MTHRTL

```
MM       MM  TTTTTTTTT  HH      HH    GGGGGGGG  MM       MM    AAAAAA    XX      XX        11
MM       MM  TTTTTTTTT  HH      HH    GGGGGGGG  MM       MM    AAAAAA    XX      XX        11
MMMM   MMMM      TT     HH      HH   GG         MMMM   MMMM   AA    AA    XX    XX        1111
MMMM   MMMM      TT     HH      HH   GG         MMMM   MMMM   AA    AA    XX    XX        1111
MM  MM MM  MM    TT     HH      HH   GG         MM  MM MM  MM AA    AA     XX  XX          11
MM  MM MM  MM    TT     HHHHHHHHHH   GG         MM  MM MM  MM AA    AA      XXXX           11
MM     MM  MM    TT     HHHHHHHHHH   GG         MM       MM   AA    AA      XX             11
MM       MM      TT     HH      HH   GG  GGGGG  MM       MM   AAAAAAAAAA   XX  XX          11
MM       MM      TT     HH      HH   GG  GGGGG  MM       MM   AAAAAAAAAA   XX  XX          11
MM       MM      TT     HH      HH   GG     GG  MM       MM   AA    AA    XX    XX         11
MM       MM      TT     HH      HH   GG     GG  MM       MM   AA    AA    XX      XX       11
MM       MM      TT     HH      HH    GGGGGG    MM       MM   AA    AA    XX      XX     111111
MM       MM      TT     HH      HH    GGGGGG    MM       MM   AA    AA    XX      XX     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
LLLLLLLLL        IIIIII        SSSSSSSS
LLLLLLLLLL       IIIIII        SSSSSSSS
```

```
0000      1                    .TITLE  MTH$GMAX1        GMAX1 function
0000      2                    .IDENT  /1-001/          ; File: MTHGMAX1.MAR
0000      3
0000      4
0000      5           ;*********************************************************************
0000      6           ;*                                                                   *
0000      7           ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                          *
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0000     23           ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.          *
0000     24           ;*                                                                   *
0000     25           ;*                                                                   *
0000     26           ;*********************************************************************
0000     27           ;
0000     28           ;
0000     29           ; FACILITY: MATH LIBRARY
0000     30           ;++
0000     31           ; ABSTRACT:
0000     32           ;       This module contains MTH$GMAX1:
0000     33           ;       Return the maximum of n G floating-point values.
0000     34           ;
0000     35           ;
0000     36           ;--
0000     37           ;
0000     38           ; VERSION: 1
0000     39           ;
0000     40           ; HISTORY:
0000     41           ;
0000     42           ; AUTHOR:
0000     43           ;       Steven B. Lionel, 18-Jan-79: Version 1
0000     44           ;
0000     45           ; MODIFIED BY:
0000     46           ;
0000     47           ;
0000     48           ;
```

MTH$GMAX1
1-001

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GMAX1 function   16-SEP-1984 01:28:41 VAX/VMS Macro V04-00   Page 2
HISTORY ; Detailed Current Edit History   6-SEP-1984 11:23:49 [MTHRTL.SRC]MTHGMAX1.MAR;1   (2)

```
0000      50                 .SBTTL  HISTORY              ; Detailed Current Edit History
0000      51
0000      52
0000      53 ; Edit History for Version 1 of MTH$GMAX1
0000      54 ;
0000      55 ; 1-001 - Original.  SBL 18-Jan-79
```

MTH$GMAX1
1-001

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GMAX1 function
DECLARATIONS

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6-SEP-1984 11:23:49   [MTHRTL.SRC]MTHGMAX1.MAR;1   (3)

```
                0000      57              .SBTTL  DECLARATIONS
                0000      58
                0000      59      ;
                0000      60      ; INCLUDE FILES:
                0000      61      ;       NONE
                0000      62
                0000      63      ;
                0000      64
                0000      65      ;
                0000      66      ; EXTERNAL SYMBOLS:
                0000      67      ;       NONE
                0000      68      ;
                0000      69
                0000      70      ;
                0000      71      ; MACROS:
                0000      72      ;       NONE
                0000      73      ;
                0000      74
                0000      75      ;
                0000      76      ; PSECT DECLARATIONS:
            00000000      77              .PSECT  _MTH$CODE       PIC, SHR, LONG, EXE, NOWRT
                0000      78
                0000      79      ;
                0000      80      ; EQUATED SYMBOLS:
                0000      81      ;       NONE
                0000      82      ;
                0000      83
                0000      84      ;
                0000      85      ; OWN STORAGE:
                0000      86      ;       NONE
                0000      87      ;
```

