```
                 PPPPPPPPPPP   RRRRRRRRRRR    IIIIIIIIII   MM        MM   CCCCCCCCCC   000000000000  BBBBBBBBBBB    2222222222
                PPPPPPPPPPPP  RRRRRRRRRRRR   IIIIIIIIII   MMM      MMM  CCCCCCCCCCCC  000000000000  BBBBBBBBBBBB  222222222222
               PP        PP  RR        RR       II       MMMM    MMMM  CC        CC  00        00  BB        BB  22        22
              PP        PP  RR        RR       II       MM MM  MM MM  CC            00        00  BB        BB            22
             PP        PP  RR        RR       II       MM  MMMM  MM  CC            00        00  BB       BB             22
            PPPPPPPPPPPP  RRRRRRRRRRRR       II       MM   MM   MM  CC            00        00  BBBBBBBBBB             22
           PPPPPPPPPPP   RRRRRRRRRRR        II       MM        MM  CC            00        00  BBBBBBBBBB           22
          PP            RR    RR           II       MM        MM  CC            00        00  BB       BB        22
         PP            RR     RR          II       MM        MM  CC            00        00  BB        BB     22
        PP            RR      RR         II       MM        MM  CC        CC  00        00  BB        BB   22
       PP            RR       RR    IIIIIIIIII   MM        MM  CCCCCCCCCCCC  000000000000  BBBBBBBBBBBB  222222222222
      PP            RR        RR   IIIIIIIIII   MM        MM   CCCCCCCCCC   000000000000  BBBBBBBBBBB   222222222222



                    JJJJJJJJJJ   2222222222                                                           EEEEEEEEEEEE
                    JJJJJJJJJJ  222222222222                                                          EEEEEEEEEEEE
                        JJ      22        22                                                          EE
                        JJ                22                                                          EE
                        JJ                22                                                          EE
                        JJ               22                                                           EEEEEEEE
                        JJ             22                                                             EEEEEEEE
                        JJ           22                                                               EE
                  JJ    JJ         22                                                                 EE
                  JJ    JJ       22                                                                   EE
                  JJJJJJJJ      222222222222                                                          EEEEEEEEEEEE
                   JJJJJJ       222222222222                                                          EEEEEEEEEEEE


****E  START  JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2  START  E****
****E  START  JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2  START  E****
****E  START  JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2  START  E****
****E  START  JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2  START  E****
```

J E S 2 J O B L O G

```
13.52.04 JOB    2  $HASP373 PRIMCOB2 STARTED - INIT  1 - CLASS A - SYS PI5B
13.52.04 JOB    2  IEF403I PRIMCOB2 - STARTED - TIME=13.52.04
13.52.04 JOB    2  IEFACTRT - Stepname  Procstep  Program   Retcode
13.52.04 JOB    2  PRIMCOB2   PRIMES    COB       IKFCBL00  RC= 0000
13.52.04 JOB    2  PRIMCOB2   PRIMES    GO        LOADER    RC= 0000
13.52.04 JOB    2  IEF404I PRIMCOB2 - ENDED - TIME=13.52.04
13.52.04 JOB    2  $HASP395 PRIMCOB2 ENDED

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

 18 MAY 26 JOB EXECUTION DATE

       445 CARDS READ

       578 SYSOUT PRINT RECORDS

         0 SYSOUT PUNCH RECORDS

      0.00 MINUTES EXECUTION TIME
```

```
1     //PRIMCOB2 JOB (COBOL),                                          JOB    2
      //             'Eratosthenes Sieve',
      //             CLASS=A,
      //             MSGCLASS=E,
      //             REGION=9000K,TIME=1440,
      //             MSGLEVEL=(1,1),
      //            USER=SCOTT,PASSWORD=        GENERATED BY IKJEFF10
      ********************************************************************
      ***
      *** Name: SYS2.JCLLIB(PRIMCOB2)
      ***
      *** Desc: Sieve of Eratosthenes programmed in COBOL.
      ***       All prime numbers up to the value entered via
      ***       //GO.SYSIN DD are computed. Due to COBOL
      ***       implementation limitations a maximum limit
      ***       of 1048544 can be entered.
      ***
      ********************************************************************
2     //PRIMES   EXEC COBUCG,
      //          PARM.COB='FLAGW,LOAD,SUPMAP,SIZE=6144K,BUF=1024K',
      //          PARM.GO='SIZE=6800000'
3     XXCOBUCG PROC SOUT='*'                                          00000100
4     XXCOB EXEC PGM=IKFCBL00,                                        00000200
      XX         PARM='LOAD,SIZE=2048K,BUF=1024K'                     00000300
5     XXSYSPRINT DD SYSOUT=&SOUT                                      00000400
6     XXSYSUT1 DD UNIT=SYSDA,SPACE=(460,(700,100))                    00000500
7     XXSYSUT2 DD UNIT=SYSDA,SPACE=(460,(700,100))                    00000600
8     XXSYSUT3 DD UNIT=SYSDA,SPACE=(460,(700,100))                    00000700
9     XXSYSUT4 DD UNIT=SYSDA,SPACE=(460,(700,100))                    00000800
10    XXSYSLIN DD DSNAME=&LOADSET,DISP=(MOD,PASS),                    00000900
      XX             UNIT=SYSDA,SPACE=(80,(500,100))                  00001000
11    //COB.SYSPUNCH DD DUMMY
12    //COB.SYSIN    DD *
13    //COB.SYSLIB   DD DSNAME=SYS1.COBLIB,DISP=SHR
14    XXGO EXEC PGM=LOADER,PARM='MAP,LET',COND=(5,LT,COB)             00001100
15    XXSYSLIN DD DSNAME=*.COB.SYSLIN,DISP=(OLD,DELETE)               00001200
16    XXSYSLOUT DD SYSOUT=&SOUT                                       00001300
17    XXSYSLIB DD DSNAME=SYS1.COBLIB,DISP=SHR                         00001400
18    //GO.SYSOUT   DD SYSOUT=*,DCB=(RECFM=FBA,LRECL=161,BLKSIZE=16100)
19    //GO.SYSIN    DD *
```

```
 STMT NO. MESSAGE
-
    5      IEF653I SUBSTITUTION JCL - SYSOUT=*
   16      IEF653I SUBSTITUTION JCL - SYSOUT=*
IEF236I ALLOC. FOR PRIMCOB2 COB PRIMES
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 292  ALLOCATED TO SYSUT1
IEF237I 293  ALLOCATED TO SYSUT2
IEF237I 291  ALLOCATED TO SYSUT3
IEF237I 290  ALLOCATED TO SYSUT4
IEF237I 293  ALLOCATED TO SYSLIN
IEF237I DMY  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF237I 390  ALLOCATED TO SYSLIB
IEF142I PRIMCOB2 COB PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00002.S00103                    SYSOUT
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.R0000001     DELETED       *--------6
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.R0000002     DELETED       *--------6
IEF285I   VOL SER NOS= WORK04.
