```
MM      MM  TTTTTTTTTT  HH      HH    GGGGGGGG   MM      MM  IIIIII   NN      NN       11
MM      MM  TTTTTTTTTT  HH      HH   GGGGGGGGG   MM      MM  IIIIII   NN      NN       11
MMMM  MMMM      TT      HH      HH   GG          MMMM  MMMM    II     NN      NN     1111
MMMM  MMMM      TT      HH      HH   GG          MMMM  MMMM    II     NN      NN     1111
MM  MM  MM      TT      HH      HH   GG          MM  MM  MM    II     NNNN    NN       11
MM  MM  MM      TT      HH      HH   GG          MM  MM  MM    II     NNNN    NN       11
MM      MM      TT      HHHHHHHHHH   GG          MM      MM    II     NN  NN  NN       11
MM      MM      TT      HHHHHHHHHH   GG          MM      MM    II     NN  NN  NN       11
MM      MM      TT      HH      HH   GG  GGGGGG  MM      MM    II     NN    NNNN       11
MM      MM      TT      HH      HH   GG  GGGGGG  MM      MM    II     NN    NNNN       11
MM      MM      TT      HH      HH   GG      GG  MM      MM    II     NN      NN       11
MM      MM      TT      HH      HH   GG      GG  MM      MM    II     NN      NN       11
MM      MM      TT      HH      HH    GGGGGG     MM      MM  IIIIII   NN      NN   111111
MM      MM      TT      HH      HH    GGGGGG     MM      MM  IIIIII   NN      NN   111111
```

```
LL          IIIIII    SSSSSSSS
LL          IIIIII    SSSSSSSS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II      SSSSSS
LL            II      SSSSSS
LL            II          SS
LL            II          SS
LL            II          SS
LL            II          SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```

```
0000    1           .TITLE  MTH$GMIN1        GMIN1 function
0000    2           .IDENT  /1-001/          ; File: MTHGMIM1.MAR
0000    3
0000    4   ;
0000    5   ;*******************************************************************************
0000    6   ;*                                                                             *
0000    7   ;*     COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
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0000   23   ;*     SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0000   24   ;*                                                                             *
0000   25   ;*                                                                             *
0000   26   ;*******************************************************************************
0000   27   ;
0000   28   ;
0000   29   ; FACILITY: MATH LIBRARY
0000   30   ;++
0000   31   ; ABSTRACT:
0000   32   ;       This module contains routine MTH$GMIN1:
0000   33   ;       Return the smaller of n G floating-point
0000   34   ;       numbers.
0000   35   ;
0000   36   ;
0000   37   ;
0000   38   ;--
0000   39   ;
0000   40   ; VERSION: 1
0000   41   ;
0000   42   ; HISTORY:
0000   43   ;
0000   44   ; AUTHOR:
0000   45   ;       Steven B. Lionel, 18-Jan-79: Version 1
0000   46   ;
0000   47   ; MODIFIED BY:
0000   48   ;
0000   49   ;
0000   50   ;
```

MTHSGMIN1
1-001

K 15

GMIN1 function   16-SEP-1984 01:29:03   VAX/VMS Macro V04-00   Page 2
HISTORY ; Detailed Current Edit History 6-SEP-1984 11:23:52 [MTHRTL.SRC]MTHGMIN1.MAR;1   (2)

```
0000    52              .SBTTL  HISTORY          ; Detailed Current Edit History
0000    53
0000    54
0000    55 ; Edit History for Version 1 of MTHSGMIN1
0000    56 ;
0000    57 ; 1-001 - Original.  SBL 18-Jan-79
```

```
        0000    59              .SBTTL  DECLARATIONS
        0000    60
        0000    61      ;
        0000    62      ; INCLUDE FILES:
        0000    63      ;       NONE
        0000    64      ;
        0000    65
        0000    66      ;
        0000    67      ; EXTERNAL SYMBOLS:
        0000    68      ;       NONE
        0000    69      ;
        0000    70
        0000    71      ;
        0000    72      ; MACROS:
        0000    73      ;       NONE
        0000    74      ;
        0000    75
        0000    76      ;
        0000    77      ; PSECT DECLARATIONS:
    00000000    78              .PSECT  _MTH$CODE       PIC, SHR, LONG, EXE, NOWRT
        0000    79
        0000    80      ; EQUATED SYMBOLS:
        0000    81      ;       NONE
        0000    82      ;
        0000    83
        0000    84      ;
        0000    85
        0000    86      ; OWN STORAGE:
        0000    87      ;       NONE
        0000    88      ;
```

MTHSGMIN1   GMIN1 function   M 15   16-SEP-1984 01:29:03 VAX/VMS Macro V04-00   Page   4
1-001   MTHSGMIN1   6-SEP-1984 11:23:52 [MTHRTL.SRC]MTHGMIN1.MAR;1   (4)

**

