J E S 2 J O B L O G

```
12.16.55 JOB 2865  $HASP373 BASIC10  STARTED - INIT  3 - CLASS S - SYS HMVS
12.16.55 JOB 2865  IEF403I BASIC10 - STARTED - TIME=12.16.55
12.16.55 JOB 2865  IEFACTRT S1      /BASIC1UP/00:00:00.04/00:00:00.06/00000/BASIC10
12.16.56 JOB 2865  IEFACTRT S2      /BASICMON/00:00:00.65/00:00:00.67/00000/BASIC10
12.16.56 JOB 2865  IEF404I BASIC10 - ENDED - TIME=12.16.56
12.16.56 JOB 2865  $HASP395 BASIC10  ENDED


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

 10 JUN 22 JOB EXECUTION DATE

        21 CARDS READ

     4,100 SYSOUT PRINT RECORDS

         0 SYSOUT PUNCH RECORDS

      0.01 MINUTES EXECUTION TIME
```

```
 1      //BASIC10 JOB 10,'BASIC',MSGCLASS=X,MSGLEVEL=(1,1),CLASS=S              JOB 2865
        ***
        ***   EXECUTE THE SAMPLE PROGRAMS
        ***
 2      //S1    EXEC PGM=BASIC1UP,PARM='SYSC.BASIC331.LIB'
 3      //STEPLIB  DD DSN=SYSC.LINKLIB,DISP=SHR
 4      //         DD DSN=SYSC.PL1LIB,DISP=SHR
 5      //SYSPRINT DD SYSOUT=*
 6      //RENUMFL  DD DUMMY,DCB=BLKSIZE=80
 7      //SYSIN  DD DSN=SYSC.BASIC331.LIB(ZCHANGE),DISP=SHR
 8      //KEYINPT  DD *
        ***
 9      //S2    EXEC PGM=BASICMON,PARM='SYSC.BASIC331.LIB'
10      //STEPLIB  DD DSN=SYSC.LINKLIB,DISP=SHR
11      //         DD DSN=SYSC.PL1LIB,DISP=SHR
12      //SYSPRINT DD SYSOUT=*
13      //RENUMFL  DD DUMMY,DCB=BLKSIZE=80
14      //SYSIN  DD DSN=SYSC.BASIC331.LIB(ZSAMPLE),DISP=SHR
        ***
```

```
IEF236I ALLOC. FOR BASIC10 S1
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO
IEF237I 253  ALLOCATED TO SYS00002
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY  ALLOCATED TO RENUMFL
IEF237I 253  ALLOCATED TO SYSIN
IEF237I JES2 ALLOCATED TO KEYINPT
IEF142I BASIC10 S1 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.PL1LIB                                 KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB02865.SO0102                        SYSOUT
IEF285I   SYSC.BASIC331.LIB                           KEPT          *--------2
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB02865.SI0101                        SYSIN
IEF373I STEP /S1      / START 22161.1216
IEF374I STEP /S1      / STOP  22161.1216 CPU    0MIN 00.03SEC SRB    0MIN 00.01SEC VIRT   268K SYS   204K
**** JOB NAME: BASIC10  JOBCARD READ 2022/161 12:16:55 370/148 VS2 R03.8 HMVS ***********************************************
*                                                                                                                          *
*  STEP NUMBER:          1  USER CORE:        268K  START TIME:   12:16:55     CPU TIME:    00:00:00.04  ACTIVE TIME:  00:00:00.05 *
*  STEP NAME:     S1        SYSTEM CORE:      204K  STOP TIME:    12:16:55     SRB TIME:    00:00:00.01  ALLOC TIME:   12:16:55    *
*  PROGRAM NAME:  BASIC1UP  REGION SIZE:      512K  ELAPSED TIME: 00:00:00.06  TCB TIME:    00:00:00.03  PROGRAM LOAD: 12:16:55    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                          *
*                           JES2 CARDS:          0       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                              50      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                          *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  253/D3350         0  253/D3350         2                                          *
************************************************************************************************************************
IEF236I ALLOC. FOR BASIC10 S2
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO
IEF237I 253  ALLOCATED TO SYS00004
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY  ALLOCATED TO RENUMFL
IEF237I 253  ALLOCATED TO SYSIN
IEF237I 253  ALLOCATED TO BASICLIB
IEF285I   SYSC.BASIC331.LIB                           KEPT          *--------6
IEF285I   VOL SER NOS= SYSCPK.
IEF237I 253  ALLOCATED TO BASICLIB
IEF142I BASIC10 S2 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.PL1LIB                                 KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB02865.SO0103                        SYSOUT
IEF285I   SYSC.BASIC331.LIB                           KEPT          *-------37
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.BASIC331.LIB                           KEPT          *--------6
IEF285I   VOL SER NOS= SYSCPK.
IEF373I STEP /S2      / START 22161.1216
IEF374I STEP /S2      / STOP  22161.1216 CPU    0MIN 00.63SEC SRB    0MIN 00.02SEC VIRT   264K SYS   220K
************************************************************************************************************************
*                                                                                                                          *
*  STEP NUMBER:          2  USER CORE:        264K  START TIME:   12:16:55     CPU TIME:    00:00:00.65  ACTIVE TIME:  00:00:00.66 *
```

```
*  STEP NAME:     S2        SYSTEM CORE:      220K  STOP TIME:    12:16:56     SRB TIME:    00:00:00.02  ALLOC TIME:   12:16:55    *
*  PROGRAM NAME:  BASICMON  REGION SIZE:      512K  ELAPSED TIME: 00:00:00.67  TCB TIME:    00:00:00.63  PROGRAM LOAD: 12:16:55    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                                 *
*                           JES2 CARDS:          0       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 957      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                                 *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  253/D3350         0  253/D3350        37  253/D3350         6                        *
*********************************************************************************************************************************
IEF375I  JOB /BASIC10 / START 22161.1216
IEF376I  JOB /BASIC10 / STOP  22161.1216 CPU    0MIN 00.66SEC SRB    0MIN 00.03SEC
```

```
*** EXEC_PARM PASSED=SYSC.BASIC331.LIB
MAX_EXECS CHANGED TO          0
DEFAULT DSN=SYSC.BASIC331.LIB                              BASIC/360   V3.3.1 1UP           DATE 06/10/2022  PAGE     1



OFFSET

000001                    10 REM TEST INPUT STATEMENT
000002                    20 PRINT "CHANGE MAKER FOR USA"
000005                    21 DIM COIN$(5),CENTS(5)
000006                    22 FOR I=1 TO 5
000011                    23 READ COIN$(I),CENTS(I)
000020                    24 NEXT I
000022                    30 PRINT
000024                    40 PRINT "HOW MUCH IS THE PURCHASE?"
000027                    50 INPUT PUR
000029                    60 PRINT "HOW MUCH WAS TENDERED?"
000032                    70 INPUT TEN
000034                    80 LET CHG=TEN-PUR
000040                    90 LET PU$="PURCHASE #,###.##  TENDERED #,###.##  CHANGE #,###.##"
000043                   100 PRINT USING PU$,PUR,TEN,CHG
000054                   110 IF CHG < 0 THEN 1000
000058                   120 IF CHG = 0 THEN 900
000062                   130 REM CONVERT CHG TO ALL CENTS DUE TO FLOATING POINT INACCURACIES
000063                   140 LET CHG=INT(CHG*100)
000071                   150 FOR I=1 TO 5
000076                   160 LET NC=INT(CHG/CENTS(I))
000089                   170 PRINT USING "### &",NC,COIN$(I)
000103                   171 IF NC=0 THEN 190
000107                   180 LET CHG=CHG-(NC*CENTS(I))
000121                   190 NEXT I
000123                   200 GOTO 2000
000125                   900 PRINT "NO CHANGE DUE"
000128                   910 GOTO 2000
000130                  1000 PRINT USING "SHORT #,###.##",CHG
000137                  2000 PRINT "MAKE MORE CHANGE (Y/N)?"
000140                  2010 INPUT R$
000142                  2020 IF R$="Y" THEN 30
000146                  2030 IF R$="N" THEN 9999
000150                  2040 PRINT "PLEASE ENTER Y OR N"\GOTO 2000
000153                  8000 DATA "DOLLAR(S)",100
000154                  8010 DATA "QUARTER(S)",25
000155                  8020 DATA "DIME(S)",10
000156                  8030 DATA "NICKLE(S)",5
000157                  8040 DATA "PENNIES",1
000158                  9999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   159 INSTRUCTIONS GENERATED,    57 SYMBOLS DEFINED    10 DATA ITEMS DEFINED ****

CHANGE MAKER FOR USA

HOW MUCH IS THE PURCHASE?
17.43 ENTERED VIA INPUT
HOW MUCH WAS TENDERED?
20 ENTERED VIA INPUT
PURCHASE    17.42  TENDERED    20.00  CHANGE     2.57
  2 DOLLAR(S)
```

```
  2 QUARTER(S)
  0 DIME(S)
  1 NICKLE(S)
  2 PENNIES
MAKE MORE CHANGE (Y/N)?
Y ENTERED VIA INPUT

HOW MUCH IS THE PURCHASE?
4 ENTERED VIA INPUT
HOW MUCH WAS TENDERED?
10 ENTERED VIA INPUT
PURCHASE     4.00  TENDERED    10.00  CHANGE     6.00
  6 DOLLAR(S)
  0 QUARTER(S)
  0 DIME(S)
  0 NICKLE(S)
  0 PENNIES
MAKE MORE CHANGE (Y/N)?
N ENTERED VIA INPUT


**** PROGRAM EXECUTION COMPLETE -      589 INSTRUCTIONS EXECUTED ****
```

```
*** EXEC_PARM=SYSC.BASIC331.LIB
DEFAULT DSN=SYSC.BASIC331.LIB                          BASIC/360 V3.3.1 MON            DATE 06/10/2022  PAGE     1

++BASIC

OFFSET

000001                    1 REM  DEMO/TEST PRINT USING
000002                    5 LET PU1$=" #####X^2+ #####X+ ##### = 0"
000005                    6 LET PU2$="&&&&&&&& X= #####.##   |   #####.## &"
000008                    7 LET PU3$="### X ###.# = #####.# , ### X ###.# = ####.#  SUM= #####.#"
000011                    00100 DATA 5,-9,-248
000012                    00110 DATA 2,6,5
000013                    00120 DATA 0,0,0
000014                    00200 READ A,B,C
000018                    00210 IF A=0 THEN 1500
000022                    00300 REM AX2+BX+C=0
000023                    00400 REM X2+BX/A=-C/A
000024                    00500 REM X2+2BX/2A+B2/4A2=B2/4A2-C/A
000025                    00600 REM (X+B/2A)2=(B2-4AC)/4A2
000026                    00700 REM X1,X2 = (-B +/- SQR(B2-4AC))/2A
000027                    00800 LET D=B*B-4*C*A
000042                    00850 PRINT USING PU1$,A,B,C
000053                    00900 IF D<0 THEN 1300
000057                    00950 REM REAL
000058                    01000 LET D=SQR(D)
000063                    01100 PRINT USING PU2$,"REAL",(-B+D)/2/A,(-B-D)/2/A," ",
000100                    01101 PRINT "REAL",(-B+D)/2/A,(-B-D)/2/A," "
000133                    01110 LET X=(-B+D)/2/A
000148                    01120 GOSUB 1600
000150                    01130 LET X=(-B-D)/2/A
000165                    01140 GOSUB 1600
000167                    01150 GOTO 200
000169                    01200 REM COMPLEX
000170                    01300 LET D=SQR(-D)
000178                    01400 PRINT USING PU2$,"COMPLEX",-B/2/A,D/2/A,"I";
000206                    01401 PRINT "COMPLEX",-B/2/A,D/2/A,"I"
000230                    01410 GOTO 200
000232                    01500 END
000234                    01600 PRINT A;"X";X*X;"=";A*X*X,B;"X";X;"=";B*X,"SUM=";A*X*X+B*X
000283                    01602 PRINT USING PU3$,A;X*X;A*X*X,B;X;B*X,A*X*X+B*X
000326                    01700 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   327 INSTRUCTIONS GENERATED,    48 SYMBOLS DEFINED     9 DATA ITEMS DEFINED ****

     5X^2+    -9X+  -248 = 0
REAL     X=     8.00   |      -6.19       REAL           8           -6.199999
 5X 64= 320   -9X 8=-72     SUM= 248
  5 X  64.0 =   320.0 ,  -9 X   8.0 =  -72.0  SUM=   248.0
 5X 38.439987= 192.19989    -9X-6.199999= 55.799987     SUM= 247.999877
  5 X  38.4 =   192.1 ,  -9 X  -6.1 =   55.7  SUM=   247.9
     2X^2+     6X+     5 = 0
COMPLEX  X=    -1.50   |       0.50 ICOMPLEX           -1.5           0.5          I


**** PROGRAM EXECUTION COMPLETE -      465 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *APPEND=TRIGPLOT
000001                  10 REM
000002                  20 REM   DEMO APPEND - PLOT SIN CURVE
000003                  30 REM
000004                  40 DEF FNX(X)=SIN(X)
000012                  50 LET T$="SIN(X)"
000015                  60 GOSUB 10000
000017                  70 PRINT "BACK"
000020                  180 END
000022                  *REM APPENDED CODE
000022                  10000 REM ------------------------------------------------------
000023                  10010 REM
000024                  10020 REM   SUBPROGRAM PLOT A TRIG FUNCTION USING CODE FROM A LIBRARY
000025                  10030 REM
000026                  10040 REM   TO USE, DEF FNX(X) TO THE TRIG FUNCTION
000027                  10050 REM   AND SET T$ TO THE TITLE OF THE PLOT
000028                  10060 REM   AND THEN GOSUB TO THE FIRST LINE OF THIS CODE
000029                  10070 REM
000030                  10080 PRINT "X";TAB(68);T$
000039                  10090 REM
000040                  10100 FOR X=0 TO 6.28 STEP .1
000045                  10110 LET Y=FNX(X)
000050                  10120 LET Y2=Y*40+70
000059                  10130 PRINT X,Y2;
000064                  10140 IF Y2>70 THEN 10180
000068                  10150 IF Y2<70 THEN 10200
000072                  10160 PRINT TAB(70);"*"
000079                  10170 GOTO 10210
000081                  10180 PRINT TAB(70);"|";TAB(Y2);"*"
000094                  10190 GOTO 10210
000096                  10200 PRINT TAB(Y2);"*";TAB(70);"|"
000109                  10210 NEXT X
000111                  10220 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   112 INSTRUCTIONS GENERATED,    35 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                       SIN(X)
 0            70                                                        *
 0.099999     73.993331                                                 |  *
 0.199999     77.946762                                                 |      *
 0.299999     81.8208                                                   |          *
 0.399999     85.576721                                                 |              *
 0.499999     89.177001                                                 |                  *
 0.599999     92.585678                                                 |                      *
 0.699999     95.768692                                                 |                          *
 0.799999     98.694229                                                 |                             *
 0.899999     101.333068                                                |                                *
 0.999999     103.658828                                                |                                   *
 1.099999     105.648269                                                |                                      *
 1.199998     107.281539                                                |                                         *
 1.299998     108.542297                                                |                                          *
 1.399997     109.417968                                                |                                            *
 1.499997     109.89978                                                 |                                            *
```

```
 1.599996      109.98294                                              |                                      *
 1.699995      109.66661                                              |                                      *
 1.799995      108.953933                                             |                                     *
 1.899994      107.852066                                             |                                    *
 1.999994      106.371978                                             |                                   *
 2.099993      104.528488                                             |                                 *
 2.199993      102.340011                                             |                               *
 2.299992      99.828399                                              |                            *
 2.399991      97.018753                                              |                          *
 2.499991      93.939147                                              |                      *
 2.59999       90.620361                                              |                   *
 2.69999       87.095535                                              |                *
 2.799989      83.399902                                              |            *
 2.899989      79.570388                                              |        *
 2.999988      75.645248                                              |    *
 3.099987      71.663696                                              |*
 3.199987      67.665527                                           *  |
 3.299986      63.690689                                       *      |
 3.399986      59.778884                                   *          |
 3.499985      55.969207                               *              |
 3.599985      52.299728                            *                 |
 3.699984      48.807083                        *                     |
 3.799983      45.526199                     *                        |
 3.899983      42.489837                  *                           |
 3.999982      39.728363               *                              |
 4.099982      37.269332             *                                |
 4.199981      35.137329           *                                  |
 4.299981      33.353668         *                                    |
 4.39998       31.936157       *                                      |
 4.499979      30.898971      *                                       |
 4.599979      30.252456      *                                       |
 4.699978      30.003082      *                                       |
 4.799978      30.15335       *                                       |
 4.899977      30.701736      *                                       |
 4.999977      31.642776       *                                      |
 5.099976      32.967071        *                                     |
 5.199975      34.661376          *                                   |
 5.299975      36.70877          *                                 |
 5.399974      39.08879             *                              |
 5.499974      41.777664                 *                            |
 5.599973      44.748519                    *                         |
 5.699973      47.971694                       *                      |
 5.799972      51.414947                           *                  |
 5.899971      55.043884                               *              |
 5.999971      58.82228                                   *           |
 6.09997       62.712341                                      *       |
 6.19997       66.675231                                          *   |
BACK


**** PROGRAM EXECUTION COMPLETE -     2998 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                   *APPEND=TRIGPLOT
000001                   10 REM
000002                   20 REM   DEMO APPEND - PLOT COS CURVE
000003                   30 REM
000004                   40 DEF FNX(X)=COS(X)
000012                   50 LET T$="COS(X)"
000015                   60 GOSUB 10000
000017                   180 END
000019                   *REM APPENDED CODE
000019                   10000 REM -----------------------------------------------------------
000020                   10010 REM
000021                   10020 REM   SUBPROGRAM PLOT A TRIG FUNCTION USING CODE FROM A LIBRARY
000022                   10030 REM
000023                   10040 REM   TO USE, DEF FNX(X) TO THE TRIG FUNCTION
000024                   10050 REM   AND SET T$ TO THE TITLE OF THE PLOT
000025                   10060 REM   AND THEN GOSUB TO THE FIRST LINE OF THIS CODE
000026                   10070 REM
000027                   10080 PRINT "X";TAB(68);T$
000036                   10090 REM
000037                   10100 FOR X=0 TO 6.28 STEP .1
000042                   10110 LET Y=FNX(X)
000047                   10120 LET Y2=Y*40+70
000056                   10130 PRINT X,Y2;
000061                   10140 IF Y2>70 THEN 10180
000065                   10150 IF Y2<70 THEN 10200
000069                   10160 PRINT TAB(70);"*"
000076                   10170 GOTO 10210
000078                   10180 PRINT TAB(70);"|";TAB(Y2);"*"
000091                   10190 GOTO 10210
000093                   10200 PRINT TAB(Y2);"*";TAB(70);"|"
000106                   10210 NEXT X
