





MTH\$IGNNT  
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- Nearest Integer

B 15

16-SEP-1984 01:42:14 VAX/VMS Macro V04-00

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(4) 84

HISTORY ; Detailed Current Edit History  
DECLARATIONS  
MTH\$IGNNT - return nearest integer as INTEGER\*2

```

0000 1 .TITLE MTH$IIGNNT - Nearest Integer
0000 2 .IDENT /1-002/ ; File: MTH$IIGNNT.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 :
0000 30 : FACILITY: MATH LIBRARY
0000 31 :++
0000 32 : ABSTRACT:
0000 33 :
0000 34 : Return nearest integer of a G REAL*8 to a INTEGER*2.
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, 05-Feb-79: Version 1
0000 44 :
0000 45 : MODIFIED BY:
0000 46 :
0000 47 :
0000 48 :

```

MTHSIIGNNT  
1-002

D 15

- Nearest Integer  
HISTORY ; Detailed Current Edit History 16-SEP-1984 01:42:14 VAX/VMS Macro V04-00 Page 2  
6-SEP-1984 11:25:58 [MTHRTL.SRC]MTHSIIGNNT.MAR;1 (2)

0000 50 .SBTTL HISTORY ; Detailed Current Edit History  
0000 51  
0000 52  
0000 53 ; Edit History for Version 1 of MTHSIIGNNT  
0000 54 :  
0000 55 : 1-001 - Original. SBL 05-Feb-79  
0000 56 : 1-002 - Use CVTRGL. SBL 21-Aug-1979

MT  
1-

```
0000 58      .SBTTL DECLARATIONS
0000 59
0000 60 :
0000 61 : INCLUDE FILES:
0000 62 :
0000 63 :
0000 64 :
0000 65 : EXTERNAL SYMBOLS:
0000 66 :
0000 67 :
0000 68 :
0000 69 : MACROS:
0000 70 :
0000 71 :
0000 72 :
0000 73 : PSECT DECLARATIONS:
0000 74 :   .PSECT _MTH$CODE      PIC, SHR, LONG, EXE, NOWRT
0000 75 :
0000 76 :
0000 77 : EQUATED SYMBOLS:
0000 78 :
0000 79 :
0000 80 :
0000 81 : OWN STORAGE:
0000 82 :
```

- Nearest Integer

MTH\$IIGNNT - return nearest integer as I

0000 84 .SBTTL MTH\$IIGNNT - return nearest integer as INTEGER\*2

0000 85

0000 86 :++

0000 87 : FUNCTIONAL DESCRIPTION:

0000 88

0000 89 : Returns the nearest integer (rounded away from zero) of a G

0000 90 : REAL\*8 to a INTEGER\*2 as a function value.

0000 91

0000 92 : CALLING SEQUENCE:

0000 93

0000 94 : nearest\_int.w.v = MTH\$IIGNNT (arg.rg.r)

0000 95

0000 96

0000 97 : INPUT PARAMETERS:

00000004

0000 98 : arg = 4 ; G floating argument

0000 99

0000 100 : IMPLICIT INPUTS:

0000 101 : NONE

0000 102

0000 103 : OUTPUT PARAMETERS:

0000 104 : NONE

0000 105

0000 106 : IMPLICIT OUTPUTS:

0000 107 : NONE

0000 108

0000 109 : FUNCTION VALUE:

0000 110 : nearest\_integer - The integer nearest to arg, rounded  
0000 111 : away from zero.

0000 112

0000 113 : SIDE EFFECTS:

0000 114 : Reserved operand, Integer overflow exceptions.

0000 115

0000 116 :--

0000 117

0000 118

0000 119

50 04 BC 4000  
50 50 F7  
04

0000 120 :.ENTRY MTH\$IIGNNT, ^M<IV>

0002 121 : CVTRGL @arg(AP), R0 ; R0 = rounded arg

0007 122 : CVTLW R0, R0 ; R0 = word result

000A 123 : RET

000B 124

000B 125

000B 126 :.END

MTH\$IIGNNT  
Symbol table

- Nearest Integer

G 15

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VAX/VMS Macro V04-00  
[MTHRTL.SRC]MTH\$IIGNNT.MAR;1

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(4)

ARG = 00000004  
MTH\$IIGNNT 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 | 0000000B ( 11.) | 01 ( 1.)  | PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG         |

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

| Phase                  | Page faults | CPU Time    | Elapsed Time |
|------------------------|-------------|-------------|--------------|
| Initialization         | 31          | 00:00:00.09 | 00:00:01.29  |
| Command processing     | 147         | 00:00:00.60 | 00:00:03.92  |
| Pass 1                 | 77          | 00:00:00.39 | 00:00:02.34  |
| Symbol table sort      | 0           | 00:00:00.00 | 00:00:00.00  |
| Pass 2                 | 38          | 00:00:00.29 | 00:00:01.32  |
| Symbol table output    | 1           | 00:00:00.01 | 00:00:00.02  |
| Psect synopsis output  | 2           | 00:00:00.02 | 00:00:00.19  |
| Cross-reference output | 0           | 00:00:00.00 | 00:00:00.00  |
| Assembler run totals   | 298         | 00:00:01.41 | 00:00:09.09  |

The working set limit was 750 pages.  
1215 bytes (3 pages) of virtual memory were used to buffer the intermediate code.  
There were 10 pages of symbol table space allocated to hold 2 non-local and 0 local symbols.  
126 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\$:MTH\$IIGNNT/OBJ=OBJ\$:MTH\$IIGNNT MSRC\$:MTH\$IIGNNT/UPDATE=(ENH\$:MTH\$IIGNNT)



MTHSIGN LIS

MTHFLOOR LIS

MTHSIGN LIS

MTHMINI LIS

MTHLOG LIS

MTHHTAN LIS

MTHIDNNT LIS

MTHIHNT LIS

MTHHSORT LIS

MTHIMAX0 LIS

MTHHINT LIS

MTHHSINH LIS

MTHHTANH LIS

MTHHINT LIS

MTHMAX1 LIS

MTHHSINCO LIS

MTHMOD LIS

MTHIGNNT LIS