0046           GO TO 400
000320                  C
000321                  C /*-----------------------------------------------------------------*/
000322                  C /*   Done marking all multiples of J as not prime.  Find the       */
000323                  C /*   next prime number after J, set it to P and loop back to       */
000324                  C /*   process it. Note: Even numbers are skipped.                   */
000325                  C /*-----------------------------------------------------------------*/
000326     ISN 0047     500   CONTINUE
000327     ISN 0048             P = P + 2
000328     ISN 0049             IF (FLAGS(P)) GO TO 600
000329     ISN 0051           GO TO 500
000330                  C
000331                  C /*-----------------------------------------------------------------*/
000332                  C /*   Bottom of the main loop.                                      */
```

```
000333
000334
000335                  C /*-----------------------------------------------------------------*/
000336     ISN 0052     600   CONTINUE
000337     ISN 0053           GO TO 300
000338                  C
000339                  C /*-----------------------------------------------------------------*/
000340                  C /*   Bottom of the benchmark loop.                                  */
000341                  C /*-----------------------------------------------------------------*/
000342     ISN 0054     700   CONTINUE
000343     ISN 0055           GO TO 100
000344     ISN 0056     999   CONTINUE
000345                  C
000346                  C /*-----------------------------------------------------------------*/
000347                  C /*   Set the prime numbers we have found in the PRIME array.        */
000348                  C /*-----------------------------------------------------------------*/
000349     ISN 0057           CPRIME = 1
000350     ISN 0058           PRIME(CPRIME) = 2
000351     ISN 0059           DO 800 J = 3, LIMIT, 2
000352     ISN 0060             IF (.NOT. FLAGS(J)) GO TO 800
000353     ISN 0062               CPRIME = CPRIME + 1
000354     ISN 0063               PRIME(CPRIME) = J
000355     ISN 0064     800   CONTINUE
000356                  C
000357                  C /*-----------------------------------------------------------------*/
000358                  C /*   Display the results.                                           */
000359                  C /*-----------------------------------------------------------------*/
000360     ISN 0065           WRITE (6, 3)
000361     ISN 0066           WRITE (6, 5)
000362     ISN 0067           WRITE (6, 6) LIMIT
000363     ISN 0068           WRITE (6, 7) CPRIME
000364     ISN 0069           WRITE (6, 3)
000365     ISN 0070           WRITE (6, 4) (PRIME(J), J = 1, CPRIME)
000366     ISN 0071           WRITE (6, 3)
000367                  C
000368                  C /*-----------------------------------------------------------------*/
000369                  C /*   End of program.                                                */
000370                  C /*-----------------------------------------------------------------*/
000371     ISN 0072           STOP
000372     ISN 0073           END
```

```
000373                                                          /     MAIN /     SIZE OF PROGRAM 61AD06 HEXADECIMAL BYTES PAGE 005
000374
000375
000376        NAME    TAG    TYPE  ADD.         NAME    TAG    TYPE  ADD.         NAME    TAG    TYPE  ADD.         NAME    TAG    TYPE  ADD
000377            J SF       I*4  0001B4            K SF       I*4  0001B8            P SF       I*4  0001BC        DEBUG S        L*1  0001
000378        FLAGS S        L*1  0001CC        LIMIT SF       I*4  0001C0        PRIME SF       I*4  4C4D14       CPRIME SF       I*4  0001
000379       IBCOM#  F  XF   R*4  000000       REPEAT SF       I*4  0001C8
```

```
000380        LABEL   ADDR                LABEL   ADDR                LABEL   ADDR                LABEL   ADDR           PAGE 006
000381
000382        100  61AA6C                 200  61AA92                 300  61AAB0                 400  61AB0C
000383        420  61AB48                 500  61AB66                 600  61AB8C                 700  61AB92
000384        999  61AB98                 800  61ABEC
000385
000386  *OPTIONS IN EFFECT*      NAME=  MAIN,OPT=00,LINECNT=50,SIZE=0000K,
000387  *OPTIONS IN EFFECT*      SOURCE,EBCDIC,NOLIST,NODECK,LOAD,MAP,NOEDIT,NOID,NOXREF
000388  *STATISTICS*     SOURCE STATEMENTS =      72 ,PROGRAM SIZE =  6401286
000389  *STATISTICS*  NO  DIAGNOSTICS GENERATED
000390   ****** END OF COMPILATION ******                                      8917K BYTES OF CORE NOT USED
000391
```