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.R0000003     DELETED       *--------9
IEF285I   VOL SER NOS= WORK02.
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.R0000004     DELETED       *--------3
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.LOADSET      PASSED        *------183
IEF285I   VOL SER NOS= WORK04.
IEF285I   JES2.JOB00002.SI0101                    SYSIN
IEF285I   SYS1.COBLIB                             KEPT          *--------0
IEF285I   VOL SER NOS= TK5RES.
IEF373I STEP /COB      / START 26138.1352
IEF374I STEP /COB      / STOP  26138.1352 CPU    0MIN 00.12SEC SRB    0MIN 00.02SEC VIRT  6172K SYS   236K
*-------------------------------------------------------------------------------------------------------------------*
*     1. Jobstep of job: PRIMCOB2    Stepname: COB          Program name: IKFCBL00   Executed on 18.05.26 from 13.52.04 to 13.52.04 *
*         elapsed time  00:00:00,31                    CPU-Identifier:  PI5B           Page-in:      0                  *
*             CPU time  00:00:00,14              Virtual Storage used:   6172K         Page-out:     0                  *
*           corr. CPU:  00:00:00,14   CPU time has been corrected by  1 / 1,0  multiplier                             *
*                                                                                                                     *
*     I/O Operation                                                                                                   *
*     Number of records read via DD * or DD DATA:    416                                                              *
*     DMY.......0 292.......6 293.......6 291.......9 290.......3 293.....183 DMY.......0 DMY.......0 390.......0    *
*                                                                                                                     *
*                                          Charge for step (w/o SYSOUT):          0,23                              *
*-------------------------------------------------------------------------------------------------------------------*
IEF236I ALLOC. FOR PRIMCOB2 GO PRIMES
IEF237I 293  ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO SYSLOUT
IEF237I 390  ALLOCATED TO SYSLIB
IEF237I JES2 ALLOCATED TO SYSOUT
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I PRIMCOB2 GO PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS26138.T135204.RA000.PRIMCOB2.LOADSET      DELETED       *------184
IEF285I   VOL SER NOS= WORK04.
IEF285I   JES2.JOB00002.S00104                    SYSOUT
IEF285I   SYS1.COBLIB                             KEPT          *-------30
IEF285I   VOL SER NOS= TK5RES.
IEF285I   JES2.JOB00002.S00105                    SYSOUT
IEF285I   JES2.JOB00002.SI0102                    SYSIN
IEF373I STEP /GO       / START 26138.1352
IEF374I STEP /GO       / STOP  26138.1352 CPU    0MIN 00.03SEC SRB    0MIN 00.02SEC VIRT  6676K SYS   224K
*-------------------------------------------------------------------------------------------------------------------*
*     2. Jobstep of job: PRIMCOB2    Stepname: GO           Program name: LOADER     Executed on 18.05.26 from 13.52.04 to 13.52.04 *
*         elapsed time  00:00:00,09                    CPU-Identifier:  PI5B           Page-in:      0                  *
```

```
*     Number of records read via DD * or DD DATA:      1                                                                *
*     293.....184 DMY.......0 390......30 DMY.......0 DMY.......0                                                       *
*                                                                                                                       *
*                                          Charge for step (w/o SYSOUT):          0,08                                *
*************************************************************************************************************************
IEF375I  JOB /PRIMCOB2/ START 26138.1352
IEF376I  JOB /PRIMCOB2/ STOP  26138.1352 CPU    0MIN 00.15SEC SRB    0MIN 00.04SEC
```

```
    10 * ////////////////////////////////////////////////////////////         PRIME
    20 * // Name: Peter M. Maurer                                              PRIME
    30 * // Program: Sieve of Eratosthenes                                     PRIME
    40 * // Due: Never                                                         PRIME
    50 * // Language: COBOL                                                    PRIME
    60 * //                                                                    PRIME
    70 * // Changes:                                                           PRIME
    80 * // - Juergen Winkelmann, 2014/10/25, o adaption to IBM OS COBOL       PRIME
    90 * //                                   o read limit from SYSIN          PRIME
   100 * //                                   o n**2 (sqrt) shortcut           PRIME
   110 * //                                   o skip even numbers              PRIME
   120 * //                                   o compact output format          PRIME
   130 * //                                   o 1048544 prime flags            PRIME
   140 * ////////////////////////////////////////////////////////////         PRIME
   150 ***                                                                     PRIME
   160 ***                                                                     PRIME
   170 ***                                                                     PRIME
   180  IDENTIFICATION DIVISION.                                               PRIME
   190  PROGRAM-ID.  'PRIMES'.                                                 PRIME
   200 ***                                                                     PRIME
   210 ***                                                                     PRIME
   220 ***                                                                     PRIME
   230  ENVIRONMENT DIVISION.                                                  PRIME
   240 **                                                                      PRIME
   250 **                                                                      PRIME