MTH$GMAX1
1-001

GMAX1 function
MTH$GMAX1

F 15

16-SEP-1984 01:28:41   VAX/VMS Macro V04-00   Page 4
6-SEP-1984 11:23:49   [MTHRTL.SRC]MTHGMAX1.MAR;1   (4)

```
                         0000      89                    .SBTTL  MTH$GMAX1
                         0000      90
                         0000      91    ;++
                         0000      92    ; FUNCTIONAL DESCRIPTION:
                         0000      93    ;       Returns the maximum of n arguments, n is greater or equal to 1.
                         0000      94    ;
                         0000      95    ;
                         0000      96    ; CALLING SEQUENCE:
                         0000      97    ;       Maximum.wg.v = MTH$GMAX1 ({arg.rg.r})
                         0000      98    ;
                         0000      99    ;
                         0000     100    ;
                         0000     101    ; INPUT PARAMETERS:
                         0000     102    ;       The n input parameters are G floating-point
                         0000     103    ;       values and are call-by-reference.
                         0000     104    ;
                         0000     105    ;
                         0000     106    ; IMPLICIT INPUTS:
                         0000     107    ;       NONE
                         0000     108    ;
                         0000     109    ; OUTPUT PARAMETERS:
                         0000     110    ;       NONE
                         0000     111    ;
                         0000     112    ; IMPLICIT OUTPUTS:
                         0000     113    ;       NONE
                         0000     114    ;
                         0000     115    ; COMPLETION CODES:
                         0000     116    ;       NONE
                         0000     117    ;
                         0000     118    ; SIDE EFFECTS:
                         0000     119    ;       Reserved Operand exception can occur.
                         0000     120    ;
                         0000     121    ;
                         0000     122    ;--
                         0000     123
                    0004 0000     124            .ENTRY  MTH$GMAX1,      ^M<R2>
        52   6C   9A 0002     125            MOVZBL  (AP), R2        ; R2 = arg count
             8C   D5 0005     126            TSTL    (AP)+           ; AP -> first arg
        50   9C 50FD 0007     127 1$:        MOVG    @(AP)+, R0      ; R0/R1 = trial max
             09   11 000B     128            BRB     3$              ; check arg count
                      000D     129
    50  00 BC 51FD 000D     130 2$:        CMPG    @0(AP), R0      ; if this arg is greater than trial max
         F3   14 0012     131            BGTR    1$              ; then it becomes trial max
             8C   D5 0014     132            TSTL    (AP)+           ; else ignore it
        F4 52   F5 0016     133 3$:        SOBGTR  R2, 2$          ; return if arg count exausted
             04 0019     134            RET
                 001A     135
                 001A     136            .END
```

MTH$GMAX1   GMAX1 function   16-SEP-1984 01:28:41   VAX/VMS Macro V04-00   Page   5
Symbol table   6-SEP-1984 11:23:49   [MTHRTL.SRC]MTHGMAX1.MAR;1   (4)

MTH$GMAX1   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   29   00:00:00.09   00:00:00.59
Command processing   103   00:00:00.52   00:00:03.54
Pass 1   64   00:00:00.41   00:00:01.19
Symbol table sort   0   00:00:00.00   00:00:00.00
Pass 2   38   00:00:00.35   00:00:01.25
Symbol table output   2   00:00:00.01   00:00:00.05
Psect synopsis output   2   00:00:00.02   00:00:00.02
Cross-reference output   0   00:00:00.00   00:00:00.00
Assembler run totals   240   00:00:01.40   00:00:06.65

The working set limit was 750 pages.
1371 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.
136 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
------------------   --------------
_255DUA28:[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$:MTHGMAX1/OBJ=OBJ$:MTHGMAX1 MSRC$:MTHGMAX1/UPDATE=(ENH$:MTHGMAX1)

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