000108                   10220 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   109 INSTRUCTIONS GENERATED,    34 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                   COS(X)
 0             110                                                    |                                       *
 0.099999      109.800155                                             |                                      *
 0.199999      109.202651                                             |                                      *
 0.299999      108.213455                                             |                                     *
 0.399999      106.842437                                             |                                   *
 0.499999      105.103302                                             |                                  *
 0.599999      103.013427                                             |                                *
 0.699999      100.593688                                             |                             *
 0.799999      97.86827                                               |                          *
 0.899999      94.864395                                              |                       *
 0.999999      91.612091                                              |                    *
 1.099999      88.143859                                              |                 *
 1.199998      84.494338                                              |             *
 1.299998      80.700012                                              |         *
 1.399997      76.798767                                              |     *
 1.499997      72.829589                                              | *
 1.599996      68.832153                                            * |
```

```
1.699995      64.846374                                                *|
1.799995      60.912094                                              *  |
1.899994      57.068603                                            *    |
1.999994      53.354339                                          *      |
2.099993      49.806381                                        *        |
2.199993      46.460189                                      *          |
2.299992      43.349182                                    *            |
2.399991      40.50447                                   *              |
2.499991      37.954467                                *                 |
2.59999       35.724639                              *                   |
2.69999       33.83728                             *                     |
2.799989      32.311248                          *                       |
2.899989      31.161788                        *                         |
2.999988      30.400375                      *                           |
3.099987      30.034622                      *                           |
3.199987      30.068191                      *                           |
3.299986      30.500732                      *                           |
3.399986      31.327941                        *                         |
3.499985      32.541534                          *                       |
3.599985      34.129409                            *                     |
3.699984      36.075683                              *                   |
3.799983      38.3609                                  *                 |
3.899983      40.962265                                  *               |
3.999982      43.853744                                    *             |
4.099982      47.006469                                      *           |
4.199981      50.388946                                        *         |
4.299981      53.967346                                          *       |
4.39998       57.705932                                            *     |
4.499979      61.567382                                              *   |
4.599979      65.513076                                                *  |
4.699978      69.503601                                                *| |
4.799978      73.499084                                                |  *
4.899977      77.459609                                                |     *
4.999977      81.345596                                                |        *
5.099976      85.118225                                                |           *
5.199975      88.739807                                                |              *
5.299975      92.174148                                                |                 *
5.399974      95.386932                                                |                    *
5.499974      98.346054                                                |                       *
5.599973      101.021957                                               |                          *
5.699973      103.387908                                               |                             *
5.799972      105.420257                                               |                                *
5.899971      107.098709                                               |                                   *
5.999971      108.406478                                               |                                     *
6.09997       109.33052                                                |                                       *
6.19997       109.861572                                               |                                       *


**** PROGRAM EXECUTION COMPLETE -     2999 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *RENUM
000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 PRINT
000016                  60 PRINT "DONE"
000019                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    20 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  *RENUM
000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 PRINT
000016                  60 PRINT "DONE"
000019                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    20 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1            1            2            3            4            5            6            7            8
 9            10
DONE


**** PROGRAM EXECUTION COMPLETE -       65 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *RENUM100
000001                  10 PRINT 1,
000004                  20 FOR I=10 TO 1 STEP -1
000012                  30 PRINT I,
000015                  40 NEXT I
000017                  50 PRINT
000019                  60 PRINT "DONE"
000022                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  *RENUM100
000001                  100 PRINT 1,
000004                  110 FOR I=10 TO 1 STEP -1
000012                  120 PRINT I,
000015                  130 NEXT I
000017                  140 PRINT
000019                  150 PRINT "DONE"
000022                  160 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1             10            9             8             7             6             5             4             3
 2             1
DONE


**** PROGRAM EXECUTION COMPLETE -       68 INSTRUCTIONS EXECUTED ****
```

```
++RENUM

OFFSET

000001                    *LIB=HERCEL.BASICLIB.BAS $$$$$
000001                    *APPEND=NEWMEMBR
**** LIBRARY NOT FOUND ****
*****                          ^
          **** CANNOT ALLOCATE THE LIBRARY ***
000001                    *APPEND=HELLOSTP
**** LIBRARY NOT FOUND ****
*****                          ^
          **** CANNOT ALLOCATE THE LIBRARY ***
000001                    *SAVE=PROGRAM1
000001                    *NOEXEC
000001                    10 PRINT I
000004                    20 PRINT
000006                    30 PRINT USING "THIS IS THE FIRST LINE"
000011                    40 PRINT USING " THE ANSWER IS ###.##",X
000018                    41 LET X=1000
000021                    42 LET Y=-222
000027                    43 PRINT USING " THE ANSWERS ARE #,###.## AND #,###.##",X,Y
000036                    48 LET X=1.92
000039                    49 LET X$=" THE NEXT ANSWER IS ###.##"
000042                    50 PRINT USING X$,X
000049                    59 LET Y$="POP"
000052                    60 PRINT USING "STRING TEST &&&&&& GOES THE WEASEL",Y$
000059                    61 PRINT USING "STRING TEST & GOES THE WEASEL",Y$
000066                     62 GOTO 1000

**** END OF COMPILATION ****     2 ERRORS FOUND - RENUMBERING BYPASSED
****    67 INSTRUCTIONS GENERATED,    29 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                    1 REM  DEMO FOR LOOPS NOW IN DO WHILE RATHER THAN DO UNTIL.
000002                    10 PRINT 1,
000005                    20 FOR I=10 TO 1
000010                    30 PRINT I,
000013                    40 NEXT I
000015                    50 PRINT
000017                    60 PRINT "DONE"
000020                    70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    21 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1
DONE

**** PROGRAM EXECUTION COMPLETE -       16 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    15 INSTRUCTIONS GENERATED,    15 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1            1            2            3            4            5            6            7            8
 9            10

**** PROGRAM EXECUTION COMPLETE -       60 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  00005 PRINT 2,3,
000006                  00010 FOR I=5 TO 1000 STEP 2
000011                  00030   FOR J=3 TO SQR(I) STEP 2
000019                  00040     IF I/J=INT(I/J) THEN 70
000031                  00050   NEXT J
000033                  00060   PRINT I,
000036                  00070 NEXT I
000038                  00080 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    39 INSTRUCTIONS GENERATED,    21 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 2            3            5            7            9            11           13           15           17
 19           21           23           25           27           29           31           33           35
 37           39           41           43           45           47           49           51           53

**** PROGRAM EXECUTION TERMINATED IN LINE    40 ****
**** PROGRAM ABORTED AFTER EXECUTING           5000 INSTRUCTIONS ****
```

```
++BASIC

OFFSET

000001                  00005 PRINT -2,
000007                  00010 FOR I=3 TO 30 STEP 2
000012                  00015   PRINT
000014                  00016   PRINT SQR(I),
000020                  00030   FOR J=3 TO SQR(I) STEP 2
000028                  00035     PRINT J,
000031                  00040     IF I/J=INT(I/J) THEN 70
000043                  00050   NEXT J
000045                  00060   PRINT -I,
000051                  00070 NEXT I
000053                  00080 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    54 INSTRUCTIONS GENERATED,    21 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

-2
 1.73205      -3
 2.236067      3            5           -5
 2.64575       3            5            7           -7
 3             3            5            7            9          -9
 3.316624      3            5            7            9           11         -11
 3.605551      3            5            7            9           11          13          -13
 3.872982      3            5            7            9           11          13           15         -15
 4.123106      3            5            7            9           11          13           15          17
-17
 4.358899      3            5            7            9           11          13           15          17
 19          -19
 4.582575      3            5            7            9           11          13           15          17
 19           21          -21
 4.795831      3            5            7            9           11          13           15          17
 19           21           23          -23
 5             3            5            7            9           11          13           15          17
 19           21           23           25          -25
 5.196152      3            5            7            9           11          13           15          17
 19           21           23           25           27          -27
 5.385165      3            5            7            9           11          13           15          17
 19           21           23           25           27           29         -29

**** PROGRAM EXECUTION COMPLETE -     2117 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *ICODE
000001                  *TABLE
000001                  *DUMP
000001                  10 REM SUBSCRIPT BOUNDS TEST
000001         10  SLN              1
000002                  20 DIM STR(14)
000002         20  SLN              1
000003                  30 LET STR(15)=-1
000003         30  SLN              1
000004             LDA              0
000005             SUB   1          0
000006             STA   TMP00      0
000007             LDA   TMP00      0
000008             LS1   1          0
000009             LS2   15         0
000010             DSL   STR        0
000011             STA   STR        0
000012             STA   TMP01      0
000013                  40 END
000013         40  SLN              1
000014             END              4

OFFSET  SYMBOL         TYPE          OCCURS     VALUE
     1  RESULTS        VAR            0    0     0.00000E+00
     2  SQR            FUNCTION       0    0     0.00000E+00
     3  ABS            FUNCTION       0    0     0.00000E+00
     4  TAB            FUNCTION       0    0     0.00000E+00
     5  INT            FUNCTION       0    0     0.00000E+00
     6  COS            FUNCTION       0    0     0.00000E+00
     7  SIN            FUNCTION       0    0     0.00000E+00
     8  TAN            FUNCTION       0    0     0.00000E+00
     9  RND            FUNCTION       0    0     0.00000E+00
    10  INR            FUNCTION       0    0     0.00000E+00
    11  EXP            FUNCTION       0    0     0.00000E+00
    12  LOG            FUNCTION       0    0     0.00000E+00
    13  STR            DIM            0   14     0.00000E+00
    14  STR      +     DIM            0    0     0.00000E+00
    15  STR      +     DIM            0    1     0.00000E+00
    16  STR      +     DIM            0    2     0.00000E+00
    17  STR      +     DIM            0    3     0.00000E+00
    18  STR      +     DIM            0    4     0.00000E+00
    19  STR      +     DIM            0    5     0.00000E+00
    20  STR      +     DIM            0    6     0.00000E+00
    21  STR      +     DIM            0    7     0.00000E+00
    22  STR      +     DIM            0    8     0.00000E+00
    23  STR      +     DIM            0    9     0.00000E+00
    24  STR      +     DIM            0   10     0.00000E+00
    25  STR      +     DIM            0   11     0.00000E+00
    26  STR      +     DIM            0   12     0.00000E+00
    27  STR      +     DIM            0   13     0.00000E+00
    28  STR      +     DIM            0   14     0.00000E+00
    29                 CONST          0    0     0.00000E+00
    30  1              CONST          0    0     1.00000E+00
    31  TMP00          VAR            0    0     0.00000E+00
```

```
    32  15              CONST          0    0     1.50000E+01
    33  TMP01           VAR            0    0     0.00000E+00
END OF SYMBOL TABLE

DEF NAME                 OFFSET
END OF DEF NAME TABLE

DATA STACK ITEM          VALUE
END OF DATA STACK

OFFSET       LINE  OP   OBJECT      FORMAT
END OF PCODE TABLE

**** END OF COMPILATION **** NO ERRORS FOUND
****    14 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****



**** PROGRAM EXECUTION TERMINATED IN LINE    30 @ OFFSET    10 ****
**** SUBSCRIPT OUT OF RANGE FOR STR

OFFSET  SYMBOL          TYPE           OCCURS     VALUE
     1  RESULTS         VAR            0    0     0.00000E+00
     2  SQR             FUNCTION       0    0     0.00000E+00
     3  ABS             FUNCTION       0    0     0.00000E+00
     4  TAB             FUNCTION       0    0     0.00000E+00
     5  INT             FUNCTION       0    0     0.00000E+00
     6  COS             FUNCTION       0    0     0.00000E+00
     7  SIN             FUNCTION       0    0     0.00000E+00
     8  TAN             FUNCTION       0    0     0.00000E+00
     9  RND             FUNCTION       0    0     0.00000E+00
    10  INR             FUNCTION       0    0     0.00000E+00
    11  EXP             FUNCTION       0    0     0.00000E+00
    12  LOG             FUNCTION       0    0     0.00000E+00
    13  STR             DIM            0   14     0.00000E+00
    14  STR       +     DIM            0    0     0.00000E+00
    15  STR       +     DIM            0    1     0.00000E+00
    16  STR       +     DIM            0    2     0.00000E+00
    17  STR       +     DIM            0    3     0.00000E+00
    18  STR       +     DIM            0    4     0.00000E+00
    19  STR       +     DIM            0    5     0.00000E+00
    20  STR       +     DIM            0    6     0.00000E+00
    21  STR       +     DIM            0    7     0.00000E+00
    22  STR       +     DIM            0    8     0.00000E+00
    23  STR       +     DIM            0    9     0.00000E+00
    24  STR       +     DIM            0   10     0.00000E+00
    25  STR       +     DIM            0   11     0.00000E+00
    26  STR       +     DIM            0   12     0.00000E+00
    27  STR       +     DIM            0   13     0.00000E+00
    28  STR       +     DIM            0   14     0.00000E+00
    29                  CONST          0    0     0.00000E+00
    30  1               CONST          0    0     1.00000E+00
    31  TMP00           VAR            0    0    -1.00000E+00
    32  15              CONST          0    0     1.50000E+01
    33  TMP01           VAR            0    0     0.00000E+00
END OF SYMBOL TABLE
```

```
++BASIC  DEMO STRING COMPARES

OFFSET

000001                    1 REM PRINT USING "A",A
000002                    10 REM
000003                    20 DATA "X","Y", "X ","Y", "X","Y ", "AB","A", "Z","Z", "*","*"
000004                    30 READ X$,Y$
000007                    40 IF X$="*" THEN 130
000011                    41 IF X$=Y$ THEN 100
000015                    50 IF X$<Y$ THEN 110
000019                    60 PRINT X$;">";Y$
000026                    70 GO TO 30
000028                    100 PRINT X$;"=";Y$
000035                    101 GO TO 30
000037                    110 PRINT X$;"<";Y$
000044                    120 GO TO 30
000046                    130 STOP

**** END OF COMPILATION **** NO ERRORS FOUND
****    47 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED    12 DATA ITEMS DEFINED ****

X<Y
X <Y
X<Y
AB>A
Z=Z

**** PROGRAM EXECUTION TERMINATED IN LINE   130 ****
**** STOP STATEMENT EXECUTED ****
```

```
++BASIC DEMO PROGRAM 1

OFFSET

000001                  10 REM
000002                  20 REM  DEMO PROGRAM FOR BASIC/360
000003                  21 REM    DEMOS FOR..NEXT, PRINT, AND FUNCTIONS
000004                  30 REM
000005                  31 PRINT "I","I*I","SQR(I)","ABS(I)"
000014                  32 FOR I=1 TO 4
000019                  34 PRINT "=====",
000022                  35 NEXT I
000024                  36 PRINT
000026                  40 FOR I=1 TO 10
000031                  50 PRINT I,I*I,SQR(I),ABS(I)
000049                  60 NEXT I
000051                  70 PRINT
000053                  100 REM
000054                  101 PRINT
000056                  102 PRINT "J","K","INT(K)","INR(K)"
000065                  110 LET J=1
000068                  115 LET K=SQR(J)
000073                  120 PRINT J,K,INT(K),INR(K)
000088                  130 LET J=J+1
000094                  140 IF J<=10 THEN 115
000098                  150 REM
000099                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   100 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

I	I*I	SQR(I)	ABS(I)
1	1	1	1
2	4	1.414213	2
3	9	1.73205	3
4	16	2	4
5	25	2.236067	5
6	36	2.449489	6
7	49	2.64575	7
8	64	2.828427	8
9	81	3	9
10	100	3.162277	10

J	K	INT(K)	INR(K)
1	1	1	1
2	1.414213	1	1
3	1.73205	1	2
4	2	2	2
5	2.236067	2	2
6	2.449489	2	2
7	2.64575	2	3
8	2.828427	2	3
9	3	3	3
10	3.162277	3	3