   260  CONFIGURATION SECTION.                                                 PRIME
   270  SOURCE-COMPUTER.  IBM-360.                                             PRIME
   280  OBJECT-COMPUTER.  IBM-360.                                             PRIME
   290 **                                                                      PRIME
   300 **                                                                      PRIME
   310  INPUT-OUTPUT SECTION.                                                  PRIME
   320  FILE-CONTROL.                                                          PRIME
   330      SELECT PRIMES-SYSIN                                                PRIME
   340         ASSIGN TO UT-S-SYSIN.                                           PRIME
   350 ***                                                                     PRIME
   360 ***                                                                     PRIME
   370 ***                                                                     PRIME
   380  DATA DIVISION.                                                         PRIME
   390 **                                                                      PRIME
   400 **                                                                      PRIME
   410  FILE SECTION.                                                          PRIME
   420  FD  PRIMES-SYSIN                                                       PRIME
   430      RECORDING MODE IS F                                                PRIME
   440      RECORD CONTAINS 80 CHARACTERS                                      PRIME
   450      BLOCK  CONTAINS  1 RECORDS                                         PRIME
   460      LABEL RECORDS ARE OMITTED                                          PRIME
   470      DATA RECORD IS PRIMES-SYSIN-RECORD.                                PRIME
   480  01  PRIMES-SYSIN-RECORD.                                               PRIME
   490   02 PRIMES-SYSIN-NUMBER PIC 99999999 OCCURS 10.                        PRIME
   500 **                                                                      PRIME
   510 **                                                                      PRIME
   520  WORKING-STORAGE SECTION.                                               PRIME
   530      77 I PIC 99999999 COMP VALUE 1.                                    PRIME
   540      77 J PIC 99999999 COMP.                                            PRIME
```

```
00055     550      77 K PIC 99999999 COMP VALUE 1.                              PRIME
00056     560      77 N PIC 99999999 COMP.                                      PRIME
00057     570      77 N-2 PIC 99999999 COMP.                                    PRIME
00058     580      77 SQRTN PIC 99999999 COMP.                                  PRIME
00059     590      77 PRIM-L PIC 9999 VALUE 1 COMP.                             PRIME
00060     600      77 PRIM-C PIC 99999 VALUE 3 COMP.                            PRIME
00061     610      77 CROSS-L PIC 9999 COMP.                                    PRIME
00062     620      77 CROSS-C PIC 99999 COMP.                                   PRIME
00063     630      77 PRODUCT PIC 99999999 COMP.                                PRIME
00064     640      77 ISPRIME PIC 9 VALUE 1.                                    PRIME
00065     650      77 SETPRIME PIC 9 VALUE 1.                                   PRIME
00066     660      01 BLANK-LINE PIC X(160).                                    PRIME
00067     670      01 OUT-INTEGER.                                              PRIME
00068     680       02 SHOWIT PIC ZZZZZZZZ OCCURS 20.                           PRIME
00069     690      01 OUT REDEFINES OUT-INTEGER.                                PRIME
00070     700       02 OUT-LINE PIC X(160).                                     PRIME
00071     710      01 C-1-001.                                                  PRIME
00072     720       02 C-001 PIC 9 OCCURS 32767.                                PRIME
00073     730       02 C-002 PIC 9 OCCURS 32767.                                PRIME
00074     740       02 C-003 PIC 9 OCCURS 32767.                                PRIME
00075     750       02 C-004 PIC 9 OCCURS 32767.                               PRIME
00076     760      01 C-1-005.                                                  PRIME
00077     770       02 C-005 PIC 9 OCCURS 32767.                               PRIME
00078     780       02 C-006 PIC 9 OCCURS 32767.                               PRIME
00079     790       02 C-007 PIC 9 OCCURS 32767.                               PRIME
00080     800       02 C-008 PIC 9 OCCURS 32767.                               PRIME
00081     810      01 C-1-009.                                                  PRIME
00082     820       02 C-009 PIC 9 OCCURS 32767.                               PRIME
00083     830       02 C-010 PIC 9 OCCURS 32767.                               PRIME
00084     840       02 C-011 PIC 9 OCCURS 32767.                               PRIME
00085     850       02 C-012 PIC 9 OCCURS 32767.                              PRIME
00086     860      01 C-1-013.                                                  PRIME
00087     870       02 C-013 PIC 9 OCCURS 32767.                               PRIME
00088     880       02 C-014 PIC 9 OCCURS 32767.                               PRIME
00089     890       02 C-015 PIC 9 OCCURS 32767.                               PRIME
00090     900       02 C-016 PIC 9 OCCURS 32767.                               PRIME
00091     910      01 C-1-017.                                                  PRIME
00092     920       02 C-017 PIC 9 OCCURS 32767.                               PRIME
00093     930       02 C-018 PIC 9 OCCURS 32767.                               PRIME
00094     940       02 C-019 PIC 9 OCCURS 32767.                               PRIME
00095     950       02 C-020 PIC 9 OCCURS 32767.                               PRIME
00096     960      01 C-1-021.                                                  PRIME
00097     970       02 C-021 PIC 9 OCCURS 32767.                               PRIME
