


```

MM      MM      TTTTTTTTTT  HH      HH      HH      HH      MM      MM      AAAAAA  XX      XX      11
MM      MM      TTTTTTTTTT  HH      HH      HH      HH      MM      MM      AAAAAA  XX      XX      11
MMMM    MMMM    TT          HH      HH      HH      HH      MMMM  MMMM  AA      AA  XX      XX      1111
MMMM    MMMM    TT          HH      HH      HH      HH      MMMM  MMMM  AA      AA  XX      XX      1111
MM      MM      TT          HH      HH      HH      HH      MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HHHHHHHHHHH  HHHHHHHHHHH  MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HHHHHHHHHHH  HHHHHHHHHHH  MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AAAAAAAAAA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AAAAAAAAAA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AA      AA  XX      XX      11
MM      MM      TT          HH      HH      HH      HH      MM      MM      AA      AA  XX      XX      111111
MM      MM      TT          HH      HH      HH      HH      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
LLLLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLLLL IIIIII  SSSSSSSS

```

MTH
Sym
MTH

PSE

_MT

Pha

Ini
Com
Pas
Sym
Pas
Sym
Pse
Cro
Ass

The
151
The
147
0 p

Mac

_S2
0 G
The
MAC

(2)	50	HISTORY	: Detailed Current Edit History
(3)	59	DECLARATIONS	
(4)	91	MTHSHMAX1	

```

0000 1      .TITLE MTH$HMAX1      HMAX1 function
0000 2      .IDENT /1-002/      ; File: MTHHMAX1.MAR  EDIT: JCW1002
0000 3
0000 4
0000 5
0000 6 *****
0000 7 *
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0000 24 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 FACILITY: MATH LIBRARY
0000 30 ++
0000 31 ABSTRACT:
0000 32 This module contains MTH$HMAX1:
0000 33 Return the maximum of n H 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 Jeffrey C. Wiener, 14-May-84: Version 1
0000 48

```

MTH\$HMAX1
1-002

HMAX1 function
HISTORY ; Detailed Current Edit History

N 3

16-SEP-1984 01:37:15 VAX/VMS Macro V04-00
6-SEP-1984 11:25:06 [MTHRTL.SRC]MTHHMAX1.MAR;1

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(2)

MTH\$
3-00

```
0000 50 .SBTTL HISTORY ; Detailed Current Edit History
0000 51
0000 52
0000 53 ; Edit History for Version 1 of MTH$HMAX1
0000 54 :
0000 55 : 1-001 - Original. SBL 18-Jan-79
0000 56 : 1-002 - The code as written did not work. Fixed various references to AP
0000 57 : and changed a GTR to a GEQ. Also fixed some comments. JCW 14-May-1984
```

```
0000 59      .SBTTL  DECLARATIONS
0000 60
0000 61      :
0000 62      : INCLUDE FILES:
0000 63      :     NONE
0000 64      :
0000 65      :
0000 66      :
0000 67      :
0000 68      : EXTERNAL SYMBOLS:
0000 69      :     NONE
0000 70      :
0000 71      :
0000 72      :
0000 73      : MACROS:
0000 74      :     NONE
0000 75      :
0000 76      :
0000 77      :
0000 78      : PSECT DECLARATIONS:
0000 79      :     .PSECT  _MTH$CODE          PIC, SHR, LONG, EXE, NOWRT
0000 80      :
0000 81      :
0000 82      : EQUATED SYMBOLS:
0000 83      :     NONE
0000 84      :
0000 85      :
0000 86      :
0000 87      : OWN STORAGE:
0000 88      :     NONE
0000 89      :
```

```

0000 91      .SBTTL MTH$HMAX1
0000 92
0000 93      :++
0000 94      : FUNCTIONAL DESCRIPTION:
0000 95      : Returns the maximum of n arguments, n is greater or equal to 1.
0000 96      :
0000 97      : Because the result can not be expressed in 64 bits, the
0000 98      : maximum of arguments 2 through n is returned as argument 1.
0000 99      :
0000 100     :
0000 101     : CALLING SEQUENCE:
0000 102     : CALL MTH$HMAX1 (Maximum.wh.r, {arg.rh.r})
0000 103     :
0000 104     :
0000 105     :
0000 106     : INPUT PARAMETERS:
0000 107     : The n input parameters are G floating-point
0000 108     : values and are call-by-reference.
0000 109     :
0000 110     :
0000 111     : IMPLICIT INPUTS:
0000 112     : NONE
0000 113     :
0000 114     : OUTPUT PARAMETERS:
0000 115     : The H floating output parameter is returned by reference.
0000 116     :
0000 117     : IMPLICIT OUTPUTS:
0000 118     : NONE
0000 119     :
0000 120     : COMPLETION CODES:
0000 121     : NONE
0000 122     :
0000 123     : SIDE EFFECTS:
0000 124     : Reserved Operand exception can occur.
0000 125     :
0000 126     :
0000 127     :--
0000 128     :
51  6C  9A 0000 129     .ENTRY MTH$HMAX1,      ^M<>
      51  D7 0002 130     MOVZBL (AP), R1      ; R1 = arg count
      8C  D5 0005 131     DECL   R1          ; R1 = the actual number of parameters
50  6C  D0 0007 132     TSTL   (AP)+        ; Arg count > 0 test and then bump AP 4
      8C  D5 0009 133     MOVL   (AP), R0      ; save address of result
60  9C  70FD 000E 134     TSTL   (AP)+        ; AP -> first arg
      09  11 0012 135 1$:  MOVH   @ (AP)+, (R0)   ; (R0) = trial max
60  00  BC  71FD 0014 136     BRB    3$           ; check arg count
      F3  18 0019 137 2$:  CMPH   @ (AP), (R0)   ; if this arg is greater than trial max
      8C  D5 001B 138     BGEQ  1$           ; then it becomes trial max
      F4  51  F5 001D 139     TSTL   (AP)+        ; else ignore it
      04  0020 140 3$:  SOBGTR R1, 2$      ; return if arg count exhausted
      0021 141     RET
      0021 142
      0021 143     .END

```

MTHSHMAX1
Symbol table

HMAX1 function

D 4

16-SEP-1984 01:37:15
6-SEP-1984 11:25:06

VAX/VMS Macro V04-00
[MTHRTL.SRC]MTHHMAX1.MAR;1

Page 5
(4)

MTH
3-C

MTHSHMAX1 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	00000021 (33.)	01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.10	00:00:00.52
Command processing	118	00:00:00.56	00:00:03.76
Pass 1	70	00:00:00.41	00:00:01.82
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	39	00:00:00.31	00:00:01.86
Symbol table output	2	00:00:00.02	00:00:00.12
Psect synopsis output	2	00:00:00.02	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	262	00:00:01.43	00:00:08.12

The working set limit was 900 pages.
1481 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.
143 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\$:MTHHMAX1/OBJ=OBJ\$:MTHHMAX1 MSRCS:MTHHMAX1/UPDATE=(ENHS:MTHHMAX1)