```
**** PROGRAM EXECUTION COMPLETE -      565 INSTRUCTIONS EXECUTED ****

++BASIC

OFFSET

000001                    10 REM
000002                    11 REM   DEMO FOR RND FUNCTION
000003                    12 REM
000004                    13 RANDOMIZE
000006                    20 PRINT "RND FUNCTION TEST"
000009                    30 FOR I=1 TO 20
000014                    40 PRINT RND(0)
000020                    50 NEXT I
000022                    60 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

RND FUNCTION TEST
 0.046876
 0.20682
 0.819039
 0.052853
 0.94576
 0.198884
 0.681461
 0.298809
 0.659702
 0.268934
 0.676278
 0.637265
 0.737082
 0.687109
 0.488911
 0.749478
 0.096672
 0.834726
 0.138304
 0.317286


**** PROGRAM EXECUTION COMPLETE -      175 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  11 REM   DEMO FOR USER SETTING RND SEED
000003                  12 REM
000004                  20 PRINT "RND FUNCTION SEED TEST"
000007                  22 FOR J=1 TO 3
000012                  25 PRINT "SEED SET",RND(1234)
000020                  30 FOR I=1 TO 20
000025                  40 PRINT RND(0);
000031                  50 NEXT I
000033                  51 PRINT
000035                  55 NEXT J
000037                  60 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    38 INSTRUCTIONS GENERATED,    22 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

RND FUNCTION SEED TEST
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903

**** PROGRAM EXECUTION COMPLETE -      544 INSTRUCTIONS EXECUTED ****
```

```
++BASIC PROGRAM 2

OFFSET

000001                  10 REM
000002                  20 REM  VALUDATION PROGRAM FOR BASIC/360
000003                  21 REM    ADVANCED PRINTING
000004                  30 REM
000005                  34 PRINT
000007                  35 PRINT "I","I*I","SQR(I)","ABS(I)"
000016                  36 FOR I=1 TO 4
000021                  37 PRINT "======",
000024                  38 NEXT I
000026                  39 PRINT
000028                  40 FOR I=1 TO 10
000033                  50 PRINT I,I*I,SQR(I),ABS(I)
000051                  60 NEXT I
000053                  70 PRINT
000055                  100 REM
000056                  104 PRINT
000058                  105 PRINT "J","J*J","SQR(J)"
000065                  106 FOR I=1 TO 3
000070                  107 PRINT "======",
000073                  108 NEXT I
000075                  109 PRINT
000077                  110 LET J=1
000080                  120 PRINT TAB(J),J,J*J,SQR(J)
000097                  130 LET J=J+1
000103                  140 IF J<=10 THEN 120
000107                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   108 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****


I             I*I           SQR(I)        ABS(I)
======        ======        ======        ======
 1             1             1             1
 2             4             1.414213      2
 3             9             1.73205       3
 4             16            2             4
 5             25            2.236067      5
 6             36            2.449489      6
 7             49            2.64575       7
 8             64            2.828427      8
 9             81            3             9
 10            100           3.162277      10


J             J*J           SQR(J)
======        ======        ======
  1             1             1
   2             4             1.414213
    3             9             1.73205
     4             16            2
      5             25            2.236067
       6             36            2.449489
        7             49            2.64575
```

```
         8     64            2.828427
          9    81            3
           10  100           3.162277


**** PROGRAM EXECUTION COMPLETE -      556 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM  VALIDATE IF, GOTO, READ AND DATA STATEMENTS
000003                  30 REM
000004                  80 PRINT "A","B"
000009                  100 READ A,B
000012                  110 IF A=999 THEN 900
000016                  120 IF A=B THEN 200
000020                  130 IF A<B THEN 220
000024                  140 IF A>B THEN 240
000028                  150 IF A<=B THEN 260
000032                  160 IF A>=B THEN 280
000036                  170 IF A<>B THEN 300
000040                  180 GOTO 100
000042                  200 PRINT A,B,"A=B"
000049                  210 GO TO 130
000051                  220 PRINT A,B,"A<B"
000058                  230 GO TO 140
000060                  240 PRINT A,B,"A>B"
000067                  250 GOTO 150
000069                  260 PRINT A,B,"A<=B"
000076                  270 GOTO 160
000078                  280 PRINT A,B,"A>=B"
000085                  290 GOTO 170
000087                  300 PRINT A,B,"A<>B"
000094                  310 GOTO 180
000096                  500 DATA 1,1,1,2,2,1
000097                  510 DATA 100,25,32,-5
000098                  520 DATA 999,999
000099                  900 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   100 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED    12 DATA ITEMS DEFINED ****

A             B
 1             1            A=B
 1             1            A<=B
 1             1            A>=B
 1             2            A<B
 1             2            A<=B
 1             2            A<>B
 2             1            A>B
 2             1            A>=B
 2             1            A<>B
 100           25           A>B
 100           25           A>=B
 100           25           A<>B
 32           -5            A>B
 32           -5            A>=B
 32           -5            A<>B


**** PROGRAM EXECUTION COMPLETE -      317 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM  TEST PRINT NUMERIC FORMATTING
000003                  30 REM
000004                  40 READ A,B,C
000008                  50 IF A=9999 THEN 9000
000012                  60 PRINT A,B,C
000019                  61 PRINT A-1,B-1,C-1
000035                  62 PRINT A+1,B+1,C+1
000051                  70 GOTO 40
000053                  100 DATA 1,2,3
000054                  110 DATA 1.23,3,432.3
000055                  120 DATA 1.0E+5,1.0E+6,1.0E+7
000056                  130 DATA -1.0E+5,-1.0E+6,-1.0E+7
000057                  140 DATA 1.0E-5,1.0E-6,1.0E-7
000058                  150 DATA -1.0E-5,-1.0E-6,-1.0E-7
000059                  160 DATA 9999,9999,9999
000060                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    61 INSTRUCTIONS GENERATED,    20 SYMBOLS DEFINED    21 DATA ITEMS DEFINED ****

 1            2            3
 0            1            2
 2            3            4
 1.229999     3            432.299804
 0.229999     2            431.299804
 2.229999     4            433.299804
 100000       1.00000E+06  1.00000E+07
 99999        999999       9.99999E+06
 100001       1.00000E+06  1.00000E+07
-100000      -1.00000E+06 -1.00000E+07
-100001      -1.00000E+06 -1.00000E+07
-99999       -999999      -9.99999E+06
 0.000009     9.99999E-07  9.99999E-08
-0.99999     -0.999999    -0.999999
 1.000009     1            1
-0.000009    -9.99999E-07 -9.99999E-08
-1.000009    -1           -1
 0.99999      0.999999     0.999999


**** PROGRAM EXECUTION COMPLETE -      307 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM   PLOT A SINE CURVE
000003                  30 REM
000004                  40 PRINT "X";TAB(68);"SIN(X)"
000013                  50 REM
000014                  60 FOR X=0 TO 6.28 STEP .1
000019                  70 LET Y=SIN(X)
000024                  80 LET Y2=Y*40+70
000033                  90 PRINT X,Y2;
000038                  100 IF Y2>70 THEN 140
000042                  110 IF Y2<70 THEN 160
000046                  120 PRINT TAB(70);"*"
000053                  130 GOTO 170
000055                  140 PRINT TAB(70);"|";TAB(Y2);"*"
000068                  150 GOTO 170
000070                  160 PRINT TAB(Y2);"*";TAB(70);"|"
000083                  170 NEXT X
000085                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    86 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                SIN(X)
 0            70                                                  *
0.099999      73.993331                                         |  *
0.199999      77.946762                                         |     *
0.299999      81.8208                                           |        *
0.399999      85.576721                                         |           *
0.499999      89.177001                                         |              *
0.599999      92.585678                                         |                 *
0.699999      95.768692                                         |                    *
0.799999      98.694229                                         |                       *
0.899999      101.333068                                        |                          *
0.999999      103.658828                                        |                             *
1.099999      105.648269                                        |                                *
1.199998      107.281539                                        |                                   *
1.299998      108.542297                                        |                                     *
1.399997      109.417968                                        |                                      *
1.499997      109.89978                                         |                                      *
1.599996      109.98294                                         |                                      *
1.699995      109.66661                                         |                                      *
1.799995      108.953933                                        |                                     *
1.899994      107.852066                                        |                                   *
1.999994      106.371978                                        |                                 *
2.099993      104.528488                                        |                              *
2.199993      102.340011                                        |                           *
2.299992      99.828399                                         |                        *
2.399991      97.018753                                         |                     *
2.499991      93.939147                                         |                  *
2.59999       90.620361                                         |               *
2.69999       87.095535                                         |            *
2.799989      83.399902                                         |         *
2.899989      79.570388                                         |      *
2.999988      75.645248                                         |   *
```

```
3.099987        71.663696                                                  |*
3.199987        67.665527                                                *  |
3.299986        63.690689                                             *     |
3.399986        59.778884                                          *        |
3.499985        55.969207                                       *           |
3.599985        52.299728                                    *              |
3.699984        48.807083                                 *                 |
3.799983        45.526199                              *                    |
3.899983        42.489837                           *                       |
3.999982        39.728363                        *                          |
4.099982        37.269332                     *                             |
4.199981        35.137329                  *                                |
4.299981        33.353668               *                                   |
4.39998         31.936157            *                                      |
4.499979        30.898971         *                                         |
4.599979        30.252456         *                                         |
4.699978        30.003082         *                                         |
4.799978        30.15335          *                                         |
4.899977        30.701736         *                                         |
4.999977        31.642776            *                                      |
5.099976        32.967071               *                                   |
5.199975        34.661376                  *                                |
5.299975        36.70877                      *                            |
5.399974        39.08879                         *                         |
5.499974        41.777664                           *                      |
5.599973        44.748519                              *                   |
5.699973        47.971694                                 *                |
5.799972        51.414947                                    *             |
5.899971        55.043884                                       *          |
5.999971        58.82228                                           *       |
6.09997         62.712341                                             *     |
6.19997         66.675231                                                *  |

**** PROGRAM EXECUTION COMPLETE -     2600 INSTRUCTIONS EXECUTED ****
```

```
                                                           BASIC/360 V3.3.1 MON             DATE 06/10/2022  PAGE     1

++BASIC

OFFSET

000001                   10 REM
000002                   20 REM   PLOT A COSINE CURVE
000003                   30 REM
000004                   40 PRINT "X";TAB(68);"COS(X)"
000013                   50 REM
000014                   60 FOR X=0 TO 6.28 STEP .1
000019                   70 LET Y2=COS(X)*40+70
000031                   80 PRINT X,Y2;
000036                   90 IF Y2>70 THEN 130
000040                   100 IF Y2<70 THEN 150
000044                   110 PRINT TAB(70);"*"
000051                   120 GOTO 160
000053                   130 PRINT TAB(70);"|";TAB(Y2);"*"
000066                   140 GOTO 160
000068                   150 PRINT TAB(Y2);"*";TAB(70);"|"
000081                   160 NEXT X
000083                   170 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    84 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                   COS(X)
 0             110                                                    |                                       *
 0.099999      109.800155                                             |                                      *
 0.199999      109.202651                                             |                                      *
 0.299999      108.213455                                             |                                     *
 0.399999      106.842437                                             |                                   *
 0.499999      105.103302                                             |                                  *
 0.599999      103.013427                                             |                                *
 0.699999      100.593688                                             |                             *
 0.799999      97.86827                                               |                          *
 0.899999      94.864395                                              |                       *
 0.999999      91.612091                                              |                    *
 1.099999      88.143859                                              |                 *
 1.199998      84.494338                                              |             *
 1.299998      80.700012                                              |         *
 1.399997      76.798767                                              |     *
 1.499997      72.829589                                              | *
 1.599996      68.832153                                            * |
 1.699995      64.846374                                        *     |
 1.799995      60.912094                                    *         |
 1.899994      57.068603                                 *            |
 1.999994      53.354339                             *                |
 2.099993      49.806381                         *                    |
 2.199993      46.460189                      *                       |
 2.299992      43.349182                   *                          |
 2.399991      40.50447                 *                             |
 2.499991      37.954467             *                                |
 2.59999       35.724639           *                                  |
 2.69999       33.83728          *                                    |
 2.799989      32.311248        *                                     |
 2.899989      31.161788       *                                      |
 2.999988      30.400375      *                                       |
 3.099987      30.034622      *                                       |
```

```
 3.199987      30.068191      *                                       |
 3.299986      30.500732      *                                       |
 3.399986      31.327941       *                                      |
 3.499985      32.541534        *                                     |
 3.599985      34.129409          *                                   |
 3.699984      36.075683            *                                 |
 3.799983      38.3609                *                               |
 3.899983      40.962265                *                             |
 3.999982      43.853744                   *                          |
 4.099982      47.006469                       *                      |
 4.199981      50.388946                          *                   |
 4.299981      53.967346                             *                |
 4.39998       57.705932                                 *            |
 4.499979      61.567382                                     *        |
 4.599979      65.513076                                         *    |
 4.699978      69.503601                                             *|
 4.799978      73.499084                                              |  *
 4.899977      77.459609                                              |      *
 4.999977      81.345596                                              |          *
 5.099976      85.118225                                              |              *
 5.199975      88.739807                                              |                 *
 5.299975      92.174148                                              |                     *
 5.399974      95.386932                                              |                        *
 5.499974      98.346054                                              |                           *
 5.599973      101.021957                                             |                              *
 5.699973      103.387908                                             |                                *
 5.799972      105.420257                                             |                                  *
 5.899971      107.098709                                             |                                    *
 5.999971      108.406478                                             |                                     *
 6.09997       109.33052                                              |                                      *
 6.19997       109.861572                                             |                                      *

**** PROGRAM EXECUTION COMPLETE -     2478 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  1 REM
000002                  2 REM  DEMONSTRATE DIM AND SUBSCRIPTED VARIABLES
000003                  3 REM
000004                  10 DIM I(10)
000005                  20 DIM J(10),K(10)
000006                  100 FOR X=1 TO 10
000011                  110 LET I(X)=X
000018                  120 LET J(X)=X*X
000028                  130 LET K(X)=SQR(X)
000037                  140 NEXT X
000039                  150 FOR X=10 TO 1 STEP -1
000047                  160 PRINT I(X),J(X),K(X)
000069                  170 NEXT X
000071                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    72 INSTRUCTIONS GENERATED,    55 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 10            100           3.162277
 9             81            3
 8             64            2.828427
 7             49            2.64575
 6             36            2.449489
 5             25            2.236067
 4             16            2
 3             9             1.73205
 2             4             1.414213
 1             1             1


**** PROGRAM EXECUTION COMPLETE -      540 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  1 REM
000002                  2 REM  DEMONSTRATE DIM AND SUBSCRIPTED VARIABLES
000003                  3 REM
000004                  10 DIM I(10)
000005                  20 DIM J(10),K(10)
000006                  100 FOR X=1 TO 10 STEP 2
000011                  110 LET I(X)=X
000018                  120 LET J(X)=X*X
000028                  130 LET K(X)=SQR(X)
000037                  140 NEXT X
000039                  141 FOR X=2 TO 10 STEP 2
000044                  142 LET I(X)=X
000051                  143 LET J(X)=X*X
000061                  144 LET K(X)=SQR(X)
000070                  145 NEXT X
000072                  150 FOR X=10 TO 1 STEP -1
000080                  160 PRINT I(X),J(X),K(X)
000102                  170 NEXT X
000104                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   105 INSTRUCTIONS GENERATED,    56 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 10            100           3.162277
 9             81            3
 8             64            2.828427
 7             49            2.64575
 6             36            2.449489
 5             25            2.236067
 4             16            2
 3             9             1.73205
 2             4             1.414213
 1             1             1


**** PROGRAM EXECUTION COMPLETE -      545 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST LINE NUMBER SEQUENCE CHECK
000002                  20 REM DIM A$(10)
000003                  30 LET X$="HELLO"
000006                  40 LET X=10
000009                  50 PRINT "HELLO WORLD"
000012                  60 PRINT X
000015                  70 LET X=X$
000018                  80 END
000020                  10 REM TEST RND
*****                   ^
          LINE NUMBER OUT OF SEQUENCE
000021                  20 PRINT "RND FUNCTION TEST"
000024                  30 FOR I=1 TO 20
000029                  40 PRINT RND(0)
000035                  50 NEXT I
000037                  60 END

**** END OF COMPILATION ****     1 ERRORS FOUND
****    38 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS VS NUMERIC VARIABLES
000002                  20 REM
000003                  30 LET X$="PASSED"
000006                  40 LET X=10
000009                  50 PRINT "THE NUMBER 10 AND THE WORD PASSED SHOULD PRINT"
000012                  60 PRINT X
000015                  70 LET Y$=X$
000018                  80 PRINT Y$
000021                  90 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    22 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THE NUMBER 10 AND THE WORD PASSED SHOULD PRINT
 10
PASSED


**** PROGRAM EXECUTION COMPLETE -       22 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS VS NUMERICS
000002                  20 PRINT "SHOULD ABEND STORING A STRING TO A NUMBER"
000005                  30 LET X$="HELLO"
000008                  40 LET X=10
000011                  50 PRINT "HELLO WORLD"
000014                  60 PRINT X,X$
000019                  90 LET X=X$
000022                  100 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

SHOULD ABEND STORING A STRING TO A NUMBER
HELLO WORLD
 10           HELLO


**** PROGRAM EXECUTION TERMINATED IN LINE    90 ****
**** STRING CANNOT BE STORED IN A NUMERIC VARIABLE ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS IN DATA STATEMENTS
000002                  20 DIM A$(10)
000003                  30 DATA 1,2,"HELLO FROM DATA 2ND LINE PRINTED"
000004                  40 READ X,Y
000007                  50 PRINT "HELLO FROM PRINT 1ST LINE PRINTED"
000010                  60 PRINT X,Y
000015                  70 READ X$
000017                  80 PRINT X$
000020                  90 LET A$(1)="THIRD LINE PRINTED"
000027                  100 PRINT A$(1)
000035                  110 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    36 INSTRUCTIONS GENERATED,    32 SYMBOLS DEFINED     3 DATA ITEMS DEFINED ****