00098     980       02 C-022 PIC 9 OCCURS 32767.                               PRIME
00099     990       02 C-023 PIC 9 OCCURS 32767.                               PRIME
00100    1000       02 C-024 PIC 9 OCCURS 32767.                               PRIME
00101    1010      01 C-1-025.                                                  PRIME
00102    1020       02 C-025 PIC 9 OCCURS 32767.                               PRIME
00103    1030       02 C-026 PIC 9 OCCURS 32767.                               PRIME
00104    1040       02 C-027 PIC 9 OCCURS 32767.                               PRIME
00105    1050       02 C-028 PIC 9 OCCURS 32767.                              PRIME
00106    1060      01 C-1-029.                                                  PRIME
00107    1070       02 C-029 PIC 9 OCCURS 32767.                               PRIME
00108    1080       02 C-030 PIC 9 OCCURS 32767.                               PRIME
00109    1090       02 C-031 PIC 9 OCCURS 32767.                               PRIME
00110    1100       02 C-032 PIC 9 OCCURS 32767.                               PRIME
00111    1110 ***                                                              PRIME
```

```
00112    1120 ***                                                        PRIME
00113    1130 ***                                                        PRIME
00114    1140  PROCEDURE DIVISION.                                       PRIME
00115    1150 **                                                        PRIME
00116    1160 **                                                        PRIME
00117    1170  MAIN-PART.                                                PRIME
00118    1180      OPEN INPUT PRIMES-SYSIN.                              PRIME
00119    1190      READ PRIMES-SYSIN AT END DISPLAY '** EOF on SYSIN **'.PRIME
00120    1200      MOVE PRIMES-SYSIN-NUMBER (1) TO N.                    PRIME
00121    1210      CLOSE PRIMES-SYSIN.                                   PRIME
00122    1220      SUBTRACT 2 FROM N GIVING N-2.                         PRIME
00123    1230 *                                                         PRIME
00124    1240      PERFORM NEXT-SQUARE UNTIL SQRTN GREATER N.            PRIME
00125    1250     MOVE I TO SQRTN.                                      PRIME
00126    1260 *                                                         PRIME
00127    1270      MOVE 3 TO I.                                         PRIME
00128    1280      PERFORM INIT-1 UNTIL I GREATER N.                    PRIME
00129    1290 *                                                         PRIME
00130    1300      MOVE 1 TO PRIM-L.                                    PRIME
00131    1310      MOVE 3 TO PRIM-C.                                    PRIME
00132    1320      MOVE 3 TO I.                                         PRIME
00133    1330      MOVE 0 TO SETPRIME.                                  PRIME
00134    1340      PERFORM CHECK-NUMBER UNTIL I GREATER SQRTN OR EQUAL SQRTN.PRIME
00135    1350 *                                                         PRIME
00136    1360      MOVE 2 TO J.                                         PRIME
00137    1370      MOVE J TO SHOWIT (K).                                PRIME
00138    1380      MOVE 1 TO PRIM-L.                                    PRIME
00139    1390      MOVE 3 TO PRIM-C.                                    PRIME
00140    1400      MOVE 3 TO I.                                         PRIME
00141    1410      PERFORM PRINT UNTIL I GREATER N.                     PRIME
00142    1420 *                                                         PRIME
00143    1430      MOVE K TO SHOWIT (1).                                PRIME
00144    1440      MOVE N TO SHOWIT (2).                                PRIME
00145    1450      DISPLAY ' '.                                         PRIME
00146    1460      DISPLAY SHOWIT (1), ' primes up to ', SHOWIT (2), ' found.'.PRIME
00147    1470      STOP RUN.                                            PRIME
00148    1480 **                                                        PRIME
00149    1490 **                                                        PRIME
00150    1500  INIT-1.                                                  PRIME
00151    1510      PERFORM PRIM-SET THRU PRIM-SET-END.                  PRIME
00152    1520      ADD 2 TO PRIM-C.                                     PRIME
00153    1530      IF PRIM-C GREATER THAN 32767                         PRIME
00154    1540          SUBTRACT 32767 FROM PRIM-C                       PRIME
00155    1550          ADD 1 TO PRIM-L.                                 PRIME
00156    1560      ADD 2 TO I.                                          PRIME
00157    1570 **                                                        PRIME
00158    1580 **                                                        PRIME
00159    1590  CHECK-NUMBER.                                            PRIME
00160    1600      PERFORM ADVANCE UNTIL I GREATER THAN SQRTN OR EQUAL TO SQRT PRIME
00161    1610 -     N OR ISPRIME EQUAL TO 1.                            PRIME
00162    1620      IF ISPRIME EQUAL TO 1                                PRIME
00163    1630          MOVE PRIM-L TO CROSS-L                           PRIME
00164    1640          MOVE PRIM-C TO CROSS-C                           PRIME
00165    1650          ADD I I GIVING J                                 PRIME
00166    1660          MULTIPLY I BY I GIVING PRODUCT                   PRIME
00167    1670          PERFORM CROSS-OUT UNTIL PRODUCT GREATER THAN N   PRIME
00168    1680          MOVE CROSS-L TO PRIM-L                           PRIME
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00169    1690           MOVE CROSS-C TO PRIM-C.                          PRIME
00170    1700       MOVE 0 TO ISPRIME.                                   PRIME
00171    1710 **                                                         PRIME
00172    1720 **                                                         PRIME
00173    1730  ADVANCE.                                                  PRIME
00174    1740       ADD 2 TO PRIM-C.                                     PRIME