```
                                                       VS LOADER

OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=9000000,NAME=**GO

  TOTAL LENGTH   61FFD0
  ENTRY ADDRESS   ACBD0
```

```
000400
000401
000402  Sieve of Eratosthenes generated using OS/360 FORTRAN H Level 21.8
000403  Upper limit of test range =         2000
000404  Number of primes in range =          303
000405
000406          2       3       5       7      11      13      17      19      23      29      31      37      41      43      47
000407         67      71      73      79      83      89      97     101     103     107     109     113     127     131     137
000408        157     163     167     173     179     181     191     193     197     199     211     223     227     229     233
000409        257     263     269     271     277     281     283     293     307     311     313     317     331     337     347
000410        367     373     379     383     389     397     401     409     419     421     431     433     439     443     449
000411        467     479     487     491     499     503     509     521     523     541     547     557     563     569     571
000412        599     601     607     613     617     619     631     641     643     647     653     659     661     673     677
000413        709     719     727     733     739     743     751     757     761     769     773     787     797     809     811
000414        829     839     853     857     859     863     877     881     883     887     907     911     919     929     937
000415        967     971     977     983     991     997    1009    1013    1019    1021    1031    1033    1039    1049    1051
000416       1087    1091    1093    1097    1103    1109    1117    1123    1129    1151    1153    1163    1171    1181    1187
000417       1217    1223    1229    1231    1237    1249    1259    1277    1279    1283    1289    1291    1297    1301    1303
000418       1327    1361    1367    1373    1381    1399    1409    1423    1427    1429    1433    1439    1447    1451    1453
000419       1483    1487    1489    1493    1499    1511    1523    1531    1543    1549    1553    1559    1567    1571    1579
000420       1607    1609    1613    1619    1621    1627    1637    1657    1663    1667    1669    1693    1697    1699    1709
000421       1741    1747    1753    1759    1777    1783    1787    1789    1801    1811    1823    1831    1847    1861    1867
000422       1879    1889    1901    1907    1913    1931    1933    1949    1951    1973    1979    1987    1993    1997    1999
000423
000424
000425                  PPPPPPPPPPP   RRRRRRRRRRR    IIIIIIIIII   MM        MM  FFFFFFFFFFFF  OOOOOOOOOOOO  RRRRRRRRRRR   HH        H
000426                  PPPPPPPPPPPP  RRRRRRRRRRRR   IIIIIIIIII   MMM      MMM  FFFFFFFFFFFF  OOOOOOOOOOOO  RRRRRRRRRRRR  HH        H
000427                 PP        PP  RR        RR       II       MMMM    MMMM  FF            OO        OO  RR        RR  HH        HH
000428                PP        PP  RR        RR       II       MM MM  MM MM  FF            OO        OO  RR        RR  HH        HH
000429               PP        PP  RR        RR       II       MM  MMMM  MM  FF            OO        OO  RR        RR  HH        HH
000430              PPPPPPPPPPPP  RRRRRRRRRRRR       II       MM   MM   MM  FFFFFFFF      OO        OO  RRRRRRRRRRRR  HHHHHHHHHHHH
000431             PPPPPPPPPPP   RRRRRRRRRRR        II       MM        MM  FFFFFFFF      OO        OO  RRRRRRRRRRR   HHHHHHHHHHHH
000432            PP            RR    RR           II       MM        MM  FF            OO        OO  RR     RR     HH        HH
000433           PP            RR      RR         II       MM        MM  FF            OO        OO  RR      RR    HH        HH
000434          PP            RR        RR       II       MM        MM  FF            OO        OO  RR       RR   HH        HH
000435         PP            RR         RR    IIIIIIIIII   MM        MM  FF            OOOOOOOOOOOO  RR        RR  HH        HH
000436        PP            RR          RR   IIIIIIIIII   MM        MM  FF            OOOOOOOOOOOO  RR         RR HH        HH
000437
000438
000439
000440                      JJJJJJJJJJ       11        3333333333                                              AAAAAAAAAA
000441                      JJJJJJJJJJ      111       333333333333                                            AAAAAAAAAAAA
000442                          JJ         1111       33        33                                            AA        AA
000443                          JJ           11                 33                                            AA        AA
000444                          JJ           11                 33                                            AA        AA
000445                          JJ           11              3333                                             AAAAAAAAAAAA
000446                          JJ           11              3333                                             AAAAAAAAAAAA
000447                          JJ           11                 33                                            AA        AA
000448                    JJ    JJ           11                 33                                            AA        AA
000449                    JJ    JJ           11       33        33                                            AA        AA
000450                    JJJJJJJJ       1111111111   333333333333                                            AA        AA
000451                     JJJJJJ        1111111111    3333333333                                             AA        AA
000452
000453
000454  ****A   END   JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13   END
000455  ****A   END   JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13   END
000456  ****A   END   JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13   END
000457  ****A   END   JOB   13  PRIMFORH  Eratosthenes Sieve    ROOM        9.17.21 PM 26 NOV 21  PRINTER1  SYS TK4-  JOB   13   END
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