HELLO FROM PRINT 1ST LINE PRINTED
 1            2
HELLO FROM DATA 2ND LINE PRINTED
THIRD LINE PRINTED


**** PROGRAM EXECUTION COMPLETE -       36 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM   DEMO FOR LOOPING PROGRAM
000003                  30 REM
000004                  31 PRINT "THIS PROGRAM DEMOS RUN AWAY ACTION"
000007                  40 LET X=0
000010                  50 IF X>1000 THEN 100
000014                  60 LET X=X+1
000020                  70 GOTO 50
000022                  100 PRINT "DONE"
000025                  110 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    26 INSTRUCTIONS GENERATED,    19 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THIS PROGRAM DEMOS RUN AWAY ACTION


**** PROGRAM EXECUTION TERMINATED IN LINE    70 ****
**** PROGRAM ABORTED AFTER EXECUTING          5000 INSTRUCTIONS ****
```

```
++BASIC

OFFSET

000001                    10 REM
000002                    20 REM   DEMO FOR LOOPING PROGRAM
000003                    30 REM
000004                    31 PRINT "THIS PROGRAM DEMOS FALL OFF END (NO END STMT)"
000007                    40 LET X=0
000010                    50 IF X>100 THEN 100
000014                    60 LET X=X+1
000020                    70 GOTO 50
000022                    100 PRINT "DONE"

**** END OF COMPILATION **** NO ERRORS FOUND
****    24 INSTRUCTIONS GENERATED,    19 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THIS PROGRAM DEMOS FALL OFF END (NO END STMT)
DONE


**** PROGRAM EXECUTION TERMINATED IN LINE   100 ****
**** PROGRAM RUN AWAY DETECTED ****
```

```
++BASIC

OFFSET

000001                  00110 REM A*X*X + B*X + C = 0
000002                  00111 REM 3*5*5 + 6*5 = 105
000003                  00115 LET C=-105
000009                  00122 FOR A=1 TO 4
000014                  00133   FOR B=5 TO 8
000019                  00142     IF (B*B)-(4*A*C)<0 THEN 177
000035                  00144     LET X1=(-B+SQR((B*B)-(4*A*C)))/(2*A)
000065                  00155     LET X2=(-B-SQR((B*B)-(4*A*C)))/(2*A)
000095                  00157     LET X3=((-B+SQR(B*B-4*A*C))/2/A
*****                                 ^
          UNBALANCED PARENS
000096                  00158     LET X4=(-B-SQR(B*B-4*A*C))/2/A
000126                  00166     PRINT A,B,X1,X2,X3,X4
000139                  00177   NEXT B
000141                  00188 NEXT A
000143                  00199 END

**** END OF COMPILATION ****     1 ERRORS FOUND
****   144 INSTRUCTIONS GENERATED,    36 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #1
000003                  30 REM
000004                  31 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  32 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  33 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  34 REM   USING.
000008                  50 REM
000009                  53 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                  54 LET U$="  --------      ----   -----    ---------"
000015                  55 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                  56 PRINT T$
000021                  57 PRINT U$
000024                  60 READ NAME$,HOURS,RATE
000028                  70 IF HOURS>0 THEN 100
000032                  75 PRINT
000034                  80 PRINT "END OF JOB"
000037                  90 END
000039                  100 LET NET=HOURS*RATE
000045                  101 PRINT "->";
000048                  109 PRINT USING P$,NAME$,HOURS,RATE,NET,
000061                  110 PRINT USING P$,NAME$,HOURS,RATE,NET,
000074                  111 IF HOURS <= 40 THEN 115
000078                  112 PRINT "OVERTIME"
000081                  113 GO TO 60
000083                  115 PRINT
000085                  120 GOTO 60
000087                  500 DATA "MOE HOWARD",41,7.25
000088                  510 DATA "LARRY FINE",32,7.25
000089                  520 DATA "CURLEY HOWARD",40,.02
000090                  530 DATA "THE BIG BOSS MAN",40,14
000091                  540 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #1
000003                  30 REM
000004                  40 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  50 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  60 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  70 REM   USING.
000008                  80 REM
000009                  90 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                 100 LET U$="  --------      ----   -----    ---------"
000015                 110 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                 120 PRINT T$
000021                 130 PRINT U$
000024                 140 READ NAME$,HOURS,RATE
000028                 150 IF HOURS>0 THEN 190
000032                 160 PRINT
000034                 170 PRINT "END OF JOB"
000037                 180 END
000039                 190 LET NET=HOURS*RATE
000045                 200 PRINT "->";
000048                 210 PRINT USING P$,NAME$,HOURS,RATE,NET,
000061                 220 PRINT USING P$,NAME$,HOURS,RATE,NET,
000074                 230 IF HOURS <= 40 THEN 260
000078                 240 PRINT "OVERTIME"
000081                 250 GO TO 140
000083                 260 PRINT
000085                 270 GOTO 140
000087                 280 DATA "MOE HOWARD",41,7.25
000088                 290 DATA "LARRY FINE",32,7.25
000089                 300 DATA "CURLEY HOWARD",40,.02
000090                 310 DATA "THE BIG BOSS MAN",40,14
000091                 320 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****

  EMPLOYEE     HOURS    RATE      NET PAY
  --------      ----   -----    ---------
->MOE HOWARD    41.0    7.25  $    297.25 MOE HOWARD    41.0    7.25  $    297.25   OVERTIME
->LARRY FINE    32.0    7.25  $    232.00 LARRY FINE    32.0    7.25  $    232.00
->CURLEY HOWAR  40.0    0.01  $      0.79 CURLEY HOWAR  40.0    0.01  $      0.79
->THE BIG BOSS  40.0   14.00  $    560.00 THE BIG BOSS  40.0   14.00  $    560.00

END OF JOB

**** PROGRAM EXECUTION COMPLETE -      235 INSTRUCTIONS EXECUTED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #2
000003                  30 REM
000004                  31 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  32 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  33 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  34 REM   USING.
000008                  50 REM
000009                  53 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                  54 LET U$="  --------      ----   -----    ---------"
000015                  55 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                  56 PRINT T$
000021                  57 PRINT U$
000024                  60 READ NAME$,HOURS,RATE
000028                  70 IF HOURS>0 THEN 100
000032                  75 PRINT
000034                  80 PRINT "END OF JOB"
000037                  90 END
000039                  100 LET NET=HOURS*RATE
000045                  101 PRINT "->";
000048                  109 PRINT USING P$,NAME$,HOURS,RATE,NET;
000061                  110 PRINT USING P$,NAME$,HOURS,RATE,NET;
000074                  111 IF HOURS <= 40 THEN 115
000078                  112 PRINT "OVERTIME"
000081                  113 GO TO 60
000083                  115 PRINT
000085                  120 GOTO 60
000087                  500 DATA "MOE HOWARD",41,7.25
000088                  510 DATA "LARRY FINE",32,7.25
000089                  520 DATA "CURLEY HOWARD",40,.02
000090                  530 DATA "THE BIG BOSS MAN",40,14
000091                  540 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #2
000003                  30 REM
000004                  40 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  50 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  60 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  70 REM   USING.
000008                  80 REM
000009                  90 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                 100 LET U$="  --------      ----    -----    ----------"
000015                 110 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                 120 PRINT T$
000021                 130 PRINT U$
000024                 140 READ NAME$,HOURS,RATE
000028                 150 IF HOURS>0 THEN 190
000032                 160 PRINT
000034                 170 PRINT "END OF JOB"
000037                 180 END
000039                 190 LET NET=HOURS*RATE
000045                 200 PRINT "->";
000048                 210 PRINT USING P$,NAME$,HOURS,RATE,NET;
000061                 220 PRINT USING P$,NAME$,HOURS,RATE,NET;
000074                 230 IF HOURS <= 40 THEN 260
000078                 240 PRINT "OVERTIME"
000081                 250 GO TO 140
000083                 260 PRINT
000085                 270 GOTO 140
000087                 280 DATA "MOE HOWARD",41,7.25
000088                 290 DATA "LARRY FINE",32,7.25
000089                 300 DATA "CURLEY HOWARD",40,.02
000090                 310 DATA "THE BIG BOSS MAN",40,14
000091                 320 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****

  EMPLOYEE     HOURS    RATE      NET PAY
  --------      ----    -----    ----------
->MOE HOWARD    41.0     7.25  $    297.25MOE HOWARD    41.0     7.25  $    297.25OVERTIME
->LARRY FINE    32.0     7.25  $    232.00LARRY FINE    32.0     7.25  $    232.00
->CURLEY HOWAR  40.0     0.01  $      0.79CURLEY HOWAR  40.0     0.01  $      0.79
->THE BIG BOSS  40.0    14.00  $    560.00THE BIG BOSS  40.0    14.00  $    560.00

END OF JOB

**** PROGRAM EXECUTION COMPLETE -      235 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  1 REM  DEMO/TEST PRINT USING
000002                  5 LET PU1$=" #####X^2+ #####X+ ##### = 0"
000005                  6 LET PU2$="&&&&&&&& X= #####.##   |   #####.## &"
000008                  7 LET PU3$="### X ###.# = #####.# , ### X ###.# = ####.#  SUM= #####.#"
000011                  00100 DATA 5,-9,-248
000012                  00110 DATA 2,6,5
000013                  00120 DATA 0,0,0
000014                  00200 READ A,B,C
000018                  00210 IF A=0 THEN 1500
000022                  00300 REM AX2+BX+C=0
000023                  00400 REM X2+BX/A=-C/A
000024                  00500 REM X2+2BX/2A+B2/4A2=B2/4A2-C/A
000025                  00600 REM (X+B/2A)2=(B2-4AC)/4A2
000026                  00700 REM X1,X2 = (-B +/- SQR(B2-4AC))/2A
000027                  00800 LET D=B*B-4*C*A
000042                  00850 PRINT USING PU1$,A,B,C
000053                  00900 IF D<0 THEN 1300
000057                  00950 REM REAL
000058                  01000 LET D=SQR(D)
000063                  01100 PRINT USING PU2$,"REAL",(-B+D)/2/A,(-B-D)/2/A," ",
000100                  01101 PRINT "REAL",(-B+D)/2/A,(-B-D)/2/A," "
000133                  01110 LET X=(-B+D)/2/A
000148                  01120 GOSUB 1600
000150                  01130 LET X=(-B-D)/2/A
000165                  01140 GOSUB 1600
000167                  01150 GOTO 200
000169                  01200 REM COMPLEX
000170                  01300 LET D=SQR(-D)
000178                  01400 PRINT USING PU2$,"COMPLEX",-B/2/A,D/2/A,"I";
000206                  01401 PRINT "COMPLEX",-B/2/A,D/2/A,"I"
000230                  01410 GOTO 200
000232                  01500 END
000234                  01600 PRINT A;"X";X*X;"=";A*X*X,B;"X";X;"=";B*X,"SUM=";A*X*X+B*X
000283                  01602 PRINT USING PU3$,A;X*X;A*X*X,B;X;B*X,A*X*X+B*X
000326                  01700 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   327 INSTRUCTIONS GENERATED,    48 SYMBOLS DEFINED     9 DATA ITEMS DEFINED ****

     5X^2+    -9X+  -248 = 0
REAL     X=     8.00   |      -6.19       REAL           8            -6.199999
 5X 64= 320   -9X 8=-72     SUM= 248
  5 X  64.0 =   320.0 ,  -9 X   8.0 =  -72.0  SUM=   248.0
 5X 38.439987= 192.19989    -9X-6.199999= 55.799987     SUM= 247.999877
  5 X  38.4 =   192.1 ,  -9 X  -6.1 =   55.7  SUM=   247.9
     2X^2+     6X+     5 = 0
COMPLEX  X=    -1.50   |       0.50 ICOMPLEX            -1.5           0.5          I


**** PROGRAM EXECUTION COMPLETE -      465 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *APPEND=TRIGPLOT
000001                  10 REM
000002                  20 REM   DEMO APPEND - PLOT SIN CURVE
000003                  30 REM
000004                  40 DEF FNX(X)=SIN(X)
000012                  50 LET T$="SIN(X)"
000015                  60 GOSUB 10000
000017                  70 PRINT "BACK"
000020                  180 END
000022                  *REM APPENDED CODE
000022                  10000 REM ------------------------------------------------------
000023                  10010 REM
000024                  10020 REM   SUBPROGRAM PLOT A TRIG FUNCTION USING CODE FROM A LIBRARY
000025                  10030 REM
000026                  10040 REM   TO USE, DEF FNX(X) TO THE TRIG FUNCTION
000027                  10050 REM   AND SET T$ TO THE TITLE OF THE PLOT
000028                  10060 REM   AND THEN GOSUB TO THE FIRST LINE OF THIS CODE
000029                  10070 REM
000030                  10080 PRINT "X";TAB(68);T$
000039                  10090 REM
000040                  10100 FOR X=0 TO 6.28 STEP .1
000045                  10110 LET Y=FNX(X)
000050                  10120 LET Y2=Y*40+70
000059                  10130 PRINT X,Y2;
000064                  10140 IF Y2>70 THEN 10180
000068                  10150 IF Y2<70 THEN 10200
000072                  10160 PRINT TAB(70);"*"
000079                  10170 GOTO 10210
000081                  10180 PRINT TAB(70);"|";TAB(Y2);"*"
000094                  10190 GOTO 10210
000096                  10200 PRINT TAB(Y2);"*";TAB(70);"|"
000109                  10210 NEXT X
000111                  10220 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   112 INSTRUCTIONS GENERATED,    35 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                       SIN(X)
 0            70                                                        *
 0.099999     73.993331                                                 |  *
 0.199999     77.946762                                                 |      *
 0.299999     81.8208                                                   |          *
 0.399999     85.576721                                                 |              *
 0.499999     89.177001                                                 |                  *
 0.599999     92.585678                                                 |                      *
 0.699999     95.768692                                                 |                          *
 0.799999     98.694229                                                 |                             *
 0.899999     101.333068                                                |                                *
 0.999999     103.658828                                                |                                   *
 1.099999     105.648269                                                |                                      *
 1.199998     107.281539                                                |                                         *
 1.299998     108.542297                                                |                                          *
 1.399997     109.417968                                                |                                            *
 1.499997     109.89978                                                 |                                            *
```

```
 1.599996      109.98294                                              |                                      *
 1.699995      109.66661                                              |                                      *
 1.799995      108.953933                                             |                                     *
 1.899994      107.852066                                             |                                    *
 1.999994      106.371978                                             |                                   *
 2.099993      104.528488                                             |                                 *
 2.199993      102.340011                                             |                               *
 2.299992      99.828399                                              |                            *
 2.399991      97.018753                                              |                          *
 2.499991      93.939147                                              |                      *
 2.59999       90.620361                                              |                   *
 2.69999       87.095535                                              |                *
 2.799989      83.399902                                              |            *
 2.899989      79.570388                                              |        *
 2.999988      75.645248                                              |    *
 3.099987      71.663696                                              |*
 3.199987      67.665527                                           *  |
 3.299986      63.690689                                       *      |
 3.399986      59.778884                                   *          |
 3.499985      55.969207                               *              |
 3.599985      52.299728                            *                 |
 3.699984      48.807083                        *                     |
 3.799983      45.526199                     *                        |
 3.899983      42.489837                  *                           |
 3.999982      39.728363               *                              |
 4.099982      37.269332             *                                |
 4.199981      35.137329           *                                  |
 4.299981      33.353668         *                                    |
 4.39998       31.936157       *                                      |
 4.499979      30.898971      *                                       |
 4.599979      30.252456      *                                       |
 4.699978      30.003082      *                                       |
 4.799978      30.15335       *                                       |
 4.899977      30.701736      *                                       |
 4.999977      31.642776       *                                      |
 5.099976      32.967071        *                                     |
 5.199975      34.661376          *                                   |
 5.299975      36.70877             *                                 |
 5.399974      39.08879                *                              |
 5.499974      41.777664                 *                            |
 5.599973      44.748519                    *                         |
 5.699973      47.971694                       *                      |
 5.799972      51.414947                           *                  |
 5.899971      55.043884                               *              |
 5.999971      58.82228                                   *           |
 6.09997       62.712341                                      *       |
 6.19997       66.675231                                          *   |
BACK


**** PROGRAM EXECUTION COMPLETE -     2998 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                   *APPEND=TRIGPLOT
000001                   10 REM
000002                   20 REM   DEMO APPEND - PLOT COS CURVE
000003                   30 REM
000004                   40 DEF FNX(X)=COS(X)
000012                   50 LET T$="COS(X)"
000015                   60 GOSUB 10000
000017                   180 END
000019                   *REM APPENDED CODE
000019                   10000 REM -----------------------------------------------------------
000020                   10010 REM
000021                   10020 REM   SUBPROGRAM PLOT A TRIG FUNCTION USING CODE FROM A LIBRARY
000022                   10030 REM
000023                   10040 REM   TO USE, DEF FNX(X) TO THE TRIG FUNCTION
000024                   10050 REM   AND SET T$ TO THE TITLE OF THE PLOT
000025                   10060 REM   AND THEN GOSUB TO THE FIRST LINE OF THIS CODE
000026                   10070 REM
000027                   10080 PRINT "X";TAB(68);T$
000036                   10090 REM
000037                   10100 FOR X=0 TO 6.28 STEP .1
000042                   10110 LET Y=FNX(X)
000047                   10120 LET Y2=Y*40+70
000056                   10130 PRINT X,Y2;
000061                   10140 IF Y2>70 THEN 10180
000065                   10150 IF Y2<70 THEN 10200
000069                   10160 PRINT TAB(70);"*"
000076                   10170 GOTO 10210
000078                   10180 PRINT TAB(70);"|";TAB(Y2);"*"
000091                   10190 GOTO 10210
000093                   10200 PRINT TAB(Y2);"*";TAB(70);"|"
000106                   10210 NEXT X
000108                   10220 RETURN