00175    1750       IF PRIM-C GREATER THAN 32767                         PRIME
00176    1760           SUBTRACT 32767 FROM PRIM-C                       PRIME
00177    1770           ADD 1 TO PRIM-L.                                 PRIME
00178    1780       ADD 2 TO I.                                          PRIME
00179    1790       PERFORM PRIM-QRY THRU PRIM-QRY-END.                  PRIME
00180    1800 **                                                         PRIME
00181    1810 **                                                         PRIME
00182    1820  CROSS-OUT.                                               PRIME
00183    1830       DIVIDE PRODUCT BY 32767 GIVING PRIM-L REMAINDER PRIM-C.  PRIME
00184    1840       IF PRIM-C EQUAL TO 0 MOVE 32767 TO PRIM-C            PRIME
00185    1850           ELSE ADD 1 TO PRIM-L.                            PRIME
00186    1860       PERFORM PRIM-SET THRU PRIM-SET-END.                  PRIME
00187    1870       ADD J TO PRODUCT.                                    PRIME
00188    1880 **                                                         PRIME
00189    1890 **                                                         PRIME
00190    1900  NEXT-SQUARE.                                             PRIME
00191    1910       ADD 1 TO I.                                          PRIME
00192    1920       MULTIPLY I BY I GIVING SQRTN.                        PRIME
00193    1930 **                                                         PRIME
00194    1940 **                                                         PRIME
00195    1950  PRINT.                                                   PRIME
00196    1960       PERFORM PRIM-QRY THRU PRIM-QRY-END.                  PRIME
00197    1970       IF ISPRIME EQUAL 1                                   PRIME
00198    1980           MOVE I TO SHOWIT (J)                             PRIME
00199    1990           ADD 1 TO K                                       PRIME
00200    2000           ADD 1 TO J                                       PRIME
00201    2010           IF J GREATER 20                                  PRIME
00202    2020               DISPLAY OUT-LINE                             PRIME
00203    2030               MOVE BLANK-LINE TO OUT-LINE                  PRIME
00204    2040               MOVE 1 TO J.                                 PRIME
00205    2050       IF I GREATER N-2 AND J NOT EQUAL 1 DISPLAY OUT-LINE.     PRIME
00206    2060       ADD 2 TO PRIM-C.                                     PRIME
00207    2070       IF PRIM-C GREATER THAN 32767                         PRIME
00208    2080           SUBTRACT 32767 FROM PRIM-C                       PRIME
00209    2090           ADD 1 TO PRIM-L.                                 PRIME
00210    2100       ADD 2 TO I.                                          PRIME
00211    2110 **                                                         PRIME
00212    2120 **                                                         PRIME
00213    2130  PRIM-SET.                                                PRIME
00214    2140       GO TO S-001 S-002 S-003 S-004 S-005 S-006 S-007 S-008 S-009 S    PRIME
00215    2150 -           -010 S-011 S-012 S-013 S-014 S-015 S-016 S-017 S-018 S    PRIME
00216    2160 -           -019 S-020 S-021 S-022 S-023 S-024 S-025 S-026 S-027 S    PRIME
00217    2170 -           -028 S-029 S-030 S-031 S-032 DEPENDING ON PRIM-L.         PRIME
00218    2180  S-001.                                                   PRIME
00219    2190       MOVE SETPRIME TO C-001 (PRIM-C).                     PRIME
00220    2200       GO TO PRIM-SET-END.                                  PRIME
00221    2210  S-002.                                                   PRIME
00222    2220       MOVE SETPRIME TO C-002 (PRIM-C).                     PRIME
00223    2230       GO TO PRIM-SET-END.                                  PRIME
00224    2240  S-003.                                                   PRIME
00225    2250       MOVE SETPRIME TO C-003 (PRIM-C).                     PRIME
```

```
00226    2260       GO TO PRIM-SET-END.                                  PRIME
00227    2270   S-004.                                                   PRIME
00228    2280       MOVE SETPRIME TO C-004 (PRIM-C).                     PRIME
00229    2290       GO TO PRIM-SET-END.                                  PRIME
00230    2300   S-005.                                                   PRIME
00231    2310       MOVE SETPRIME TO C-005 (PRIM-C).                     PRIME
00232    2320       GO TO PRIM-SET-END.                                  PRIME
00233    2330   S-006.                                                   PRIME
00234    2340       MOVE SETPRIME TO C-006 (PRIM-C).                     PRIME
00235    2350       GO TO PRIM-SET-END.                                  PRIME
00236    2360   S-007.                                                   PRIME
00237    2370       MOVE SETPRIME TO C-007 (PRIM-C).                     PRIME
00238    2380       GO TO PRIM-SET-END.                                  PRIME
00239    2390   S-008.                                                   PRIME
00240    2400       MOVE SETPRIME TO C-008 (PRIM-C).                     PRIME
00241    2410       GO TO PRIM-SET-END.                                  PRIME
00242    2420   S-009.                                                   PRIME
00243    2430       MOVE SETPRIME TO C-009 (PRIM-C).                     PRIME
00244    2440       GO TO PRIM-SET-END.                                  PRIME
00245    2450   S-010.                                                   PRIME
00246    2460       MOVE SETPRIME TO C-010 (PRIM-C).                     PRIME
00247    2470       GO TO PRIM-SET-END.                                  PRIME
00248    2480   S-011.                                                   PRIME
00249    2490       MOVE SETPRIME TO C-011 (PRIM-C).                     PRIME
00250    2500       GO TO PRIM-SET-END.                                  PRIME
00251    2510   S-012.                                                   PRIME
00252    2520       MOVE SETPRIME TO C-012 (PRIM-C).                     PRIME
