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LLLLLLLLLLLL           IIIIIII
LLLLLLLLLLLL           IIIIIII

SSSSSSSSS             SS
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SSSSSSSSS             SS
SSSSSSS               SSSSSSS
SSSSSSS               SSSSSS
SS                     SSS
SS                     SSS
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```


(2) 50
(3) 57
(4) 88

HISTORY ; Detailed Current Edit History
DECLARATIONS
MTH\$GNINT - return nearest integer as G REAL*8


```
0000 1 .TITLE MTH$GNINT - Nearest Integer
0000 2 .IDENT /1-001/ ; File: MTHGNINT.MAR
0000 3
0000 4 :
0000 5 :*****
0000 6 :*
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0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28 :
0000 29 : FACILITY: MATH LIBRARY
0000 30 :++
0000 31 : ABSTRACT:
0000 32 : This module contains routine MTH$GNINT:
0000 33 : Return the rounded G floating-point argument.
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, 26-Jan-1979: Version 1
0000 44 :
0000 45 : MODIFIED BY:
0000 46 :
0000 47 :
0000 48 :
```


MTH\$GNINT
1-001

D 1
- Nearest Integer
HISTORY ; Detailed Current Edit History 16-SEP-1984 01:29:45 VAX/VMS Macro V04-00
6-SEP-1984 11:23:56 [MTHRTL.SRC]MTHGNINT.MAR;1 Page 2
(2)
.SBTTL HISTORY ; Detailed Current Edit History
0000 50
0000 51
0000 52
0000 53 ; Edit History for Version 1 of MTH\$GNINT
0000 54
0000 55 ; 1-001 - Adapted from MTH\$DNINT version 1-001. SBL 26-Jan-1979


```

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

```

- Nearest Integer

MTH\$GNINT - return nearest integer as G

```
0000 88      .SBTTL MTH$GNINT - return nearest integer as G REAL*8
0000 89
0000 90      :++
0000 91      : FUNCTIONAL DESCRIPTION:
0000 92      : Returns the rounded (away from zero) argument.
0000 93      :
0000 94      :
0000 95      : CALLING SEQUENCE:
0000 96      :
0000 97      : Nearest_integer.wg.v = MTH$GNINT (arg.rg.r)
0000 98      :
0000 99      :
0000 100     : INPUT PARAMETERS:
0000 101     : The input parameter is a G floating-point value
0000 102     : and is call-by-reference.
0000 103     :
0000 104     :
0000 105     : IMPLICIT INPUTS:
0000 106     : NONE
0000 107     :
0000 108     : OUTPUT PARAMETERS:
0000 109     : NONE
0000 110     :
0000 111     : IMPLICIT OUTPUTS:
0000 112     : NONE
0000 113     :
0000 114     : COMPLETION CODES:
0000 115     : NONE
0000 116     :
0000 117     : SIDE EFFECTS:
0000 118     : Reserved Operand and Floating Overflow exceptions can occur.
0000 119     :
0000 120     :
0000 121     :--
0000 122
0000 123
0000 124
0000 125     .ENTRY MTH$GNINT, ^M<R2, R3>
0000 126     ADDG3 #0.5, @4(AP), R0      ; R0/R1 = arg + 0.5
0000 127     BGTR 1$                  ; branch if positive
0000 128     SUBG2 #1.0, R0           ; R0/R1 = arg - 0.5
0000 129 1$: EMODG R0, #0, #1, R2, R2 ; R2/R3 = fraction_part(R0/R1)
0000 130     SUBG2 R2, R0              ; R0/R1 = integer_part(R0)
0000 131     RET
0000 132
0000 133
0000 134     .END
```

```
50 04 BC 00 000C
04 14 0008
50 08 42FD 000A
52 52 08 00 50 54FD 000E
50 52 42FD 0015
04 0019
```


MTH\$GNINT
Symbol table

- Nearest Integer

G 1

16-SEP-1984 01:29:45 VAX/VMS Macro V04-00
6-SEP-1984 11:23:56 [MTHRTL.SRC]MTHGNINT.MAR;1

Page 5
(4)

MTH\$GNINT 00000000 RG 01

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

PSECT name	Allocation	PSECT No.	Attributes
ABS	00000000 (0.)	00 (0.)	NOPIC USR
MTH\$CODE	0000001A (26.)	01 (1.)	PIC USR

CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
CON REL LCL SHR EXE RD NOWRT NOVEC LONG