**** END OF COMPILATION **** NO ERRORS FOUND
****   109 INSTRUCTIONS GENERATED,    34 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                   COS(X)
 0             110                                                    |                                       *
 0.099999      109.800155                                             |                                      *
 0.199999      109.202651                                             |                                      *
 0.299999      108.213455                                             |                                     *
 0.399999      106.842437                                             |                                   *
 0.499999      105.103302                                             |                                  *
 0.599999      103.013427                                             |                                *
 0.699999      100.593688                                             |                             *
 0.799999      97.86827                                               |                          *
 0.899999      94.864395                                              |                       *
 0.999999      91.612091                                              |                    *
 1.099999      88.143859                                              |                 *
 1.199998      84.494338                                              |             *
 1.299998      80.700012                                              |         *
 1.399997      76.798767                                              |     *
 1.499997      72.829589                                              | *
 1.599996      68.832153                                            * |
```

```
1.699995      64.846374                                                *|
1.799995      60.912094                                              *  |
1.899994      57.068603                                            *    |
1.999994      53.354339                                          *      |
2.099993      49.806381                                        *        |
2.199993      46.460189                                      *          |
2.299992      43.349182                                    *            |
2.399991      40.50447                                   *              |
2.499991      37.954467                                *                 |
2.59999       35.724639                              *                   |
2.69999       33.83728                             *                     |
2.799989      32.311248                          *                       |
2.899989      31.161788                        *                         |
2.999988      30.400375                      *                           |
3.099987      30.034622                      *                           |
3.199987      30.068191                      *                           |
3.299986      30.500732                      *                           |
3.399986      31.327941                        *                         |
3.499985      32.541534                          *                       |
3.599985      34.129409                            *                     |
3.699984      36.075683                              *                   |
3.799983      38.3609                                  *                 |
3.899983      40.962265                                  *               |
3.999982      43.853744                                    *             |
4.099982      47.006469                                      *           |
4.199981      50.388946                                        *         |
4.299981      53.967346                                          *       |
4.39998       57.705932                                            *     |
4.499979      61.567382                                              *   |
4.599979      65.513076                                                *  |
4.699978      69.503601                                                *| |
4.799978      73.499084                                                |  *
4.899977      77.459609                                                |     *
4.999977      81.345596                                                |        *
5.099976      85.118225                                                |           *
5.199975      88.739807                                                |              *
5.299975      92.174148                                                |                 *
5.399974      95.386932                                                |                    *
5.499974      98.346054                                                |                       *
5.599973      101.021957                                               |                          *
5.699973      103.387908                                               |                             *
5.799972      105.420257                                               |                                *
5.899971      107.098709                                               |                                   *
5.999971      108.406478                                               |                                     *
6.09997       109.33052                                                |                                       *
6.19997       109.861572                                               |                                       *


**** PROGRAM EXECUTION COMPLETE -     2999 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *RENUM
000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 PRINT
000016                  60 PRINT "DONE"
000019                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    20 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  *RENUM
000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 PRINT
000016                  60 PRINT "DONE"
000019                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    20 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1            1            2            3            4            5            6            7            8
 9            10
DONE


**** PROGRAM EXECUTION COMPLETE -       65 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *RENUM100
000001                  10 PRINT 1,
000004                  20 FOR I=10 TO 1 STEP -1
000012                  30 PRINT I,
000015                  40 NEXT I
000017                  50 PRINT
000019                  60 PRINT "DONE"
000022                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  *RENUM100
000001                  100 PRINT 1,
000004                  110 FOR I=10 TO 1 STEP -1
000012                  120 PRINT I,
000015                  130 NEXT I
000017                  140 PRINT
000019                  150 PRINT "DONE"
000022                  160 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1             10            9             8             7             6             5             4             3
 2             1
DONE


**** PROGRAM EXECUTION COMPLETE -       68 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                    1 REM  DEMO FOR LOOPS NOW IN DO WHILE RATHER THAN DO UNTIL.
000002                    10 PRINT 1,
000005                    20 FOR I=10 TO 1
000010                    30 PRINT I,
000013                    40 NEXT I
000015                    50 PRINT
000017                    60 PRINT "DONE"
000020                    70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    21 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1
DONE

**** PROGRAM EXECUTION COMPLETE -       16 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 PRINT 1,
000004                  20 FOR I=1 TO 10
000009                  30 PRINT I,
000012                  40 NEXT I
000014                  50 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    15 INSTRUCTIONS GENERATED,    15 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1            1            2            3            4            5            6            7            8
 9            10

**** PROGRAM EXECUTION COMPLETE -       60 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  00005 PRINT 2,3,
000006                  00010 FOR I=5 TO 1000 STEP 2
000011                  00030   FOR J=3 TO SQR(I) STEP 2
000019                  00040     IF I/J=INT(I/J) THEN 70
000031                  00050   NEXT J
000033                  00060   PRINT I,
000036                  00070 NEXT I
000038                  00080 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    39 INSTRUCTIONS GENERATED,    21 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 2            3            5            7            9            11           13           15           17
 19           21           23           25           27           29           31           33           35
 37           39           41           43           45           47           49           51           53

**** PROGRAM EXECUTION TERMINATED IN LINE    40 ****
**** PROGRAM ABORTED AFTER EXECUTING           5000 INSTRUCTIONS ****
```

```
++BASIC

OFFSET

000001                  00005 PRINT -2,
000007                  00010 FOR I=3 TO 30 STEP 2
000012                  00015   PRINT
000014                  00016   PRINT SQR(I),
000020                  00030   FOR J=3 TO SQR(I) STEP 2
000028                  00035     PRINT J,
000031                  00040     IF I/J=INT(I/J) THEN 70
000043                  00050   NEXT J
000045                  00060   PRINT -I,
000051                  00070 NEXT I
000053                  00080 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    54 INSTRUCTIONS GENERATED,    21 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

-2
 1.73205      -3
 2.236067      3            5           -5
 2.64575       3            5            7           -7
 3             3            5            7            9          -9
 3.316624      3            5            7            9           11         -11
 3.605551      3            5            7            9           11          13          -13
 3.872982      3            5            7            9           11          13           15         -15
 4.123106      3            5            7            9           11          13           15          17
-17
 4.358899      3            5            7            9           11          13           15          17
 19          -19
 4.582575      3            5            7            9           11          13           15          17
 19           21          -21
 4.795831      3            5            7            9           11          13           15          17
 19           21           23          -23
 5             3            5            7            9           11          13           15          17
 19           21           23           25          -25
 5.196152      3            5            7            9           11          13           15          17
 19           21           23           25           27          -27
 5.385165      3            5            7            9           11          13           15          17
 19           21           23           25           27           29         -29

**** PROGRAM EXECUTION COMPLETE -     2117 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  *ICODE
000001                  *TABLE
000001                  *DUMP
000001                  10 REM SUBSCRIPT BOUNDS TEST
000001         10  SLN              1
000002                  20 DIM STR(14)
000002         20  SLN              1
000003                  30 LET STR(15)=-1
000003         30  SLN              1
000004             LDA              0
000005             SUB   1          0
000006             STA   TMP00      0
000007             LDA   TMP00      0
000008             LS1   1          0
000009             LS2   15         0
000010             DSL   STR        0
000011             STA   STR        0
000012             STA   TMP01      0
000013                  40 END
000013         40  SLN              1
000014             END              4

OFFSET  SYMBOL         TYPE          OCCURS     VALUE
     1  RESULTS        VAR            0    0     0.00000E+00
     2  SQR            FUNCTION       0    0     0.00000E+00
     3  ABS            FUNCTION       0    0     0.00000E+00
     4  TAB            FUNCTION       0    0     0.00000E+00
     5  INT            FUNCTION       0    0     0.00000E+00
     6  COS            FUNCTION       0    0     0.00000E+00
     7  SIN            FUNCTION       0    0     0.00000E+00
     8  TAN            FUNCTION       0    0     0.00000E+00
     9  RND            FUNCTION       0    0     0.00000E+00
    10  INR            FUNCTION       0    0     0.00000E+00
    11  EXP            FUNCTION       0    0     0.00000E+00
    12  LOG            FUNCTION       0    0     0.00000E+00
    13  STR            DIM            0   14     0.00000E+00
    14  STR      +     DIM            0    0     0.00000E+00
    15  STR      +     DIM            0    1     0.00000E+00
    16  STR      +     DIM            0    2     0.00000E+00
    17  STR      +     DIM            0    3     0.00000E+00
    18  STR      +     DIM            0    4     0.00000E+00
    19  STR      +     DIM            0    5     0.00000E+00
    20  STR      +     DIM            0    6     0.00000E+00
    21  STR      +     DIM            0    7     0.00000E+00
    22  STR      +     DIM            0    8     0.00000E+00
    23  STR      +     DIM            0    9     0.00000E+00
    24  STR      +     DIM            0   10     0.00000E+00
    25  STR      +     DIM            0   11     0.00000E+00
    26  STR      +     DIM            0   12     0.00000E+00
    27  STR      +     DIM            0   13     0.00000E+00
    28  STR      +     DIM            0   14     0.00000E+00
    29                 CONST          0    0     0.00000E+00
    30  1              CONST          0    0     1.00000E+00
    31  TMP00          VAR            0    0     0.00000E+00
```

```
    32  15              CONST          0    0     1.50000E+01
    33  TMP01           VAR            0    0     0.00000E+00
END OF SYMBOL TABLE

DEF NAME                 OFFSET
END OF DEF NAME TABLE

DATA STACK ITEM          VALUE
END OF DATA STACK

OFFSET       LINE  OP   OBJECT      FORMAT
END OF PCODE TABLE

**** END OF COMPILATION **** NO ERRORS FOUND
****    14 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****



**** PROGRAM EXECUTION TERMINATED IN LINE    30 @ OFFSET    10 ****
**** SUBSCRIPT OUT OF RANGE FOR STR

OFFSET  SYMBOL          TYPE           OCCURS     VALUE
     1  RESULTS         VAR            0    0     0.00000E+00
     2  SQR             FUNCTION       0    0     0.00000E+00
     3  ABS             FUNCTION       0    0     0.00000E+00
     4  TAB             FUNCTION       0    0     0.00000E+00
     5  INT             FUNCTION       0    0     0.00000E+00
     6  COS             FUNCTION       0    0     0.00000E+00
     7  SIN             FUNCTION       0    0     0.00000E+00
     8  TAN             FUNCTION       0    0     0.00000E+00
     9  RND             FUNCTION       0    0     0.00000E+00
    10  INR             FUNCTION       0    0     0.00000E+00
    11  EXP             FUNCTION       0    0     0.00000E+00
    12  LOG             FUNCTION       0    0     0.00000E+00
    13  STR             DIM            0   14     0.00000E+00
    14  STR       +     DIM            0    0     0.00000E+00
    15  STR       +     DIM            0    1     0.00000E+00
    16  STR       +     DIM            0    2     0.00000E+00
    17  STR       +     DIM            0    3     0.00000E+00
    18  STR       +     DIM            0    4     0.00000E+00
    19  STR       +     DIM            0    5     0.00000E+00
    20  STR       +     DIM            0    6     0.00000E+00
    21  STR       +     DIM            0    7     0.00000E+00
    22  STR       +     DIM            0    8     0.00000E+00
    23  STR       +     DIM            0    9     0.00000E+00
    24  STR       +     DIM            0   10     0.00000E+00
    25  STR       +     DIM            0   11     0.00000E+00
    26  STR       +     DIM            0   12     0.00000E+00
    27  STR       +     DIM            0   13     0.00000E+00
    28  STR       +     DIM            0   14     0.00000E+00
    29                  CONST          0    0     0.00000E+00
    30  1               CONST          0    0     1.00000E+00
    31  TMP00           VAR            0    0    -1.00000E+00
    32  15              CONST          0    0     1.50000E+01
    33  TMP01           VAR            0    0     0.00000E+00
END OF SYMBOL TABLE
```

```
++BASIC  DEMO STRING COMPARES

OFFSET

000001                    1 REM PRINT USING "A",A
000002                    10 REM
000003                    20 DATA "X","Y", "X ","Y", "X","Y ", "AB","A", "Z","Z", "*","*"
000004                    30 READ X$,Y$
000007                    40 IF X$="*" THEN 130
000011                    41 IF X$=Y$ THEN 100
000015                    50 IF X$<Y$ THEN 110
000019                    60 PRINT X$;">";Y$
000026                    70 GO TO 30
000028                    100 PRINT X$;"=";Y$
000035                    101 GO TO 30
000037                    110 PRINT X$;"<";Y$
000044                    120 GO TO 30
000046                    130 STOP

**** END OF COMPILATION **** NO ERRORS FOUND
****    47 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED    12 DATA ITEMS DEFINED ****

X<Y
X <Y
X<Y
AB>A
Z=Z

**** PROGRAM EXECUTION TERMINATED IN LINE   130 ****
**** STOP STATEMENT EXECUTED ****
```

```
++BASIC DEMO PROGRAM 1

OFFSET

000001                  10 REM
000002                  20 REM  DEMO PROGRAM FOR BASIC/360
000003                  21 REM    DEMOS FOR..NEXT, PRINT, AND FUNCTIONS
000004                  30 REM
000005                  31 PRINT "I","I*I","SQR(I)","ABS(I)"
000014                  32 FOR I=1 TO 4
000019                  34 PRINT "=====",
000022                  35 NEXT I
000024                  36 PRINT
000026                  40 FOR I=1 TO 10
000031                  50 PRINT I,I*I,SQR(I),ABS(I)
000049                  60 NEXT I
000051                  70 PRINT
000053                  100 REM
000054                  101 PRINT
000056                  102 PRINT "J","K","INT(K)","INR(K)"
000065                  110 LET J=1
000068                  115 LET K=SQR(J)
000073                  120 PRINT J,K,INT(K),INR(K)
000088                  130 LET J=J+1
000094                  140 IF J<=10 THEN 115
000098                  150 REM
000099                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   100 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

I	I*I	SQR(I)	ABS(I)
1	1	1	1
2	4	1.414213	2
3	9	1.73205	3
4	16	2	4
5	25	2.236067	5
6	36	2.449489	6
7	49	2.64575	7
8	64	2.828427	8
9	81	3	9
10	100	3.162277	10

