

File created: 7-Jul-85 12:26:39 {ERIS}<LISPCORE>LIBRARY>MACROTESTAUX.;2

changes to: (FNS !MIXNUMTEST)

previous date: 3-Dec-84 19:19:33 {ERIS}<LISPCORE>LIBRARY>MACROTESTAUX.;1

Read Table: OLD-INTERLISP-FILE

Package: INTERLISP

Format: XCCS

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(RPAQQ **MACROTESTAUXCOMS**

```
[ (E (RADIX 8))
  (DECLARE: EVAL@COMPILE DONTCOPY (P (LOADCOMP (QUOTE MACROTEST)))
    (DECLARE: DONTEVAL@LOAD (P (RESETSAVE OPTIMIZATIONSOFF T)
      (COMS (* "Test out of free variables")
        (FNS !FVARTEST PUSH.TEST CALLS.FIRSTARGTEST CALLS.LASTARGTEST CALLS.TOOFEWARGS FVAR.FREE FVAR.TEST
          FVAR.TEST2 FVAR.TEST3 FN.FIRSTARG.FVARS FN.FIRSTARG.PVARS.FVARS FN.LASTARG.FVARS
          FN.LASTARG.FVARS.PVARS FVAR.TESTN FN.FREE.SKIPPVARS FN.FREEPVAR FN.FVAR3 FN.FREEARG FN.FR1
          FN.FR2 FN.FR3 FAULTTEST)
        (VARS (F0 0)
          (F1 1)
          (F2 2)
          (F3 3)
          (F4 4)
          (F5 5)
          (F6 6)
          (F7 7)
          (F8 8)))
        (* "Test out of numeric capabilities")
        (FNS !NUMBERTEST !NUMTEST1 !NUMTEST2 !NUMTEST3 !NUMTEST4 !NUMTEST5 !NUMTEST6 !RANDNUMTEST !RANDNUMTEST1
          !RANDNUMTEST2 !RANDNUMTEST3 !RANDNUMTEST4 !FNUMTEST !FNUMTEST1 !FNUMTEST2 !FNUMTEST3 !FNUMTEST4
          !FNUMTEST5 !MIXNUMTEST)
        (* "Compiler error may prevent some of the above functions from getting compiled")
        (DECLARE: DONTEVAL@LOAD DONTEVAL@COMPILE DOCOPY (P (MAPC (OR (FILEFNLSLST (QUOTE MACROTESTAUX))
          (QUOTE (PUSH.TEST)))
          (FUNCTION (LAMBDA (X)
            (MOVD? (QUOTE NIL)
              X]))
          (DECLARE: EVAL@COMPILE DONTCOPY
            (LOADCOMP (QUOTE MACROTEST))
            (DECLARE: DONTEVAL@LOAD
              (RESETSAVE OPTIMIZATIONSOFF T)
            )
            )
          ;; Test out of free variables
          (DEFINEQ
            (!FVARTEST
              [LAMBDA NIL
                (PUSH.TEST)
                (CALLS.FIRSTARGTEST)
                (CALLS.LASTARGTEST)
                (CALLS.TOOFEWARGS)
                (FVAR.FREE)
                (FVAR.TEST)
                (FVAR.TEST2)
                (FVAR.TEST3)])
              (* JonL " 1-Jun-84 18:19")
            (PUSH.TEST
              [LAMBDA (I0 I1 I2 I3 I4)
                (PROG (P0 P1 P2 P3 P4 P5 P6 P7 P8)
                  [PROGN (MTCHECKSTK (COND
                    ((NULL F0)
                     F0))
                    (MTCHECKSTK (COND
                    ((NULL F1)
                     F1))
                    (MTCHECKSTK (COND
                    ((NULL F2)
                     F2))
                    (MTCHECKSTK (COND
                    ((NULL F3)
                     F3))
                    (MTCHECKSTK (COND
                    ((NULL F4)
```

```

      F4)))
(MTCHECKSTK (COND
  ((NULL F5)
   F5)))
(MTCHECKSTK (COND
  ((NULL F6)
   F6)))
(MTCHECKSTK (COND
  ((NULL F7)
   F7)))
(MTCHECKSTK (COND
  ((NULL F8)
   F8])
(PROGN (MTCHECKSTK (COND
  ((NULL P0)
   P0)))
(MTCHECKSTK (COND
  ((NULL P1)
   P1)))
(MTCHECKSTK (COND
  ((NULL P7)
   P7)))
(MTCHECKSTK (COND
  ((NULL P8)
   P8]))

```

(CALLS.FIRSTARGTEST

(* JonL " 1-Jun-84 18:19")

```

[LAMBDA NIL
  (MTCHECK (EQ (FN.FIRSTARG.FVARS 1 2 3)
    1)
    (EQ (FN.FIRSTARG.PVARS.FVARS 1 2 3)
      1]))