00253    2530       GO TO PRIM-SET-END.                                  PRIME
00254    2540   S-013.                                                   PRIME
00255    2550       MOVE SETPRIME TO C-013 (PRIM-C).                     PRIME
00256    2560       GO TO PRIM-SET-END.                                  PRIME
00257    2570   S-014.                                                   PRIME
00258    2580       MOVE SETPRIME TO C-014 (PRIM-C).                     PRIME
00259    2590       GO TO PRIM-SET-END.                                  PRIME
00260    2600   S-015.                                                   PRIME
00261    2610       MOVE SETPRIME TO C-015 (PRIM-C).                     PRIME
00262    2620       GO TO PRIM-SET-END.                                  PRIME
00263    2630   S-016.                                                   PRIME
00264    2640       MOVE SETPRIME TO C-016 (PRIM-C).                     PRIME
00265    2650       GO TO PRIM-SET-END.                                  PRIME
00266    2660   S-017.                                                   PRIME
00267    2670       MOVE SETPRIME TO C-017 (PRIM-C).                     PRIME
00268    2680       GO TO PRIM-SET-END.                                  PRIME
00269    2690   S-018.                                                   PRIME
00270    2700       MOVE SETPRIME TO C-018 (PRIM-C).                     PRIME
00271    2710       GO TO PRIM-SET-END.                                  PRIME
00272    2720   S-019.                                                   PRIME
00273    2730       MOVE SETPRIME TO C-019 (PRIM-C).                     PRIME
00274    2740       GO TO PRIM-SET-END.                                  PRIME
00275    2750   S-020.                                                   PRIME
00276    2760       MOVE SETPRIME TO C-020 (PRIM-C).                     PRIME
00277    2770       GO TO PRIM-SET-END.                                  PRIME
00278    2780   S-021.                                                   PRIME
00279    2790       MOVE SETPRIME TO C-021 (PRIM-C).                     PRIME
00280    2800       GO TO PRIM-SET-END.                                  PRIME
00281    2810   S-022.                                                   PRIME
00282    2820       MOVE SETPRIME TO C-022 (PRIM-C).                     PRIME
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00283    2830       GO TO PRIM-SET-END.                                  PRIME
00284    2840   S-023.                                                   PRIME
00285    2850       MOVE SETPRIME TO C-023 (PRIM-C).                     PRIME
00286    2860       GO TO PRIM-SET-END.                                  PRIME
00287    2870   S-024.                                                   PRIME
00288    2880       MOVE SETPRIME TO C-024 (PRIM-C).                     PRIME
00289    2890       GO TO PRIM-SET-END.                                  PRIME
00290    2900   S-025.                                                   PRIME
00291    2910       MOVE SETPRIME TO C-025 (PRIM-C).                     PRIME
00292    2920       GO TO PRIM-SET-END.                                  PRIME
00293    2930   S-026.                                                   PRIME
00294    2940       MOVE SETPRIME TO C-026 (PRIM-C).                     PRIME
00295    2950       GO TO PRIM-SET-END.                                  PRIME
00296    2960   S-027.                                                   PRIME
00297    2970       MOVE SETPRIME TO C-027 (PRIM-C).                     PRIME
00298    2980       GO TO PRIM-SET-END.                                  PRIME
00299    2990   S-028.                                                   PRIME
00300    3000       MOVE SETPRIME TO C-028 (PRIM-C).                     PRIME
00301    3010       GO TO PRIM-SET-END.                                  PRIME
00302    3020   S-029.                                                   PRIME
00303    3030       MOVE SETPRIME TO C-029 (PRIM-C).                     PRIME
00304    3040       GO TO PRIM-SET-END.                                  PRIME
00305    3050   S-030.                                                   PRIME
00306    3060       MOVE SETPRIME TO C-030 (PRIM-C).                     PRIME
00307    3070       GO TO PRIM-SET-END.                                  PRIME
00308    3080   S-031.                                                   PRIME
00309    3090       MOVE SETPRIME TO C-031 (PRIM-C).                     PRIME
00310    3100       GO TO PRIM-SET-END.                                  PRIME
00311    3110   S-032.                                                   PRIME
00312    3120       MOVE SETPRIME TO C-032 (PRIM-C).                     PRIME
00313    3130   PRIM-SET-END.                                            PRIME
00314    3140  **                                                        PRIME
00315    3150  **                                                        PRIME
00316    3160   PRIM-QRY.                                                PRIME
00317    3170       GO TO Q-001 Q-002 Q-003 Q-004 Q-005 Q-006 Q-007 Q-008 Q-009 Q   PRIME
00318    3180  -          -010 Q-011 Q-012 Q-013 Q-014 Q-015 Q-016 Q-017 Q-018 Q   PRIME
00319    3190  -          -019 Q-020 Q-021 Q-022 Q-023 Q-024 Q-025 Q-026 Q-027 Q   PRIME
00320    3200  -          -028 Q-029 Q-030 Q-031 Q-032 DEPENDING ON PRIM-L.        PRIME
00321    3210   Q-001.                                                   PRIME
00322    3220       MOVE C-001 (PRIM-C) TO ISPRIME.                      PRIME
00323    3230       GO TO PRIM-QRY-END.                                  PRIME
00324    3240   Q-002.                                                   PRIME
00325    3250       MOVE C-002 (PRIM-C) TO ISPRIME.                      PRIME
00326    3260       GO TO PRIM-QRY-END.                                  PRIME
00327    3270   Q-003.                                                   PRIME
00328    3280       MOVE C-003 (PRIM-C) TO ISPRIME.                      PRIME
00329    3290       GO TO PRIM-QRY-END.                                  PRIME