J	K	INT(K)	INR(K)
1	1	1	1
2	1.414213	1	1
3	1.73205	1	2
4	2	2	2
5	2.236067	2	2
6	2.449489	2	2
7	2.64575	2	3
8	2.828427	2	3
9	3	3	3
10	3.162277	3	3

```
**** PROGRAM EXECUTION COMPLETE -      565 INSTRUCTIONS EXECUTED ****

++BASIC

OFFSET

000001                    10 REM
000002                    11 REM   DEMO FOR RND FUNCTION
000003                    12 REM
000004                    13 RANDOMIZE
000006                    20 PRINT "RND FUNCTION TEST"
000009                    30 FOR I=1 TO 20
000014                    40 PRINT RND(0)
000020                    50 NEXT I
000022                    60 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

RND FUNCTION TEST
 0.090822
 0.404577
 0.610064
 0.019188
 0.624552
 0.574617
 0.826725
 0.788801
 0.292278
 0.654454
 0.296218
 0.887222
 0.657363
 0.959182
 0.838819
 0.400278
 0.852294
 0.511258
 0.396905
 0.780102


**** PROGRAM EXECUTION COMPLETE -      175 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                   10 REM
000002                   11 REM   DEMO FOR USER SETTING RND SEED
000003                   12 REM
000004                   20 PRINT "RND FUNCTION SEED TEST"
000007                   22 FOR J=1 TO 3
000012                   25 PRINT "SEED SET",RND(1234)
000020                   30 FOR I=1 TO 20
000025                   40 PRINT RND(0);
000031                   50 NEXT I
000033                   51 PRINT
000035                   55 NEXT J
000037                   60 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    38 INSTRUCTIONS GENERATED,    22 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

RND FUNCTION SEED TEST
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903
SEED SET       0.03769
 0.22614 0.017624 0.070481 0.264269 0.951285 0.329291 0.414173 0.52142 0.400962 0.71299 0.669274 0.598736 0.568943
 0.025038 0.029737 0.953072 0.450802 0.127156 0.705718 0.089903

**** PROGRAM EXECUTION COMPLETE -      544 INSTRUCTIONS EXECUTED ****
```

```
++BASIC PROGRAM 2

OFFSET

000001                  10 REM
000002                  20 REM  VALUDATION PROGRAM FOR BASIC/360
000003                  21 REM    ADVANCED PRINTING
000004                  30 REM
000005                  34 PRINT
000007                  35 PRINT "I","I*I","SQR(I)","ABS(I)"
000016                  36 FOR I=1 TO 4
000021                  37 PRINT "======",
000024                  38 NEXT I
000026                  39 PRINT
000028                  40 FOR I=1 TO 10
000033                  50 PRINT I,I*I,SQR(I),ABS(I)
000051                  60 NEXT I
000053                  70 PRINT
000055                  100 REM
000056                  104 PRINT
000058                  105 PRINT "J","J*J","SQR(J)"
000065                  106 FOR I=1 TO 3
000070                  107 PRINT "======",
000073                  108 NEXT I
000075                  109 PRINT
000077                  110 LET J=1
000080                  120 PRINT TAB(J),J,J*J,SQR(J)
000097                  130 LET J=J+1
000103                  140 IF J<=10 THEN 120
000107                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   108 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****


I             I*I           SQR(I)        ABS(I)
======        ======        ======        ======
 1             1             1             1
 2             4             1.414213      2
 3             9             1.73205       3
 4             16            2             4
 5             25            2.236067      5
 6             36            2.449489      6
 7             49            2.64575       7
 8             64            2.828427      8
 9             81            3             9
 10            100           3.162277      10


J             J*J           SQR(J)
======        ======        ======
  1             1             1
   2             4             1.414213
    3             9             1.73205
     4             16            2
      5             25            2.236067
       6             36            2.449489
        7             49            2.64575
```

```
         8     64            2.828427
          9    81            3
           10  100           3.162277


**** PROGRAM EXECUTION COMPLETE -      556 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM  VALIDATE IF, GOTO, READ AND DATA STATEMENTS
000003                  30 REM
000004                  80 PRINT "A","B"
000009                  100 READ A,B
000012                  110 IF A=999 THEN 900
000016                  120 IF A=B THEN 200
000020                  130 IF A<B THEN 220
000024                  140 IF A>B THEN 240
000028                  150 IF A<=B THEN 260
000032                  160 IF A>=B THEN 280
000036                  170 IF A<>B THEN 300
000040                  180 GOTO 100
000042                  200 PRINT A,B,"A=B"
000049                  210 GO TO 130
000051                  220 PRINT A,B,"A<B"
000058                  230 GO TO 140
000060                  240 PRINT A,B,"A>B"
000067                  250 GOTO 150
000069                  260 PRINT A,B,"A<=B"
000076                  270 GOTO 160
000078                  280 PRINT A,B,"A>=B"
000085                  290 GOTO 170
000087                  300 PRINT A,B,"A<>B"
000094                  310 GOTO 180
000096                  500 DATA 1,1,1,2,2,1
000097                  510 DATA 100,25,32,-5
000098                  520 DATA 999,999
000099                  900 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   100 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED    12 DATA ITEMS DEFINED ****

A             B
 1             1            A=B
 1             1            A<=B
 1             1            A>=B
 1             2            A<B
 1             2            A<=B
 1             2            A<>B
 2             1            A>B
 2             1            A>=B
 2             1            A<>B
 100           25           A>B
 100           25           A>=B
 100           25           A<>B
 32           -5            A>B
 32           -5            A>=B
 32           -5            A<>B


**** PROGRAM EXECUTION COMPLETE -      317 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM  TEST PRINT NUMERIC FORMATTING
000003                  30 REM
000004                  40 READ A,B,C
000008                  50 IF A=9999 THEN 9000
000012                  60 PRINT A,B,C
000019                  61 PRINT A-1,B-1,C-1
000035                  62 PRINT A+1,B+1,C+1
000051                  70 GOTO 40
000053                  100 DATA 1,2,3
000054                  110 DATA 1.23,3,432.3
000055                  120 DATA 1.0E+5,1.0E+6,1.0E+7
000056                  130 DATA -1.0E+5,-1.0E+6,-1.0E+7
000057                  140 DATA 1.0E-5,1.0E-6,1.0E-7
000058                  150 DATA -1.0E-5,-1.0E-6,-1.0E-7
000059                  160 DATA 9999,9999,9999
000060                  9000 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    61 INSTRUCTIONS GENERATED,    20 SYMBOLS DEFINED    21 DATA ITEMS DEFINED ****

 1            2            3
 0            1            2
 2            3            4
 1.229999     3            432.299804
 0.229999     2            431.299804
 2.229999     4            433.299804
 100000       1.00000E+06  1.00000E+07
 99999        999999       9.99999E+06
 100001       1.00000E+06  1.00000E+07
-100000      -1.00000E+06 -1.00000E+07
-100001      -1.00000E+06 -1.00000E+07
-99999       -999999      -9.99999E+06
 0.000009     9.99999E-07  9.99999E-08
-0.99999     -0.999999    -0.999999
 1.000009     1            1
-0.000009    -9.99999E-07 -9.99999E-08
-1.000009    -1           -1
 0.99999      0.999999     0.999999


**** PROGRAM EXECUTION COMPLETE -      307 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM   PLOT A SINE CURVE
000003                  30 REM
000004                  40 PRINT "X";TAB(68);"SIN(X)"
000013                  50 REM
000014                  60 FOR X=0 TO 6.28 STEP .1
000019                  70 LET Y=SIN(X)
000024                  80 LET Y2=Y*40+70
000033                  90 PRINT X,Y2;
000038                  100 IF Y2>70 THEN 140
000042                  110 IF Y2<70 THEN 160
000046                  120 PRINT TAB(70);"*"
000053                  130 GOTO 170
000055                  140 PRINT TAB(70);"|";TAB(Y2);"*"
000068                  150 GOTO 170
000070                  160 PRINT TAB(Y2);"*";TAB(70);"|"
000083                  170 NEXT X
000085                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    86 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X                                                                SIN(X)
 0            70                                                  *
0.099999      73.993331                                         |  *
0.199999      77.946762                                         |     *
0.299999      81.8208                                           |        *
0.399999      85.576721                                         |           *
0.499999      89.177001                                         |              *
0.599999      92.585678                                         |                 *
0.699999      95.768692                                         |                    *
0.799999      98.694229                                         |                       *
0.899999      101.333068                                        |                          *
0.999999      103.658828                                        |                             *
1.099999      105.648269                                        |                                *
1.199998      107.281539                                        |                                   *
1.299998      108.542297                                        |                                     *
1.399997      109.417968                                        |                                      *
1.499997      109.89978                                         |                                      *
1.599996      109.98294                                         |                                      *
1.699995      109.66661                                         |                                      *
1.799995      108.953933                                        |                                     *
1.899994      107.852066                                        |                                   *
1.999994      106.371978                                        |                                 *
2.099993      104.528488                                        |                              *
2.199993      102.340011                                        |                           *
2.299992      99.828399                                         |                        *
2.399991      97.018753                                         |                     *
2.499991      93.939147                                         |                  *
2.59999       90.620361                                         |               *
2.69999       87.095535                                         |            *
2.799989      83.399902                                         |         *
2.899989      79.570388                                         |      *
2.999988      75.645248                                         |   *
```

```
3.099987        71.663696                                                  |*
3.199987        67.665527                                                *  |
3.299986        63.690689                                             *     |
3.399986        59.778884                                          *        |
3.499985        55.969207                                       *           |
3.599985        52.299728                                    *              |
3.699984        48.807083                                 *                 |
3.799983        45.526199                              *                    |
3.899983        42.489837                           *                       |
3.999982        39.728363                        *                          |
4.099982        37.269332                     *                             |
4.199981        35.137329                  *                                |
4.299981        33.353668               *                                   |
4.39998         31.936157            *                                      |
4.499979        30.898971         *                                         |
4.599979        30.252456         *                                         |
4.699978        30.003082         *                                         |
4.799978        30.15335          *                                         |
4.899977        30.701736         *                                         |
4.999977        31.642776            *                                      |
5.099976        32.967071               *                                   |
5.199975        34.661376                  *                                |
5.299975        36.70877                      *                            |
5.399974        39.08879                         *                         |
5.499974        41.777664                           *                      |
5.599973        44.748519                              *                   |
5.699973        47.971694                                 *                |
5.799972        51.414947                                    *             |
5.899971        55.043884                                       *          |
5.999971        58.82228                                           *       |
6.09997         62.712341                                             *     |
6.19997         66.675231                                                *  |

**** PROGRAM EXECUTION COMPLETE -     2600 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                   10 REM
000002                   20 REM   PLOT A COSINE CURVE
000003                   30 REM
000004                   40 PRINT "X";TAB(68);"COS(X)"
000013                   50 REM
000014                   60 FOR X=0 TO 6.28 STEP .1
000019                   70 LET Y2=COS(X)*40+70
000031                   80 PRINT X,Y2;
000036                   90 IF Y2>70 THEN 130
000040                   100 IF Y2<70 THEN 150
000044                   110 PRINT TAB(70);"*"
000051                   120 GOTO 160
000053                   130 PRINT TAB(70);"|";TAB(Y2);"*"
000066                   140 GOTO 160
000068                   150 PRINT TAB(Y2);"*";TAB(70);"|"
000081                   160 NEXT X
000083                   170 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    84 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
X                                                                   COS(X)
 0             110                                                    |                                       *
 0.099999      109.800155                                             |                                      *
 0.199999      109.202651                                             |                                      *
 0.299999      108.213455                                             |                                     *
 0.399999      106.842437                                             |                                   *
 0.499999      105.103302                                             |                                  *
 0.599999      103.013427                                             |                                *
 0.699999      100.593688                                             |                             *
 0.799999      97.86827                                               |                          *
 0.899999      94.864395                                              |                       *
 0.999999      91.612091                                              |                    *
 1.099999      88.143859                                              |                 *
 1.199998      84.494338                                              |             *
 1.299998      80.700012                                              |         *
 1.399997      76.798767                                              |     *
 1.499997      72.829589                                              | *
 1.599996      68.832153                                            * |
 1.699995      64.846374                                        *     |
 1.799995      60.912094                                    *         |
 1.899994      57.068603                                 *            |
 1.999994      53.354339                             *                |
 2.099993      49.806381                         *                    |
 2.199993      46.460189                      *                       |
 2.299992      43.349182                   *                          |
 2.399991      40.50447                 *                             |
 2.499991      37.954467             *                                |
 2.59999       35.724639           *                                  |
 2.69999       33.83728          *                                    |
 2.799989      32.311248        *                                     |
 2.899989      31.161788       *                                      |
 2.999988      30.400375      *                                       |
 3.099987      30.034622      *                                       |
```

```
 3.199987      30.068191      *                                       |
 3.299986      30.500732      *                                       |
 3.399986      30.327941       *                                      |
 3.499985      32.541534        *                                     |
 3.599985      34.129409          *                                   |
 3.699984      36.075683            *                                 |
 3.799983      38.3609                *                               |
 3.899983      40.962265                *                             |
 3.999982      43.853744                   *                          |
 4.099982      47.006469                       *                      |
 4.199981      50.388946                          *                   |
 4.299981      53.967346                             *                |
 4.39998       57.705932                                 *            |
 4.499979      61.567382                                     *        |
 4.599979      65.513076                                         *    |
 4.699978      69.503601                                             *|
 4.799978      73.499084                                              |  *
 4.899977      77.459609                                              |      *
 4.999977      81.345596                                              |          *
 5.099976      85.118225                                              |              *
 5.199975      88.739807                                              |                 *
 5.299975      92.174148                                              |                     *
 5.399974      95.386932                                              |                        *
 5.499974      98.346054                                              |                           *
 5.599973      101.021957                                             |                              *
 5.699973      103.387908                                             |                                *
 5.799972      105.420257                                             |                                  *
 5.899971      107.098709                                             |                                    *
 5.999971      108.406478                                             |                                     *
 6.09997       109.33052                                              |                                      *
 6.19997       109.861572                                             |                                      *

**** PROGRAM EXECUTION COMPLETE -     2478 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  1 REM
000002                  2 REM  DEMONSTRATE DIM AND SUBSCRIPTED VARIABLES
000003                  3 REM
000004                  10 DIM I(10)
000005                  20 DIM J(10),K(10)
000006                  100 FOR X=1 TO 10
000011                  110 LET I(X)=X
000018                  120 LET J(X)=X*X
000028                  130 LET K(X)=SQR(X)
000037                  140 NEXT X
000039                  150 FOR X=10 TO 1 STEP -1
000047                  160 PRINT I(X),J(X),K(X)
000069                  170 NEXT X
000071                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    72 INSTRUCTIONS GENERATED,    55 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 10            100           3.162277
 9             81            3
 8             64            2.828427
 7             49            2.64575
 6             36            2.449489
 5             25            2.236067
 4             16            2
 3             9             1.73205
 2             4             1.414213
 1             1             1


**** PROGRAM EXECUTION COMPLETE -      540 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  1 REM
000002                  2 REM  DEMONSTRATE DIM AND SUBSCRIPTED VARIABLES
000003                  3 REM
000004                  10 DIM I(10)
000005                  20 DIM J(10),K(10)
000006                  100 FOR X=1 TO 10 STEP 2
000011                  110 LET I(X)=X
000018                  120 LET J(X)=X*X
000028                  130 LET K(X)=SQR(X)
000037                  140 NEXT X
000039                  141 FOR X=2 TO 10 STEP 2
000044                  142 LET I(X)=X
000051                  143 LET J(X)=X*X
000061                  144 LET K(X)=SQR(X)
000070                  145 NEXT X
000072                  150 FOR X=10 TO 1 STEP -1
000080                  160 PRINT I(X),J(X),K(X)
000102                  170 NEXT X
000104                  180 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   105 INSTRUCTIONS GENERATED,    56 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 10            100           3.162277