```

(CALLS.LASTARGTEST

(* JonL " 1-Jun-84 18:19")

```

[LAMBDA NIL
  (MTCHECK (EQ (FN.LASTARG.FVARS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15)
    15)
    (MTCHECK (EQ (FN.LASTARG.FVARS.PVARS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15)
      15]))

```

(CALLS.TOOFEWARGS

(* JonL " 1-Jun-84 18:19")

```

[LAMBDA NIL
  (MTCHECK (EQ (FN.FIRSTARG.PVARS.FVARS 1 2)
    1)
    (EQ (FN.FIRSTARG.PVARS.FVARS)
      NIL)
    (EQ (FN.LASTARG.FVARS 1 2 3 4 5 6 7 8 9 10 11 12 13 14)
      NIL]))

```

(FVAR.FREE

(* JonL " 1-Jun-84 18:19")

```

[LAMBDA NIL
  (PROGN (SETQ F0 100)
    (SETQ F1 101)
    (SETQ F2 102)
    (SETQ F3 103)
    (SETQ F4 104)
    (SETQ F5 105)
    (SETQ F6 106)
    (SETQ F7 107)
    (SETQ F8 108)
    (MTCHECK (EQ F0 100)
      (EQ F1 101)
      (EQ F2 102)
      (EQ F3 103)
      (EQ F4 104)
      (EQ F5 105)
      (EQ F6 106)
      (EQ F7 107)
      (EQ F8 108))
    (SETQ F0 0)
    (SETQ F1 1)
    (SETQ F2 2)
    (SETQ F3 3)
    (SETQ F4 4)
    (SETQ F5 5)
    (SETQ F6 6)
    (SETQ F7 7)
    (SETQ F8 8]))

```

(FVAR.TEST

(* JonL " 1-Jun-84 18:19")

```

[LAMBDA (FLG)
  [PROG ((FREE.VAR.FLAG (QUOTE FREE.VALUE))

```

```

(FREE.VAR (QUOTE GARBAGE)))
(DECLARE (SPECVARS . T))
(FN.FR1)
(MTCHECK (NULL FREE.VAR.FLAG))
(MTCHECK (EQ FREE.VAR (QUOTE FREE.VALUE])
(PROG ((FREE.VAR.FLAG (QUOTE FREE.VALUE)))
(DECLARE (SPECVARS . T))
(FN.FR1)
(MTCHECK (NULL FREE.VAR.FLAG))
(MTCHECK (EQ FREE.VAR (QUOTE FREE.VALUE])

```

(FVAR.TEST2

```

[LAMBDA NIL
 (PROG ((FVAR1 1)
 (FVAR2 2)
 (FVAR3 3))
 (FVAR.TEST T])

```

(* Imm "31-JUL-81 15:58")

(FVAR.TEST3

```

[LAMBDA NIL
 (FVAR.TESTN 1 2 3)]

```

(* Imm " 3-JAN-80 01:46")

(FN.FIRSTARG.FVARS

```

[LAMBDA (X Y Z)
 (COND
 (NIL FREE.1)
 (NIL FREE.2)
 (NIL FREE.3)
 (T X])

```

(* JonL " 1-Jun-84 18:32")

(FN.FIRSTARG.PVARS.FVARS

```

[LAMBDA (X Y Z)
 (PROG (P D Q)
 (RETURN (COND
 (P FREE.1)
 (P FREE.2)
 (P FREE.3)
 (T X])

```

(* JonL " 1-Jun-84 18:33")

(FN.LASTARG.FVARS

```

[LAMBDA (A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15)
 (COND
 (NIL FREE.1)
 (NIL FREE.2)
 (NIL FREE.3)
 (T A15])

```

(* JonL " 1-Jun-84 18:34")

(FN.LASTARG.FVARS.PVARS

```

[LAMBDA (A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15)
 (PROG (P1 P2 P3)
 (RETURN (COND
 (NIL FREE.1)
 (NIL FREE.2)
 (NIL FREE.3)
 (T A15])

```

(* JonL " 1-Jun-84 18:35")

(FVAR.TESTN

```

[LAMBDA (FVAR1 FVAR2 FVAR3)
 (FVAR.TEST T])

```

(* Imm " 3-JAN-80 01:46")

(FN.FREE.SKIPPVARS

```

[LAMBDA NIL
 (PROG (FVAR1 FVAR2 FVAR3)
 ((OPCODES NOP)))
 (FN.FVAR3])

```

(* bvm: "21-OCT-83 12:38")

(FN.FREEPVAR

```

[LAMBDA NIL
 (PROG (FVAR3)
 (SETQ FVAR3 (QUOTE FREEPVAR.VALUE))
 (RETURN (FN.FVAR3])

