


```

MM      MM      TTTTTTTTTT  HH      HH      JJ      NN      NN      IIIIII  NN      NN      TTTTTTTTTT
MM      MM      TTTTTTTTTT  HH      HH      JJ      NN      NN      IIIIII  NN      NN      TTTTTTTTTT
MMMM    MMMM      TT      HH      HH      JJ      NN      NN      II      NN      NN      TT
MMMM    MMMM      TT      HH      HH      JJ      NN      NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NNNN   NN      NN      II      NNNN  NN      TT
MM      MM      TT      HH      HH      JJ      NNNN   NN      NN      II      NNNN  NN      TT
MM      MM      TT      HHHHHHHHHH  JJ      NN      NN      II      NN      NN      TT
MM      MM      TT      HHHHHHHHHH  JJ      NN      NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NNNN  NN      II      NN      NNNN  TT
MM      MM      TT      HH      HH      JJ      NN      NNNN  NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NN      NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NN      NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NN      NN      II      NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NN      NN      IIIIII  NN      NN      TT
MM      MM      TT      HH      HH      JJ      NN      NN      NN      IIIIII  NN      NN      TT

```

```

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

```

```

....
....
....
....

```

(2)	51	HISTORY ; Detailed Current Edit History
(3)	62	DECLARATIONS
(4)	93	MTH\$JNINT - return nearest integer as INTEGER*4

M
S
E
E
M

P
L
I
P

A
I
H
O
S
P
S
O
A
C
O
U
N
T
I
N
G

O

E
I
O
T
E

```

0000 1 .TITLE MTH$JNINT - Nearest Integer
0000 2 .IDENT /2-001/ ; File: MTHJNINT.MAR
0000 3
0000 4
0000 5 :*****
0000 6 :*
0000 7 :* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
0000 8 :* DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
0000 9 :* ALL RIGHTS RESERVED.
0000 10 :*
0000 11 :* THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
0000 12 :* ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
0000 13 :* INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
0000 14 :* COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
0000 15 :* OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
0000 16 :* TRANSFERRED.
0000 17 :*
0000 18 :* THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
0000 19 :* AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
0000 20 :* CORPORATION.
0000 21 :*
0000 22 :* DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23 :* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24 :*
0000 25 :*
0000 26 :*****
0000 27
0000 28
0000 29 : FACILITY: MATH LIBRARY
0000 30 :++
0000 31 : ABSTRACT:
0000 32 : This module contains routine MTH$JNINT:
0000 33 : Round floating-point argument and return as a longword integer.
0000 34 :
0000 35 :
0000 36 :--
0000 37
0000 38 : VERSION: 1
0000 39
0000 40 : HISTORY:
0000 41
0000 42 : AUTHOR:
0000 43 : Jonathan M. Taylor, 28-Jul-77: Version 0
0000 44
0000 45 : MODIFIED BY:
0000 46
0000 47 : Steven B. Lionel, 19-Feb-1979: Version 2
0000 48
0000 49 :

```

MTH\$JNINT
2-001

```
0000 51 .SBTTL HISTORY ; Detailed Current Edit History
0000 52
0000 53
0000 54 ; Edit History for Version 1 of MTH$JNINT
0000 55 :
0000 56 : 0-3 - Remove MTH$FLAG_JACKET. TNH 5-July-78
0000 57 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 58 : 1-002 - Add "" to the PSECT directive. JBS 22-DEC-78
0000 59 : 1-003 - Add IV to entry mask. SBL 06-Feb-79
0000 60 : 2-001 - Use CVTRFL. SBL 19-Feb-79
```

```
0000 62      .SBTTL DECLARATIONS
0000 63
0000 64 :
0000 65 : INCLUDE FILES:
0000 66 :     NONE
0000 67 :
0000 68
0000 69 :
0000 70 : EXTERNAL SYMBOLS:
0000 71 :     NONE
0000 72 :
0000 73
0000 74 :
0000 75 : MACROS:
0000 76 :     NONE
0000 77 :
0000 78
0000 79 :
0000 80 : PSECT DECLARATIONS:
0000 81 :     .PSECT _MTH$CODE      PIC, SHR, LONG, EXE, NOWRT
0000 82
0000 83 :
0000 84 : EQUATED SYMBOLS:
0000 85 :     NONE
0000 86 :
0000 87
0000 88 :
0000 89 : OWN STORAGE:
0000 90 :     NONE
0000 91 :
```

```

0000 93      .SBTTL MTH$JNINT - return nearest integer as INTEGER*4
0000 94
0000 95      :++
0000 96      : FUNCTIONAL DESCRIPTION:
0000 97      : MTH$JNINT returns as its function value the INTEGER*4
0000 98      : integer nearest its REAL*4 argument, rounded away from zero.
0000 99      :
0000 100     :
0000 101     : CALLING SEQUENCE:
0000 102     : Nearest_integer.wl.v = MTH$JNINT (arg.rf.r)
0000 103     :
0000 104     :
0000 105     :
0000 106     : INPUT PARAMETERS:
0000 107     : The input parameter is single-precision floating-point value
0000 108     : and is call-by-reference.
0000 109     :
0000 110     :
0000 111     : IMPLICIT INPUTS:
0000 112     : NONE
0000 113     :
0000 114     : OUTPUT PARAMETERS:
0000 115     : NONE
0000 116     :
0000 117     : IMPLICIT OUTPUTS:
0000 118     : NONE
0000 119     :
0000 120     : FUNCTION VALUE:
0000 121     : nearest_integer - trunc(arg + .5*sign(arg))
0000 122     :
0000 123     : SIDE EFFECTS:
0000 124     : Reserved operand and integer overflow exceptions may occur.
0000 125     :
0000 126     :
0000 127     :--
0000 128
0000 129
0000 130     .ENTRY MTH$JNINT,      ^M<IV>
0002 131     CVTRFL @4(AP), R0      ; R0 gets rounded argument
0006 132     RET
0007 133
0007 134     .END

```

50 04 BC 4000
4B
04

MTH\$JNINT
Symbol table

- Nearest Integer

D 6

16-SEP-1984 01:46:18 VAX/VMS Macro V04-00
6-SEP-1984 11:26:37 [MTHRTL.SRC]MTHJNINT.MAR;1

Page 5
(4)

MTH\$JNINT 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	00000007 (7.)	01 (1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG		

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	38	00:00:00.10	00:00:00.80
Command processing	114	00:00:00.58	00:00:04.06
Pass 1	67	00:00:00.35	00:00:03.26
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	38	00:00:00.33	00:00:02.16
Symbol table output	1	00:00:00.00	00:00:00.22
Psect synopsis output	2	00:00:00.02	00:00:00.08
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	262	00:00:01.39	00:00:10.60

The working set limit was 750 pages.
1237 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 0 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\$:MTHJNINT/OBJ=OBJ\$:MTHJNINT MSRC\$:MTHJNINT/UPDATE=(ENH\$:MTHJNINT)