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

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.07	00:00:01.10
Command processing	116	00:00:00.55	00:00:02.70
Pass 1	76	00:00:00.38	00:00:01.35
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	37	00:00:00.33	00:00:01.29
Symbol table output	2	00:00:00.01	00:00:00.01
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	264	00:00:01.36	00:00:06.47

The working set limit was 900 pages.
1386 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 1 local symbols.
134 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

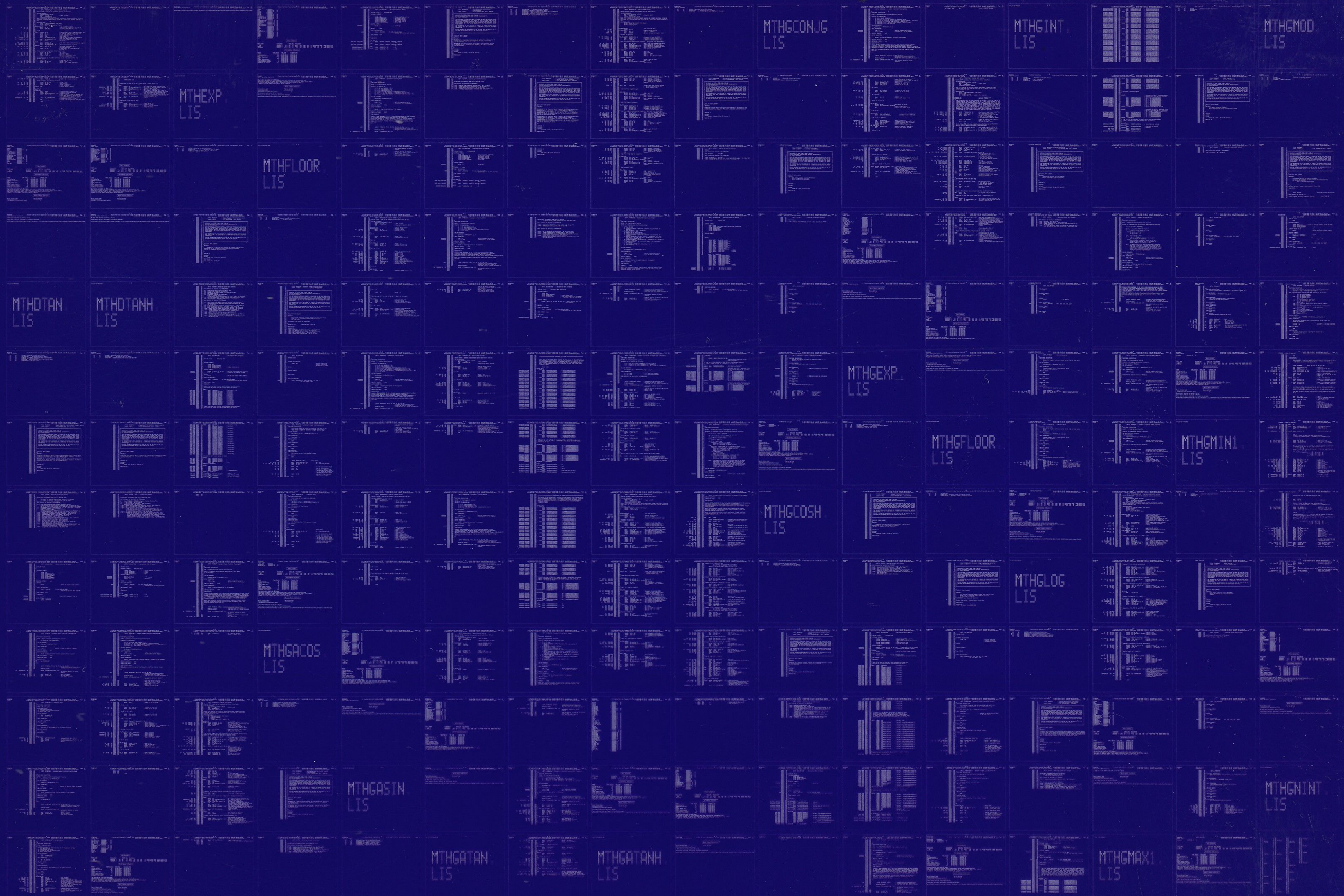
0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

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

0260 AH-BT13A-SE
VAX/VMS V4.0

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