```
MMM          MMM  TTTTTTTTTTTTTTT   HHH          HHH  RRRRRRRRRRR     TTTTTTTTTTTTTTT   LLL
MMM          MMM  TTTTTTTTTTTTTTT   HHH          HHH  RRRRRRRRRRRR    TTTTTTTTTTTTTTT   LLL
MMM          MMM  TTTTTTTTTTTTTTT   HHH          HHH  RRRRRRRRRRRR    TTTTTTTTTTTTTTT   LLL
MMMMMM    MMMMMM        TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMMMMM    MMMMMM        TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMMMMM    MMMMMM        TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMM   MMM   MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMM   MMM   MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMM   MMM   MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLL
MMM         MMM         TTT         HHHHHHHHHHHHHHHH  RRRRRRRRRRR           TTT         LLL
MMM         MMM         TTT         HHHHHHHHHHHHHHHH  RRRRRRRRRRRR          TTT         LLL
MMM         MMM         TTT         HHHHHHHHHHHHHHHH  RRRRRRRRRRRR          TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR   RRR             TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR   RRR             TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR   RRR             TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR      RRR          TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR      RRR          TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR      RRR          TTT         LLL
MMM         MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLLLLLLLLLLLLLLL
MMM         MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLLLLLLLLLLLLLLL
MMM         MMM         TTT         HHH          HHH  RRR         RRR       TTT         LLLLLLLLLLLLLLLL
```

```
MM      MM  TTTTTTTTTT  HH      HH    IIIIII      IIIIII    HH      HH  NN      NN  NN      NN  TTTTTTTTTT
MM      MM  TTTTTTTTTT  HH      HH    IIIIII      IIIIII    HH      HH  NN      NN  NN      NN  TTTTTTTTTT
MMMM  MMMM      TT      HH      HH      II          II      HH      HH  NN      NN  NN      NN      TT
MMMM  MMMM      TT      HH      HH      II          II      HH      HH  NN      NN  NN      NN      TT
MM  MM  MM      TT      HH      HH      II          II      HH      HH  NNNN    NN  NNNN    NN      TT
MM  MM  MM      TT      HH      HH      II          II      HH      HH  NNNN    NN  NNNN    NN      TT
MM      MM      TT      HHHHHHHHHH      II          II      HHHHHHHHHH  NN  NN  NN  NN  NN  NN      TT
MM      MM      TT      HHHHHHHHHH      II          II      HHHHHHHHHH  NN  NN  NN  NN  NN  NN      TT
MM      MM      TT      HH      HH      II          II      HH      HH  NN    NNNN  NN    NNNN      TT
MM      MM      TT      HH      HH      II          II      HH      HH  NN    NNNN  NN    NNNN      TT
MM      MM      TT      HH      HH      II          II      HH      HH  NN      NN  NN      NN      TT      ....
MM      MM      TT      HH      HH      II          II      HH      HH  NN      NN  NN      NN      TT      ....
MM      MM      TT      HH      HH    IIIIII      IIIIII    HH      HH  NN      NN  NN      NN      TT      ....
MM      MM      TT      HH      HH    IIIIII      IIIIII    HH      HH  NN      NN  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
```

Table of contents

```
0000     1          .TITLE  MTH$IIHNNT - Nearest Integer of H
0000     2          .IDENT  /1-001/         ; File: MTHIIHNNT.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 ;
0000    33 ;       Return nearest integer of a REAL*16 to a INTEGER*2.
0000    34 ;
0000    35 ;--
0000    36 ;
0000    37 ; VERSION: 1
0000    38 ;
0000    39 ; HISTORY:
0000    40 ;
0000    41 ; AUTHOR:
0000    42 ;       Steven B. Lionel, 21-Aug-1979
0000    43 ;
0000    44 ; MODIFIED BY:
0000    45 ;
0000    46 ;
0000    47 ;
```

```
0000     49          .SBTTL  HISTORY         ; Detailed Current Edit History
0000     50
0000     51
0000     52 ; Edit History for Version 1 of MTH$IIHNNT
0000     53 ;
0000     54 ; 1-001 - Original.  SBL 21-Aug-79
```

```
                     56          .SBTTL  DECLARATIONS
                     57
                     58 ;
                     59 ; INCLUDE FILES:
                     60 ;
                     61
                     62 ;
                     63 ; EXTERNAL SYMBOLS:
                     64 ;
                     65
                     66 ;
                     67 ; MACROS:
                     68 ;
                     69
                     70 ;
                     71 ; PSECT DECLARATIONS:
00000000             72          .PSECT  _MTH$CODE       PIC, SHR, LONG, EXE, NOWRT
                     73
                     74 ;
                     75 ; EQUATED SYMBOLS:
                     76 ;
                     77
                     78 ;
                     79 ; OWN STORAGE:
                     80 ;
```

```
                                        .SBTTL  MTH$IIHNNT - return nearest integer as INTEGER*2

                                ;++
                                ; FUNCTIONAL DESCRIPTION:
                                ;
                                ; Returns the nearest integer (rounded away from zero) of a
                                ; REAL*16 to a INTEGER*2 as a function value.
                                ;
                                ; CALLING SEQUENCE:
                                ;
                                ;       result.ww.v = MTH$IIHNNT (arg.rh.r)
                                ;
                                ;
                                ; INPUT PARAMETERS:
                00000004        ;       arg = 4         ; H floating argument
                                ;
                                ; IMPLICIT INPUTS:
                                ;       NONE
                                ;
                                ; OUTPUT PARAMETERS:
                                ;       NONE
                                ;
                                ; IMPLICIT OUTPUTS:
                                ;       NONE
                                ;
                                ; FUNCTION VALUE:
                                ;       The argument rounded to the nearest word integer away from
                                ;       zero.
                                ;
                                ; SIDE EFFECTS:
                                ;       Reserved operand, Integer overflow exceptions.
                                ;
                                ;--


                        4000    .ENTRY  MTH$IIHNNT,     ^M<IV>
    50    04 BC     6BFD      CVTRHL  @arg(AP), R0            ; R0 = rounded argument
       50    50       F7      CVTLW   R0, R0                  ; R0 = word result
                        04      RET

                                .END
```

```
ARG             = 00000004
MTH$IIHNNT        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	29	00:00:00.11	00:00:00.59
Command processing	112	00:00:00.55	00:00:04.97
Pass 1	65	00:00:00.38	00:00:02.90
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	38	00:00:00.29	00:00:01.17
Symbol table output	1	00:00:00.00	00:00:00.02
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	249	00:00:01.35	00:00:09.67

```
The working set limit was 900 pages.
1199 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.
124 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$:MTHIIHNNT/OBJ=OBJ$:MTHIIHNNT MSRC$:MTHIIHNNT/UPDATE=(ENH$:MTHIIHNNT)
```

MTHIISIGN
LIS

MTHHFLOOR
LIS

MTHHSIGN
LIS

MTHHMIN
LIS

MTHHLOG
LIS

MTHHTAN
LIS

MTHIIONNT
LIS

MTHIIHNNT
LIS

MTHHSQRT
LIS

MTHIMAX0
LIS

MTHHNINT
LIS

MTHHSINH
LIS

MTHHTANH
LIS

MTHHINT
LIS

MTHHMAX1
LIS

MTHHSINCO
LIS

MTHHMOD
LIS

MTHIIGNNT
LIS