 9             81            3
 8             64            2.828427
 7             49            2.64575
 6             36            2.449489
 5             25            2.236067
 4             16            2
 3             9             1.73205
 2             4             1.414213
 1             1             1


**** PROGRAM EXECUTION COMPLETE -      545 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST LINE NUMBER SEQUENCE CHECK
000002                  20 REM DIM A$(10)
000003                  30 LET X$="HELLO"
000006                  40 LET X=10
000009                  50 PRINT "HELLO WORLD"
000012                  60 PRINT X
000015                  70 LET X=X$
000018                  80 END
000020                  10 REM TEST RND
*****                   ^
          LINE NUMBER OUT OF SEQUENCE
000021                  20 PRINT "RND FUNCTION TEST"
000024                  30 FOR I=1 TO 20
000029                  40 PRINT RND(0)
000035                  50 NEXT I
000037                  60 END

**** END OF COMPILATION ****     1 ERRORS FOUND
****    38 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS VS NUMERIC VARIABLES
000002                  20 REM
000003                  30 LET X$="PASSED"
000006                  40 LET X=10
000009                  50 PRINT "THE NUMBER 10 AND THE WORD PASSED SHOULD PRINT"
000012                  60 PRINT X
000015                  70 LET Y$=X$
000018                  80 PRINT Y$
000021                  90 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    22 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THE NUMBER 10 AND THE WORD PASSED SHOULD PRINT
 10
PASSED


**** PROGRAM EXECUTION COMPLETE -       22 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS VS NUMERICS
000002                  20 PRINT "SHOULD ABEND STORING A STRING TO A NUMBER"
000005                  30 LET X$="HELLO"
000008                  40 LET X=10
000011                  50 PRINT "HELLO WORLD"
000014                  60 PRINT X,X$
000019                  90 LET X=X$
000022                  100 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    23 INSTRUCTIONS GENERATED,    18 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

SHOULD ABEND STORING A STRING TO A NUMBER
HELLO WORLD
 10           HELLO


**** PROGRAM EXECUTION TERMINATED IN LINE    90 ****
**** STRING CANNOT BE STORED IN A NUMERIC VARIABLE ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST STRINGS IN DATA STATEMENTS
000002                  20 DIM A$(10)
000003                  30 DATA 1,2,"HELLO FROM DATA 2ND LINE PRINTED"
000004                  40 READ X,Y
000007                  50 PRINT "HELLO FROM PRINT 1ST LINE PRINTED"
000010                  60 PRINT X,Y
000015                  70 READ X$
000017                  80 PRINT X$
000020                  90 LET A$(1)="THIRD LINE PRINTED"
000027                  100 PRINT A$(1)
000035                  110 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    36 INSTRUCTIONS GENERATED,    32 SYMBOLS DEFINED     3 DATA ITEMS DEFINED ****

HELLO FROM PRINT 1ST LINE PRINTED
 1            2
HELLO FROM DATA 2ND LINE PRINTED
THIRD LINE PRINTED


**** PROGRAM EXECUTION COMPLETE -       36 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM
000002                  20 REM   DEMO FOR LOOPING PROGRAM
000003                  30 REM
000004                  31 PRINT "THIS PROGRAM DEMOS RUN AWAY ACTION"
000007                  40 LET X=0
000010                  50 IF X>1000 THEN 100
000014                  60 LET X=X+1
000020                  70 GOTO 50
000022                  100 PRINT "DONE"
000025                  110 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    26 INSTRUCTIONS GENERATED,    19 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THIS PROGRAM DEMOS RUN AWAY ACTION


**** PROGRAM EXECUTION TERMINATED IN LINE    70 ****
**** PROGRAM ABORTED AFTER EXECUTING          5000 INSTRUCTIONS ****
```

```
++BASIC

OFFSET

000001                    10 REM
000002                    20 REM   DEMO FOR LOOPING PROGRAM
000003                    30 REM
000004                    31 PRINT "THIS PROGRAM DEMOS FALL OFF END (NO END STMT)"
000007                    40 LET X=0
000010                    50 IF X>100 THEN 100
000014                    60 LET X=X+1
000020                    70 GOTO 50
000022                    100 PRINT "DONE"

**** END OF COMPILATION **** NO ERRORS FOUND
****    24 INSTRUCTIONS GENERATED,    19 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

THIS PROGRAM DEMOS FALL OFF END (NO END STMT)
DONE


**** PROGRAM EXECUTION TERMINATED IN LINE   100 ****
**** PROGRAM RUN AWAY DETECTED ****
```

```
++BASIC

OFFSET

000001                  00110 REM A*X*X + B*X + C = 0
000002                  00111 REM 3*5*5 + 6*5 = 105
000003                  00115 LET C=-105
000009                  00122 FOR A=1 TO 4
000014                  00133   FOR B=5 TO 8
000019                  00142     IF (B*B)-(4*A*C)<0 THEN 177
000035                  00144     LET X1=(-B+SQR((B*B)-(4*A*C)))/(2*A)
000065                  00155     LET X2=(-B-SQR((B*B)-(4*A*C)))/(2*A)
000095                  00157     LET X3=((-B+SQR(B*B-4*A*C))/2/A
*****                                 ^
          UNBALANCED PARENS
000096                  00158     LET X4=(-B-SQR(B*B-4*A*C))/2/A
000126                  00166     PRINT A,B,X1,X2,X3,X4
000139                  00177   NEXT B
000141                  00188 NEXT A
000143                  00199 END

**** END OF COMPILATION ****     1 ERRORS FOUND
****   144 INSTRUCTIONS GENERATED,    36 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #1
000003                  30 REM
000004                  31 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  32 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  33 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  34 REM   USING.
000008                  50 REM
000009                  53 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                  54 LET U$="  --------      ----   -----    ---------"
000015                  55 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                  56 PRINT T$
000021                  57 PRINT U$
000024                  60 READ NAME$,HOURS,RATE
000028                  70 IF HOURS>0 THEN 100
000032                  75 PRINT
000034                  80 PRINT "END OF JOB"
000037                  90 END
000039                  100 LET NET=HOURS*RATE
000045                  101 PRINT "->";
000048                  109 PRINT USING P$,NAME$,HOURS,RATE,NET,
000061                  110 PRINT USING P$,NAME$,HOURS,RATE,NET,
000074                  111 IF HOURS <= 40 THEN 115
000078                  112 PRINT "OVERTIME"
000081                  113 GO TO 60
000083                  115 PRINT
000085                  120 GOTO 60
000087                  500 DATA "MOE HOWARD",41,7.25
000088                  510 DATA "LARRY FINE",32,7.25
000089                  520 DATA "CURLEY HOWARD",40,.02
000090                  530 DATA "THE BIG BOSS MAN",40,14
000091                  540 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #1
000003                  30 REM
000004                  40 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  50 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  60 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  70 REM   USING.
000008                  80 REM
000009                  90 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                 100 LET U$="  --------      ----   -----    ---------"
000015                 110 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                 120 PRINT T$
000021                 130 PRINT U$
000024                 140 READ NAME$,HOURS,RATE
000028                 150 IF HOURS>0 THEN 190
000032                 160 PRINT
000034                 170 PRINT "END OF JOB"
000037                 180 END
000039                 190 LET NET=HOURS*RATE
000045                 200 PRINT "->";
000048                 210 PRINT USING P$,NAME$,HOURS,RATE,NET,
000061                 220 PRINT USING P$,NAME$,HOURS,RATE,NET,
000074                 230 IF HOURS <= 40 THEN 260
000078                 240 PRINT "OVERTIME"
000081                 250 GO TO 140
000083                 260 PRINT
000085                 270 GOTO 140
000087                 280 DATA "MOE HOWARD",41,7.25
000088                 290 DATA "LARRY FINE",32,7.25
000089                 300 DATA "CURLEY HOWARD",40,.02
000090                 310 DATA "THE BIG BOSS MAN",40,14
000091                 320 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****

  EMPLOYEE     HOURS    RATE      NET PAY
  --------      ----   -----    ---------
->MOE HOWARD    41.0    7.25  $    297.25 MOE HOWARD    41.0    7.25  $    297.25   OVERTIME
->LARRY FINE    32.0    7.25  $    232.00 LARRY FINE    32.0    7.25  $    232.00
->CURLEY HOWAR  40.0    0.01  $      0.79 CURLEY HOWAR  40.0    0.01  $      0.79
->THE BIG BOSS  40.0   14.00  $    560.00 THE BIG BOSS  40.0   14.00  $    560.00

END OF JOB

**** PROGRAM EXECUTION COMPLETE -      235 INSTRUCTIONS EXECUTED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #2
000003                  30 REM
000004                  31 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  32 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  33 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  34 REM   USING.
000008                  50 REM
000009                  53 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                  54 LET U$="  --------      ----   -----    ---------"
000015                  55 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                  56 PRINT T$
000021                  57 PRINT U$
000024                  60 READ NAME$,HOURS,RATE
000028                  70 IF HOURS>0 THEN 100
000032                  75 PRINT
000034                  80 PRINT "END OF JOB"
000037                  90 END
000039                  100 LET NET=HOURS*RATE
000045                  101 PRINT "->";
000048                  109 PRINT USING P$,NAME$,HOURS,RATE,NET;
000061                  110 PRINT USING P$,NAME$,HOURS,RATE,NET;
000074                  111 IF HOURS <= 40 THEN 115
000078                  112 PRINT "OVERTIME"
000081                  113 GO TO 60
000083                  115 PRINT
000085                  120 GOTO 60
000087                  500 DATA "MOE HOWARD",41,7.25
000088                  510 DATA "LARRY FINE",32,7.25
000089                  520 DATA "CURLEY HOWARD",40,.02
000090                  530 DATA "THE BIG BOSS MAN",40,14
000091                  540 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****
```

```
++RENUM

OFFSET

000001                  10 REM
000002                  20 REM   DEMO PRINT USING #2
000003                  30 REM
000004                  40 REM   A LOT OF POSSIBLE COMBINATIONS OF PRINT AND PRINT USING
000005                  50 REM   ARE SHOWN IN THIS PROGRAM.  THE OUTPUT IS A JUMBLE OF
000006                  60 REM   STUFF TO DEMONSTRATE THE INTERACTIONS OF PRINT AND PRINT
000007                  70 REM   USING.
000008                  80 REM
000009                  90 LET T$="  EMPLOYEE     HOURS    RATE      NET PAY"
000012                 100 LET U$="  --------      ----    -----    ----------"
000015                 110 LET P$=  "&&&&&&&&&&&&  ##.#   ##.##  $ ##,###.##"
000018                 120 PRINT T$
000021                 130 PRINT U$
000024                 140 READ NAME$,HOURS,RATE
000028                 150 IF HOURS>0 THEN 190
000032                 160 PRINT
000034                 170 PRINT "END OF JOB"
000037                 180 END
000039                 190 LET NET=HOURS*RATE
000045                 200 PRINT "->";
000048                 210 PRINT USING P$,NAME$,HOURS,RATE,NET;
000061                 220 PRINT USING P$,NAME$,HOURS,RATE,NET;
000074                 230 IF HOURS <= 40 THEN 260
000078                 240 PRINT "OVERTIME"
000081                 250 GO TO 140
000083                 260 PRINT
000085                 270 GOTO 140
000087                 280 DATA "MOE HOWARD",41,7.25
000088                 290 DATA "LARRY FINE",32,7.25
000089                 300 DATA "CURLEY HOWARD",40,.02
000090                 310 DATA "THE BIG BOSS MAN",40,14
000091                 320 DATA "END",0,0

**** END OF COMPILATION **** NO ERRORS FOUND
****    91 INSTRUCTIONS GENERATED,    33 SYMBOLS DEFINED    15 DATA ITEMS DEFINED ****

  EMPLOYEE     HOURS    RATE      NET PAY
  --------      ----    -----    ----------
->MOE HOWARD    41.0     7.25  $    297.25MOE HOWARD    41.0     7.25  $    297.25OVERTIME
->LARRY FINE    32.0     7.25  $    232.00LARRY FINE    32.0     7.25  $    232.00
->CURLEY HOWAR  40.0     0.01  $      0.79CURLEY HOWAR  40.0     0.01  $      0.79
->THE BIG BOSS  40.0    14.00  $    560.00THE BIG BOSS  40.0    14.00  $    560.00

END OF JOB

**** PROGRAM EXECUTION COMPLETE -      235 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DEF FUNCTION TEST # 1

OFFSET

000001                  10 REM
000002                  11 LET Y=999
000005                  20 DEF FNX(Y)=Y*2
000014                  30 FOR I=1 TO 10
000019                  40 PRINT I,FNX(I)
000027                  50 NEXT I
000029                  60 PRINT "Y=";Y
000034                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    35 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1            2
 2            4
 3            6
 4            8
 5            10
 6            12
 7            14
 8            16
 9            18
 10           20
Y= 999

**** PROGRAM EXECUTION COMPLETE -      188 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DEF FUNCTION TEST # 2

OFFSET

000001                  10 REM
000002                  20 DIM X(10)
000003                  25 DEF FNX(Y)=X(Y)*2
000017                  30 FOR I=1 TO 10\LET X(I)=SQR(I)\NEXT I
000030                  35 FOR I=1 TO 10
000035                  40 PRINT I,X(I),FNX(I)
000050                  50 NEXT I
000052                  70 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    53 INSTRUCTIONS GENERATED,    34 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1             1             2
 2             0             0
 3             0             0
 4             0             0
 5             0             0
 6             0             0
 7             0             0
 8             0             0
 9             0             0
 10            0             0


**** PROGRAM EXECUTION COMPLETE -      314 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DEF FUNCTION TEST # 3

OFFSET

000001                  10 REM
000002                  20 DIM X(10),Z(10,2)
000003                  25 DEF FNX(Y)=Z(Y,1)*2
*****                      ^
          TWO SUBSCRIPTS NOT ALLOWED IN DEF
000008                  29 PRINT "X","Z"
000013                  30 FOR I=1 TO 10\LET X(I)=SQR(I)\LET Z(I,1)=X(I)
000026                  31 PRINT X(I),Z(I,1)\NEXT I
000039                  35 FOR I=1 TO 10
000044                  36 LET T=FNX(I)
000049                  40 PRINT I,X(I),FNX(I),T
000066                  50 NEXT I
000068                  70 END

**** END OF COMPILATION ****     1 ERRORS FOUND
****    69 INSTRUCTIONS GENERATED,    68 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 1

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-SIMPLE
000002                  20 DIM Z(10)
000003                  21 LET X=Z(1)
000011                  100 FOR I=1 TO 10
000016                  105 LET Z(I)=11-I
000026                  110 PRINT I,Z(I)
000036                  120 NEXT I
000038                  130 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    39 INSTRUCTIONS GENERATED,    31 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 1             10
 2             9
 3             8
 4             7
 5             6
 6             5
 7             4
 8             3
 9             2
 10            1


**** PROGRAM EXECUTION COMPLETE -      237 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 2

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-SIMPLE
000002                  20 DIM Z(10)
000003                  100 FOR I=1 TO 10
000008                  105 LET Z(I)=11-I
000018                  120 NEXT I
000020                  130 PRINT "I","Z(I)"
000025                  200 FOR I=1 TO 10
000030                  210 PRINT I,Z(I)
000040                  220 NEXT I
000042                  230 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    43 INSTRUCTIONS GENERATED,    32 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

I             Z(I)
 1             10
 2             9
 3             8
 4             7
 5             6
 6             5
 7             4
 8             3
 9             2
 10            1

**** PROGRAM EXECUTION COMPLETE -      259 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 3

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-EXPRESSION ON RIGHT SIDE OF LET
000002                  20 DIM Z(10)
000003                  21 LET X=Z(1)
000011                  30 PRINT "I","Z(I)","Z(11-I)"
000018                  100 FOR I=1 TO 10
000023                  105 LET Z(I)=11-I
000033                  110 PRINT I,Z(I),Z(11-I)
000053                  120 NEXT I
000055                  130 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    56 INSTRUCTIONS GENERATED,    35 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

I             Z(I)          Z(11-I)
 1             10            0
 2             9             0
 3             8             0
 4             7             0
 5             6             0
 6             5             6
 7             4             7
 8             3             8
 9             2             9
 10            1             10


**** PROGRAM EXECUTION COMPLETE -      344 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 4

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-EXPRESSION ON RIGHT SIDE OF LET
000002                  20 DIM Z(10)
000003                  100 FOR I=1 TO 10
000008                  105 LET Z(I)=11-I
000018                  120 NEXT I
000020                  130 PRINT "I","Z(I)","Z(11-I)"
000027                  200 FOR I=1 TO 10
000032                  210 PRINT I,Z(I),Z(11-I)
000052                  220 NEXT I
000054                  230 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    55 INSTRUCTIONS GENERATED,    34 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

I             Z(I)          Z(11-I)
 1             10            1
 2             9             2
 3             8             3
 4             7             4
 5             6             5
 6             5             6
 7             4             7
 8             3             8
 9             2             9
 10            1             10

**** PROGRAM EXECUTION COMPLETE -      361 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 5

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-EXPRESSION ON LEFT SIDE OF LET
000002                  20 DIM Z(10)
000003                  100 FOR I=1 TO 10
000008                  105 LET Z(11-I)=I
000018                  120 NEXT I
000020                  130 PRINT "I","Z(I)","Z(11-I)"
000027                  200 FOR I=1 TO 10
000032                  210 PRINT I,Z(I),Z(11-I)
000052                  220 NEXT I
000054                  230 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    55 INSTRUCTIONS GENERATED,    34 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

I             Z(I)          Z(11-I)
 1             1             10
 2             2             9
 3             3             8
 4             4             7
 5             5             6
 6             6             5
 7             7             4
 8             8             3
 9             9             2
 10            10            1

**** PROGRAM EXECUTION COMPLETE -      361 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPE SUBSCRIPT TEST # 6

OFFSET

000001                    10 REM TEST 1 SUBSCRIPT-READ AND PRINT
000002                    20 DIM X(10)
000003                    30 FOR I=1 TO 10
000008                    40 READ X(I)
000013                    50 PRINT X(I)
000021                    60 NEXT I
000023                    100 DATA 16,29,32,11,0
000024                    110 DATA 100,1720,260,6.5,18
000025                    888 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    26 INSTRUCTIONS GENERATED,    28 SYMBOLS DEFINED    10 DATA ITEMS DEFINED ****

 16
 29
 32
 11
 0
 100
 1720
 260
 6.5
 18

**** PROGRAM EXECUTION COMPLETE -      161 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPE SUBSCRIPT TEST # 7

OFFSET

000001                    10 REM TEST 1 SUBSCRIPT-READ AND PRINT
000002                    20 DIM X(10)
000003                    30 FOR I=0 TO 9
000008                    40 READ X(I+1)
000016                    50 PRINT X(I+1)
000027                    60 NEXT I
000029                    100 DATA 16,29,32,11,0
000030                    110 DATA 100,1720,260,6.5,18
000031                    888 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    32 INSTRUCTIONS GENERATED,    30 SYMBOLS DEFINED    10 DATA ITEMS DEFINED ****

 16
 29
 32
 11
 0
 100
 1720
 260
 6.5
 18

**** PROGRAM EXECUTION COMPLETE -      221 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPE SUBSCRIPT TEST # 8

OFFSET

000001                  10 REM TEST 1 SUBSCRIPT-FOR NEXT
000002                  20 DIM X(5)
000003                  30 READ X(1),X(2)
000012                  40 PRINT X(1),X(2)
000027                  50 FOR I=X(1) TO X(2)
000042                  55 READ X(I)
000047                  60 NEXT I
000049                  70 FOR I=1 TO 5
000054                  80 PRINT X(I)
000062                  90 NEXT I
000064                  100 DATA 3,5
000065                  110 DATA 100,1720,260,6.5,18
000066                  888 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    67 INSTRUCTIONS GENERATED,    25 SYMBOLS DEFINED     7 DATA ITEMS DEFINED ****

 3            5
 3
 5
 100
 1720
 260

**** PROGRAM EXECUTION COMPLETE -      121 INSTRUCTIONS EXECUTED ****
```