00330    3300   Q-004.                                                   PRIME
00331    3310       MOVE C-004 (PRIM-C) TO ISPRIME.                      PRIME
00332    3320       GO TO PRIM-QRY-END.                                  PRIME
00333    3330   Q-005.                                                   PRIME
00334    3340       MOVE C-005 (PRIM-C) TO ISPRIME.                      PRIME
00335    3350       GO TO PRIM-QRY-END.                                  PRIME
00336    3360   Q-006.                                                   PRIME
00337    3370       MOVE C-006 (PRIM-C) TO ISPRIME.                      PRIME
00338    3380       GO TO PRIM-QRY-END.                                  PRIME
00339    3390   Q-007.                                                   PRIME
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00340    3400       MOVE C-007 (PRIM-C) TO ISPRIME.                      PRIME
00341    3410       GO TO PRIM-QRY-END.                                  PRIME
00342    3420   Q-008.                                                   PRIME
00343    3430       MOVE C-008 (PRIM-C) TO ISPRIME.                      PRIME
00344    3440       GO TO PRIM-QRY-END.                                  PRIME
00345    3450   Q-009.                                                   PRIME
00346    3460       MOVE C-009 (PRIM-C) TO ISPRIME.                      PRIME
00347    3470       GO TO PRIM-QRY-END.                                  PRIME
00348    3480   Q-010.                                                   PRIME
00349    3490       MOVE C-010 (PRIM-C) TO ISPRIME.                      PRIME
00350    3500       GO TO PRIM-QRY-END.                                  PRIME
00351    3510   Q-011.                                                   PRIME
00352    3520       MOVE C-011 (PRIM-C) TO ISPRIME.                      PRIME
00353    3530       GO TO PRIM-QRY-END.                                  PRIME
00354    3540   Q-012.                                                   PRIME
00355    3550       MOVE C-012 (PRIM-C) TO ISPRIME.                      PRIME
00356    3560       GO TO PRIM-QRY-END.                                  PRIME
00357    3570   Q-013.                                                   PRIME
00358    3580       MOVE C-013 (PRIM-C) TO ISPRIME.                      PRIME
00359    3590       GO TO PRIM-QRY-END.                                  PRIME
00360    3600   Q-014.                                                   PRIME
00361    3610       MOVE C-014 (PRIM-C) TO ISPRIME.                      PRIME
00362    3620       GO TO PRIM-QRY-END.                                  PRIME
00363    3630   Q-015.                                                   PRIME
00364    3640       MOVE C-015 (PRIM-C) TO ISPRIME.                      PRIME
00365    3650       GO TO PRIM-QRY-END.                                  PRIME
00366    3660   Q-016.                                                   PRIME
00367    3670       MOVE C-016 (PRIM-C) TO ISPRIME.                      PRIME
00368    3680       GO TO PRIM-QRY-END.                                  PRIME
00369    3690   Q-017.                                                   PRIME
00370    3700       MOVE C-017 (PRIM-C) TO ISPRIME.                      PRIME
00371    3710       GO TO PRIM-QRY-END.                                  PRIME
00372    3720   Q-018.                                                   PRIME
00373    3730       MOVE C-018 (PRIM-C) TO ISPRIME.                      PRIME
00374    3740       GO TO PRIM-QRY-END.                                  PRIME
00375    3750   Q-019.                                                   PRIME
00376    3760       MOVE C-019 (PRIM-C) TO ISPRIME.                      PRIME
00377    3770       GO TO PRIM-QRY-END.                                  PRIME
00378    3780   Q-020.                                                   PRIME
00379    3790       MOVE C-020 (PRIM-C) TO ISPRIME.                      PRIME
00380    3800       GO TO PRIM-QRY-END.                                  PRIME
00381    3810   Q-021.                                                   PRIME
00382    3820       MOVE C-021 (PRIM-C) TO ISPRIME.                      PRIME
00383    3830       GO TO PRIM-QRY-END.                                  PRIME
00384    3840   Q-022.                                                   PRIME
00385    3850       MOVE C-022 (PRIM-C) TO ISPRIME.                      PRIME
00386    3860       GO TO PRIM-QRY-END.                                  PRIME
00387    3870   Q-023.                                                   PRIME
00388    3880       MOVE C-023 (PRIM-C) TO ISPRIME.                      PRIME
00389    3890       GO TO PRIM-QRY-END.                                  PRIME
00390    3900   Q-024.                                                   PRIME
00391    3910       MOVE C-024 (PRIM-C) TO ISPRIME.                      PRIME
00392    3920       GO TO PRIM-QRY-END.                                  PRIME
00393    3930   Q-025.                                                   PRIME
00394    3940       MOVE C-025 (PRIM-C) TO ISPRIME.                      PRIME
00395    3950       GO TO PRIM-QRY-END.                                  PRIME
00396    3960   Q-026.                                                   PRIME
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00397    3970       MOVE C-026 (PRIM-C) TO ISPRIME.                      PRIME
00398    3980       GO TO PRIM-QRY-END.                                  PRIME
00399    3990   Q-027.                                                   PRIME
00400    4000       MOVE C-027 (PRIM-C) TO ISPRIME.                      PRIME
00401    4010       GO TO PRIM-QRY-END.                                  PRIME
00402    4020   Q-028.                                                   PRIME
00403    4030       MOVE C-028 (PRIM-C) TO ISPRIME.                      PRIME
00404    4040       GO TO PRIM-QRY-END.                                  PRIME
00405    4050   Q-029.                                                  PRIME
00406    4060       MOVE C-029 (PRIM-C) TO ISPRIME.                      PRIME