```
                      0000      90              .SBTTL   MTHSGMIN1
                      0000      91
                      0000      92  ;++
                      0000      93  ;  FUNCTIONAL DESCRIPTION:
                      0000      94  ;       Return the minimum of n arguments, n is greater than or equal
                      0000      95  ;       to 1.
                      0000      96  ;
                      0000      97  ;
                      0000      98  ;  CALLING SEQUENCE:
                      0000      99  ;       Minimum.wg.v = MTH$GMIN1 ({arg.rg.r})
                      0000     100  ;
                      0000     101  ;
                      0000     102  ;
                      0000     103  ;  INPUT PARAMETERS:
                      0000     104  ;       The n parameters are G floating point values
                      0000     105  ;       and are call-by-reference.
                      0000     106  ;
                      0000     107  ;
                      0000     108  ;  IMPLICIT INPUTS:
                      0000     109  ;       NONE
                      0000     110  ;
                      0000     111  ;  OUTPUT PARAMETERS:
                      0000     112  ;       NONE
                      0000     113  ;
                      0000     114  ;  IMPLICIT OUTPUTS:
                      0000     115  ;       NONE
                      0000     116  ;
                      0000     117  ;  COMPLETION CODES:
                      0000     118  ;       NONE
                      0000     119  ;
                      0000     120  ;  SIDE EFFECTS:
                      0000     121  ;       Reserved Operand exception can occur.
                      0000     122  ;
                      0000     123  ;
                      0000     124  ;--
                      0000     125
                0004  0000     126              .ENTRY   MTH$GMIN1,          ^M<R2>
         52   6C   9A  0002     127              MOVZBL   (AP), R2          ; R2 = arg count
              8C   D5  0005     128              TSTL     (AP)+             ; AP -> first arg
         50  9C 50FD  0007     129  1$:         MOVG     @(AP)+, R0        ; R0/R1 = trial min
              09   11  000B     130              BRB      3$                ; check arg count
      50   00 BC 51FD 000D     131  2$:         CMPG     @0(AP), R0        ; if this arg is less than trial min
              F3   19  0012     132              BLSS     1$                ; then it becomes new trial min
              8C   D5  0014     133              TSTL     (AP)+             ; else ignore it
      F4 52   F5  0016     134  3$:             SOBGTR   R2, 2$            ; return if arg count exausted
              04  0019     135              RET                            ; with min in R0/R1
                  001A     136
                  001A     137
                  001A     138              .END
```

MTH$GMIN1   GMIN1 function   16-SEP-1984 01:29:03 VAX/VMS Macro V04-00   Page 5
Symbol table   6-SEP-1984 11:23:52 [MTHRTL.SRC]MTHGMIN1.MAR;1   (4)

MTH$GMIN1   00000000 RG   01

```
                              +-------------------+
                              ! Psect synopsis !
                              +-------------------+


PSECT name                    Allocation        PSECT No.   Attributes
-----------                   ----------        ---------   ----------
.  ABS  .                     00000000 (   0.)  00 (  0.)   NOPIC  USR  CON  ABS  LCL  NOSHR  NOEXE  NORD  NOWRT NOVEC BYTE
_MTH$CODE                     0000001A (  26.)  01 (  1.)   PIC    USR  CON  REL  LCL  SHR    EXE    RD    NOWRT NOVEC LONG

                              +------------------------+
                              ! Performance indicators !
                              +------------------------+


Phase                   Page faults   CPU Time      Elapsed Time
-----                   -----------   --------      ------------
Initialization                  31    00:00:00.06   00:00:00.91
Command processing             116    00:00:00.54   00:00:03.15
Pass 1                          69    00:00:00.41   00:00:02.90
Symbol table sort                0    00:00:00.00   00:00:00.00
Pass 2                          38    00:00:00.31   00:00:01.07
Symbol table output              1    00:00:00.01   00:00:00.04
Psect synopsis output            2    00:00:00.03   00:00:00.12
Cross-reference output           0    00:00:00.00   00:00:00.00
Assembler run totals           259    00:00:01.36   00:00:08.28
```

The working set limit was 900 pages.
1387 bytes (3 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 1 non-local and 3 local symbols.
138 source lines were read in Pass 1, producing 10 object records in Pass 2.
0 pages of virtual memory were used to define 0 macros.

```
                              +-------------------------+
                              ! Macro library statistics !
                              +-------------------------+


Macro library name                   Macros defined
------------------                   --------------

_$255$DUA28:[SYSLIB]STARLET.MLB;2          0
```

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:MTHGMIN1/OBJ=OBJ$:MTHGMIN1 MSRC$:MTHGMIN1/UPDATE=(ENH$:MTHGMIN1)

MTHGCONJG
LIS

MTHGINT
LIS

MTHGMOD
LIS

MTHEXP
LIS

MTHFLOOR
LIS

MTHDTAN
LIS

MTHDTANH
LIS

MTHGEXP
LIS

MTHGFLOOR
LIS

MTHGMIN1
LIS

MTHGCOSH
LIS

MTHGLOG
LIS

MTHGACOS
LIS

MTHGASIN
LIS

MTHGNINT
LIS

MTHGATAN
LIS

MTHGATANH
LIS

MTHGMAX1
LIS