++BASIC PLOT RND SAMPLES

```
OFFSET

000001                  10 REM TEST SIMPLE SUBSCRIPTS-COMPLEX TEST
000002                  20 DIM P(20)
000003                  30 READ N
000005                  50 FOR I=1 TO 20
000010                  60 LET P(I)=0
000017                  70 NEXT I
000019                  80 FOR I=1 TO N
000024                  90 LET X=INT(RND(0)*20)+1
000039                  100 PRINT X,
000042                  110 LET P(X)=P(X)+1
000057                  120 NEXT I
000059                  125 EJECT
000061                  126 PRINT N;" SAMPLES WILL BE PLOTTED"
000066                  127 PRINT "SAMPLE"
000069                  128 PRINT "NUMBER","COUNT","BAR CHART"
000076                  130 FOR I=1 TO 20
000081                  140 PRINT I,P(I),
000091                  150 FOR J=1 TO P(I)
000101                  160 PRINT "*";
000104                  170 NEXT J
000106                  180 PRINT
000108                  200 NEXT I
000110                  998 DATA 100
000111                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   112 INSTRUCTIONS GENERATED,    51 SYMBOLS DEFINED     1 DATA ITEMS DEFINED ****

 3              12              5              5              13             13             19             4              11
 14             11              17             7              14             18             3              4              16
 2              13              19             1              14             15             7              10             20
 15             15              11             17             6              2              6              14             15
 7              7               18             8              6              9              1              20             19
 13             9               18             8              10             5              9              6              18
 14             8               5              17             1              17             16             6              9
 7              3               12             10             15             19             4              14             12
 12             5               3              10             1              12             9              8              9
 4              20              9              14             9              10             20             8              10
 11             15              16             5              6              13             4              11             15
 12
```

```
 100 SAMPLES WILL BE PLOTTED
SAMPLE
NUMBER         COUNT          BAR CHART
 1              4             ****
 2              2             **
 3              4             ****
 4              5             *****
 5              6             ******
 6              6             ******
 7              5             *****
 8              5             *****
 9              8             ********
 10             6             ******
 11             5             *****
 12             6             ******
 13             5             *****
 14             7             *******
 15             7             *******
 16             3             ***
 17             4             ****
 18             4             ****
 19             4             ****
 20             4             ****


**** PROGRAM EXECUTION COMPLETE -     4699 INSTRUCTIONS EXECUTED ****
```

```
++BASIC  SIMPLE SUBSCRIPT TEST # 9

OFFSET

000001                    10 REM TEST WITH IF STATEMENT
000002                    20 DIM X(2)
000003                    30 READ X(1),X(2)
000012                    31 IF X(1)=999 THEN 999
000021                    32 DATA 100,100,1,2,6,5,999,999
000022                    35 IF X(1)=X(2) THEN 70
000036                    40 IF X(1)=<X(2) THEN 90
000050                    50 PRINT X(1);" >";X(2)
000067                    60 GOTO 30
000069                    70 PRINT X(1);" =";X(2)
000086                    80 GOTO 30
000088                    90 PRINT X(1);" <";X(2)
000105                    100 GOTO 30
000107                    999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   108 INSTRUCTIONS GENERATED,    24 SYMBOLS DEFINED     8 DATA ITEMS DEFINED ****

 100 = 100
 1 < 2
 6 > 5


**** PROGRAM EXECUTION COMPLETE -      206 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPT TEST #1

OFFSET

000001                  10 REM  GENERATE A 5X5 TABLE OF NUMBERS
000002                  20 DIM X(5,5)
000003                  30 FOR I=1 TO 5
000008                  40 FOR J=1 TO 5
000013                  50 LET X(I,J)=I*10+J
000026                  60 NEXT J
000028                  70 NEXT I
000030                  80 REM
000031                  90 FOR I=1 TO 5
000036                  100 FOR J=1 TO 5
000041                  110 PRINT X(I,J);
000047                  120 NEXT J
000049                  130 PRINT
000051                  140 NEXT I
000053                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    54 INSTRUCTIONS GENERATED,    57 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

 11 12 13 14 15
 21 22 23 24 25
 31 32 33 34 35
 41 42 43 44 45
 51 52 53 54 55

**** PROGRAM EXECUTION COMPLETE -      670 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPT TEST #2

OFFSET

000001                  10 REM  READ AND PRINT A 5X5 TABLE OF NUMBERS
000002                  20 DIM X(5,5)
000003                  30 FOR I=1 TO 5
000008                  40 FOR J=1 TO 5
000013                  50 READ X(I,J)
000018                  60 NEXT J
000020                  70 NEXT I
000022                  80 REM
000023                  90 FOR I=1 TO 5
000028                  100 FOR J=1 TO 5
000033                  110 PRINT X(I,J);
000039                  120 NEXT J
000041                  130 PRINT
000043                  140 NEXT I
000045                  210 DATA 11,12,13,14,15
000046                  220 DATA 21,22,23,24,25
000047                  230 DATA 31,32,33,34,35
000048                  240 DATA 41,42,43,44,45
000049                  250 DATA 51,52,53,54,55
000050                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    51 INSTRUCTIONS GENERATED,    54 SYMBOLS DEFINED    25 DATA ITEMS DEFINED ****

 11 12 13 14 15
 21 22 23 24 25
 31 32 33 34 35
 41 42 43 44 45
 51 52 53 54 55

**** PROGRAM EXECUTION COMPLETE -      475 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPT TEST #3

OFFSET

000001                  10 REM  READ AND PRINT A 5X5 TABLE OF STRINGS
000002                  20 DIM X$(5,5)
000003                  30 FOR I=1 TO 5
000008                  40 FOR J=1 TO 5
000013                  50 READ X$(I,J)
000018                  60 NEXT J
000020                  70 NEXT I
000022                  80 REM
000023                  90 FOR I=1 TO 5
000028                  100 FOR J=1 TO 5
000033                  110 PRINT X$(I,J);" ";
000041                  120 NEXT J
000043                  130 PRINT
000045                  140 NEXT I
000047                  210 DATA "11","12","13","14","15"
000048                  220 DATA "21","22","23","24","25"
000049                  230 DATA "31","32","33","34","35"
000050                  240 DATA "41","42","43","44","45"
000051                  250 DATA "51","52","53","54","55"
000052                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    53 INSTRUCTIONS GENERATED,    80 SYMBOLS DEFINED    25 DATA ITEMS DEFINED ****

11 12 13 14 15
21 22 23 24 25
31 32 33 34 35
41 42 43 44 45
51 52 53 54 55

**** PROGRAM EXECUTION COMPLETE -      525 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPTED SUBSCRIPT TEST #1

OFFSET

000001                  10 REM  READ AND PRINT A 5X5 TABLE OF NUMBERS
000002                  20 DIM X(5,5),D(5),E(5)
000003                  30 FOR I=1 TO 5
000008                  35 LET D(I)=I
000015                  40 FOR J=1 TO 5
000020                  45 LET E(J)=J
000027                  50 READ X(I,J)
000032                  60 NEXT J
000034                  70 NEXT I
000036                  80 REM
000037                  90 FOR I=1 TO 5
000042                  100 FOR J=1 TO 5
000047                  110 PRINT X(D(I),E(J));
000063                  120 NEXT J
000065                  130 PRINT
000067                  140 NEXT I
000069                  210 DATA 11,12,13,14,15
000070                  220 DATA 21,22,23,24,25
000071                  230 DATA 31,32,33,34,35
000072                  240 DATA 41,42,43,44,45
000073                  250 DATA 51,52,53,54,55
000074                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    75 INSTRUCTIONS GENERATED,    70 SYMBOLS DEFINED    25 DATA ITEMS DEFINED ****

 11 12 13 14 15
 21 22 23 24 25
 31 32 33 34 35
 41 42 43 44 45
 51 52 53 54 55


**** PROGRAM EXECUTION COMPLETE -      935 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPTED SUBSCRIPT TEST #2

OFFSET

000001                  10 REM  READ AND PRINT A 5X5 TABLE OF NUMBERS
000002                  20 DIM X(5,5),D(5),E(5)
000003                  30 FOR I=1 TO 5
000008                  35 LET D(I)=I
000015                  40 FOR J=1 TO 5
000020                  45 LET E(J)=J
000027                  50 READ X(D(I),E(J))
000042                  60 NEXT J
000044                  70 NEXT I
000046                  80 REM
000047                  90 FOR I=1 TO 5
000052                  100 FOR J=1 TO 5
000057                  110 PRINT X(D(I),E(J));
000073                  120 NEXT J
000075                  130 PRINT
000077                  140 NEXT I
000079                  210 DATA 11,12,13,14,15
000080                  220 DATA 21,22,23,24,25
000081                  230 DATA 31,32,33,34,35
000082                  240 DATA 41,42,43,44,45
000083                  250 DATA 51,52,53,54,55
000084                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    85 INSTRUCTIONS GENERATED,    70 SYMBOLS DEFINED    25 DATA ITEMS DEFINED ****

 11 12 13 14 15
 21 22 23 24 25
 31 32 33 34 35
 41 42 43 44 45
 51 52 53 54 55


**** PROGRAM EXECUTION COMPLETE -     1185 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPTED SUBSCRIPT TEST #3

OFFSET

000001                  10 REM  READ A 5X5 TABLE OF NUMBERS AND
000002                  11 REM  PRINT WITH THE PRINT USING
000003                  20 DIM X(5,5),D(5),E(5)
000004                  30 FOR I=1 TO 5
000009                  35 LET D(I)=I
000016                  40 FOR J=1 TO 5
000021                  45 LET E(J)=J
000028                  50 READ X(D(I),E(J))
000043                  60 NEXT J
000045                  70 NEXT I
000047                  80 REM
000048                  85 LET U$="### : ### : ### : ### : ###"
000051                  90 FOR I=1 TO 5
000056                  110 PRINT USING U$,X(D(I),1),X(D(I),2),X(D(I),3),X(D(I),4),X(D(I),5)
000111                  140 NEXT I
000113                  210 DATA 11,12,13,14,15
000114                  220 DATA 21,22,23,24,25
000115                  230 DATA 31,32,33,34,35
000116                  240 DATA 41,42,43,44,45
000117                  250 DATA 51,52,53,54,55
000118                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   119 INSTRUCTIONS GENERATED,    82 SYMBOLS DEFINED    25 DATA ITEMS DEFINED ****

 11 :  12 :  13 :  14 :  15
 21 :  22 :  23 :  24 :  25
 31 :  32 :  33 :  34 :  35
 41 :  42 :  43 :  44 :  45
 51 :  52 :  53 :  54 :  55


**** PROGRAM EXECUTION COMPLETE -      974 INSTRUCTIONS EXECUTED ****
```

```
++BASIC DOUBLE SUBSCRIPTED SUBSCRIPT TEST #4

OFFSET

000001                  10 REM TEST WITH IF STATEMENT
000002                  20 DIM X(2,2),T(2)
000003                  25 IF T(1)<>T(2) THEN 28
000017                  26 PRINT "T(1) EQ T(2)"
000020                  28 PRINT "TEST","RESULTS"
000025                  30 READ X(1,1),X(1,2),X(2,1),X(2,2)
000042                  31 PRINT X(1,1),X(1,2),X(2,1),X(2,2)
000063                  32 IF X(1,1)=999 THEN 999
000070                  33 DATA 100,100,1,2,6,5,999,999
000071                  34 FOR I=1 TO 2
000076                  35 IF X(I,1)=X(I,2) THEN 70
000086                  40 IF X(I,1)=<X(I,2) THEN 90
000096                  50 PRINT I,X(I,1);" >";X(I,2)
000111                  60 GOTO 100
000113                  70 PRINT I,X(I,1);" =";X(I,2)
000128                  80 GOTO 100
000130                  90 PRINT I,X(I,1);" <";X(I,2)
000145                  100 NEXT I
000147                  110 GOTO 30
000149                  998 DATA 999,999,999,999
000150                  999 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   151 INSTRUCTIONS GENERATED,    40 SYMBOLS DEFINED    12 DATA ITEMS DEFINED ****

T(1) EQ T(2)
TEST          RESULTS
 100           100           1             2
 1             100 = 100
 2             1 < 2
 6             5             999           999
 1             6 > 5
 2             999 = 999
 999           999           999           999


**** PROGRAM EXECUTION COMPLETE -      311 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                   1 REM MULTI STMTS TEST #1
000002                   10 PRINT "HELLO"\PRINT "AGAIN"
000005                   20 PRINT "HELLO"\PRINT "AGAIN"\PRINT "!"

**** END OF COMPILATION **** NO ERRORS FOUND
****     9 INSTRUCTIONS GENERATED,    15 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

HELLO
HELLO
AGAIN


**** PROGRAM EXECUTION TERMINATED IN LINE    20 ****
**** PROGRAM RUN AWAY DETECTED ****
```

```
++BASIC

OFFSET

000001                  10 REM MULTI STMTS TEST #2
000002                  20 LET X=1
000005                  30 PRINT "X","X*X","SQR(X)"
000012                  40 PRINT X,X*X,SQR(X)\LET X=X+1\IF X<10 THEN 40\LET X=1
000033                  50 PRINT X,X*X,SQR(X)\LET X=X+1\ IF X<10 THEN 50\LET X=1
000054                  60 PRINT X,X*X,SQR(X)\LET X=X+1 \IF X<10 THEN 60\LET X=1
000075                  70 PRINT\FOR X=1 TO 9\PRINT X,X*X,SQR(X)\NEXT X\PRINT "DONE"
000094                  80 FOR I=1 TO 9
000099                  85 PRINT I
000102                  90 NEXT I
000104                  100 END

**** END OF COMPILATION **** NO ERRORS FOUND
****   105 INSTRUCTIONS GENERATED,    23 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

X             X*X           SQR(X)
 1             1             1
 2             4             1.414213
 3             9             1.73205
 4             16            2
 5             25            2.236067
 6             36            2.449489
 7             49            2.64575
 8             64            2.828427
 9             81            3
 10            100           3.162277
 11            121           3.316624

 1             1             1
 2             4             1.414213
 3             9             1.73205
 4             16            2
 5             25            2.236067
 6             36            2.449489
 7             49            2.64575
 8             64            2.828427
 9             81            3
 1
 2
 3
 4
 5
 6
 7
 8
 9


**** PROGRAM EXECUTION COMPLETE -      417 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST DATA STNTS
000002                  20 DATA 1,2,3\DATA 4,5,6\DATA 7
000003                  30 DATA 8
000004                  40 FOR I=1 TO 8\READ X\PRINT X\NEXT I
000012                  50 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    13 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     7 DATA ITEMS DEFINED ****

 1


**** PROGRAM EXECUTION COMPLETE -       13 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                  10 REM TEST DATA STNTS
000002                  20 DATA "A"\DATA "B","C"\DATA "D"
000003                  30 DATA "E"
000004                  40 FOR I=1 TO 5\READ X$\PRINT X$\NEXT I
000012                  50 END

**** END OF COMPILATION **** NO ERRORS FOUND
****    13 INSTRUCTIONS GENERATED,    20 SYMBOLS DEFINED     4 DATA ITEMS DEFINED ****

A


**** PROGRAM EXECUTION COMPLETE -       13 INSTRUCTIONS EXECUTED ****
```

```
++BASIC

OFFSET

000001                    10 REM GOSUB AND GOTO TEST
000002                    20 GOSUB 100\GOSUB 300\GOSUB 200\GOTO 999
000006                    100 PRINT "AT 100"\RETURN
000009                    200 PRINT "AT 200"\RETURN
000012                    300 PRINT "AT 300"\RETURN
000015                    999 PRINT "AT 999"\END

**** END OF COMPILATION **** NO ERRORS FOUND
****    17 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****

AT 100
AT 200
AT 300
AT 999


**** PROGRAM EXECUTION TERMINATED IN LINE   999 ****
**** PROGRAM RUN AWAY DETECTED ****
```

```
++RENUM

OFFSET

000001                  10 REM GOSUB AND GOTO TEST
000002                  20 GOSUB 100\GOSUB 300\GOSUB 200\GOTO 999
000006                  100 PRINT "AT 100"\RETURN
000009                  200 PRINT "AT 200"\RETURN
000012                  300 PRINT "AT 300"\RETURN
000015                  999 PRINT "AT 999"\END

**** END OF COMPILATION **** NO ERRORS FOUND - RENUMBERING PROGRAM
****    17 INSTRUCTIONS GENERATED,    16 SYMBOLS DEFINED     0 DATA ITEMS DEFINED ****
**** CANNOT RENUM PROGRAM WITH MULTIPLE STATEMENTS PER LINE ****
**** RENUM CANCELLED ****
```

```
++BASIC

OFFSET

000001                  100 REM   ////////////////////////////////////////////////
000002                  110 REM   // Name: Peter M. Maurer
000003                  120 REM   // Program: Sieve of Eratosthenes
000004                  130 REM   // Due: Never
000005                  140 REM   // Language: Dartmouth Basic
000006                  141 REM   //
000007                  142 REM   // This version modified for (1) syntax differences
000008                  143 REM   // between Dartmouth BASIC and BASIC360 and (2) the
000009                  144 REM   // restrictions that BASIC360 places on DIM sizes.
000010                  145 REM   //
000011                  146 REM   // It also serves as an example of solving a simple
000012                  147 REM   // problem without using WHILE loops. The array size is
000013                  148 REM   // roughly the maximum that BASIC360 will allow.
000014                  150 REM   ////////////////////////////////////////////////
000015                  153 REM   Modlines: 260,290,300,370,470
000016                  157 REM   Change THEN to GOTO for YABASIC
000017                  160 DIM   C(50)
000018                  170 REM define the sieve data structure
000019                  180 FOR   I = 0 TO 50
000024                  190 REM everything is potentially prime until proven otherwise
000025                  200 LET   C(I) = 1
000032                  210 NEXT  I
000034                  220 REM Neither 1 nor 0 is prime, so flag them off
000035                  225 LET   C(0) = 0
000042                  230 LET   C(1) = 0
000049                  240 REM start the sieve with the integer 0
000050                  250 LET   I = 0
000053                  260 IF    I>=51 THEN 440
000057                  270 REM advance to the next un-crossed out number.
000058                  280 REM this number must be a prime
000059                  290 IF    I >= 51 THEN 440
000063                  300 IF    C(I) <> 0 THEN 330
000072                  310 LET   I = (I + 1)
000078                  320 GOTO  290
000080                  330 REM come here when prime found
000081                  340 REM cross out all multiples of the prime, starting with 2*p.
000082                  350 LET   J = 2
000085                  360 LET   P = (I * 2)
000091                  370 IF    P >= 51 THEN 420
000095                  380 LET   C(P) = 0
000102                  390 LET   J = (J + 1)
000108                  400 LET   P = (I * (J))
000114                  410 GOTO  370
000116                  420 LET   I = (I + 1)
000122                  430 GOTO  260
000124                  440 REM all uncrossed-out numbers are prime
000125                  450 REM print all primes
000126                  460 FOR   I = 0 TO 50
000131                  470 IF    C(I) = 0 THEN 490
000140                  480 PRINT I," is prime"
000145                  490 NEXT  I
000147                  500 END

**** END OF COMPILATION **** NO ERRORS FOUND
```

**** 148 INSTRUCTIONS GENERATED, 74 SYMBOLS DEFINED 0 DATA ITEMS DEFINED ****

```
 2            is prime
 3            is prime
 5            is prime
 7            is prime
 11           is prime
 13           is prime
 17           is prime
 19           is prime
 23           is prime
 29           is prime
 31           is prime
 37           is prime
 41           is prime
 43           is prime
 47           is prime
```

**** PROGRAM EXECUTION COMPLETE - 4143 INSTRUCTIONS EXECUTED ****