00407    4070       GO TO PRIM-QRY-END.                                  PRIME
00408    4080   Q-030.                                                   PRIME
00409    4090       MOVE C-030 (PRIM-C) TO ISPRIME.                      PRIME
00410    4100       GO TO PRIM-QRY-END.                                  PRIME
00411    4110   Q-031.                                                   PRIME
00412    4120       MOVE C-031 (PRIM-C) TO ISPRIME.                      PRIME
00413    4130       GO TO PRIM-QRY-END.                                  PRIME
00414    4140   Q-032.                                                   PRIME
00415    4150       MOVE C-032 (PRIM-C) TO ISPRIME.                      PRIME
00416    4160   PRIM-QRY-END.                                            PRIME
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*STATISTICS*     SOURCE RECORDS =   416     DATA DIVISION STATEMENTS =    61     PROCEDURE DIVISION STATEMENTS =   201
*OPTIONS IN EFFECT*     SIZE = 6291456  BUF = 1048576  LINECNT = 57  SPACE1, FLAGW,   SEQ,   SOURCE
*OPTIONS IN EFFECT*     NODMAP, NOPMAP, NOCLIST,   SUPMAP, NOXREF,   LOAD, NODECK, APOST, NOTRUNC, NOLIB, NOVERB
*OPTIONS IN EFFECT*       ZWB
```

VS LOADER

```
OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=6800000,NAME=**GO

  TOTAL LENGTH   102988
  ENTRY ADDRESS   ACD90
```

```
      2     3     5     7    11    13    17    19    23    29    31    37    41    43    47    53
     73    79    83    89    97   101   103   107   109   113   127   131   137   139   149   151
    179   181   191   193   197   199   211   223   227   229   233   239   241   251   257   263
    283   293   307   311   313   317   331   337   347   349   353   359   367   373   379   383
    419   421   431   433   439   443   449   457   461   463   467   479   487   491   499   503
    547   557   563   569   571   577   587   593   599   601   607   613   617   619   631   641
    661   673   677   683   691   701   709   719   727   733   739   743   751   757   761   769
    811   821   823   827   829   839   853   857   859   863   877   881   883   887   907   911
    947   953   967   971   977   983   991   997  1009  1013  1019  1021  1031  1033  1039  1049
   1087  1091  1093  1097  1103  1109  1117  1123  1129  1151  1153  1163  1171  1181  1187  1193
   1229  1231  1237  1249  1259  1277  1279  1283  1289  1291  1297  1301  1303  1307  1319  1321
   1381  1399  1409  1423  1427  1429  1433  1439  1447  1451  1453  1459  1471  1481  1483  1487
   1523  1531  1543  1549  1553  1559  1567  1571  1579  1583  1597  1601  1607  1609  1613  1619
   1663  1667  1669  1693  1697  1699  1709  1721  1723  1733  1741  1747  1753  1759  1777  1783
   1823  1831  1847  1861  1867  1871  1873  1877  1879  1889  1901  1907  1913  1931  1933  1949
   1993  1997  1999

  303 primes up to     2000 found.
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```
                 PPPPPPPPPPP   RRRRRRRRRRR    IIIIIIIIII   MM        MM   CCCCCCCCCC   000000000000  BBBBBBBBBBB    2222222222
                PPPPPPPPPPPP  RRRRRRRRRRRR   IIIIIIIIII   MMM      MMM  CCCCCCCCCCCC  000000000000  BBBBBBBBBBBB  222222222222
               PP        PP  RR        RR       II       MMMM    MMMM  CC        CC  00        00  BB        BB  22        22
              PP        PP  RR        RR       II       MM MM  MM MM  CC            00        00  BB        BB            22
             PP        PP  RR        RR       II       MM  MMMM  MM  CC            00        00  BB       BB             22
            PPPPPPPPPPPP  RRRRRRRRRRRR       II       MM   MM   MM  CC            00        00  BBBBBBBBBB             22
           PPPPPPPPPPP   RRRRRRRRRRR        II       MM        MM  CC            00        00  BBBBBBBBBB           22
          PP            RR    RR           II       MM        MM  CC            00        00  BB       BB        22
         PP            RR     RR          II       MM        MM  CC            00        00  BB        BB       22
        PP            RR      RR         II       MM        MM  CC        CC  00        00  BB        BB   22
       PP            RR       RR    IIIIIIIIII   MM        MM  CCCCCCCCCCCC  000000000000  BBBBBBBBBBB   222222222222
      PP            RR        RR   IIIIIIIIII   MM        MM   CCCCCCCCCC   000000000000  BBBBBBBBBBB   222222222222


                    JJJJJJJJJ    2222222222                                                           EEEEEEEEEEEE
                    JJJJJJJJJ   222222222222                                                          EEEEEEEEEEEE
                        JJ      22        22                                                          EE
                        JJ                22                                                          EE
                        JJ                22                                                          EE
                        JJ               22                                                           EEEEEEEE
                        JJ             22                                                             EEEEEEEE
                        JJ           22                                                               EE
                  JJ    JJ         22                                                                 EE
                  JJ    JJ       22                                                                   EE
                  JJJJJJJJ      222222222222                                                          EEEEEEEEEEEE
                   JJJJJJ       222222222222                                                          EEEEEEEEEEEE


****E   END   JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2   END   E****
****E   END   JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2   END   E****
****E   END   JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2   END   E****
****E   END   JOB    2  PRIMCOB2  Eratosthenes Sieve    ROOM        1.52.04 PM 18 MAY 26  PRINTER4  SYS PI5B  JOB    2   END   E****
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