```

(* bvm: "21-OCT-83 12:29")

(FN.FVAR3

```

[LAMBDA NIL
 FVAR3])

```

(* bvm: "21-OCT-83 12:29")

(FN.FREEARG

[LAMBDA (FVAR3)
(FN.FVAR3)]

(* Imm " 3-JAN-80 01:34")

(FN.FR1

[LAMBDA NIL
(FN.FR2)
(MTCHECK (EQ FREE.VAR (QUOTE FREE.VALUE))

(* JonL " 1-Jun-84 18:19")

(FN.FR2

[LAMBDA NIL
(FN.FR3)
(MTCHECK (EQ FREE.VAR (QUOTE FREE.VALUE))

(* JonL " 1-Jun-84 18:19")

(FN.FR3

[LAMBDA NIL
(COND
(FREE.VAR.FLAG (SETQ FREE.VAR FREE.VAR.FLAG)
(SETQ FREE.VAR.FLAG NIL))
(T (MTCHECK (EQ FREE.VAR (QUOTE FREE.VALUE))

(* JonL " 1-Jun-84 18:19")

(FAULTTEST

[LAMBDA NIL
(SETQ FAULTFVAR 100)
(MTCHECK (EQ 100 (PROGN (\RELEASEWORKINGSET
FAULTFVAR))

(* JonL " 1-Jun-84 18:19")

)

(RPAQQ **F0** 0)

(RPAQQ **F1** 1)

(RPAQQ **F2** 2)

(RPAQQ **F3** 3)

(RPAQQ **F4** 4)

(RPAQQ **F5** 5)

(RPAQQ **F6** 6)

(RPAQQ **F7** 7)

(RPAQQ **F8** 8)

:: Test out of numeric capabilities

(DEFINEQ

(!NUMBERTEST

[LAMBDA NIL
(!NUMTEST1)
(!NUMTEST2)
(!NUMTEST3)
(!NUMTEST4)
(!NUMTEST5)
(!NUMTEST6)]

(* Imm "21-OCT-81 15:50")

(!NUMTEST1

[LAMBDA NIL
(MTCHECKSTK (CKEQ (IGREATERP 0 0)
NIL)
(CKEQ (IPLUS 0 0)
0)
(CKEQ (IDIFFERENCE 0 0)
0)
(CKEQ (LOGOR 0 0)
0)
(CKEQ (LOGAND 0 0)
0)
(CKEQ (LOGXOR 0 0)
0)
(CKEQ (IGREATERP 0 1)
NIL)
(CKEQ (IPLUS 0 1)
1)
(CKEQ (IDIFFERENCE 0 1)
-1)
(CKEQ (LOGOR 0 1)
1)

(* bvm: " 8-MAR-82 22:59")

(CKEQ (LOGAND 0 1)
0)
(CKEQ (LOGXOR 0 1)
1)
(CKEQ (IGREATERP 0 -1)
T)
(CKEQ (IPLUS 0 -1)
-1)
(CKEQ (IDIFFERENCE 0 -1)
1)
(CKEQ (LOGOR 0 -1)
-1)
(CKEQ (LOGAND 0 -1)
0)
(CKEQ (LOGXOR 0 -1)
-1)
(CKEQ (IGREATERP 0 2)
NIL)
(CKEQ (IPLUS 0 2)
2)
(CKEQ (IDIFFERENCE 0 2)
-2)
(CKEQ (LOGOR 0 2)
2)
(CKEQ (LOGAND 0 2)
0)
(CKEQ (LOGXOR 0 2)
2)
(CKEQ (IGREATERP 0 -2)
T)
(CKEQ (IPLUS 0 -2)
-2)
(CKEQ (IDIFFERENCE 0 -2)
2)
(CKEQ (LOGOR 0 -2)
-2)
(CKEQ (LOGAND 0 -2)
0)
(CKEQ (LOGXOR 0 -2)
-2)
(CKEQ (IGREATERP 0 65535)
NIL)
(CKEQ (IPLUS 0 65535)
65535)
(CKEQ (IDIFFERENCE 0 65535)
-65535)
(CKEQ (LOGOR 0 65535)
65535)
(CKEQ (LOGAND 0 65535)
0)
(CKEQ (LOGXOR 0 65535)
65535)
(CKEQ (IGREATERP 0 -65536)
T)
(CKEQ (IPLUS 0 -65536)
-65536)
(CKEQ (IDIFFERENCE 0 -65536)
65536)
(CKEQ (LOGOR 0 -65536)
-65536)
(CKEQ (LOGAND 0 -65536)
0)
(CKEQ (LOGXOR 0 -65536)
-65536)
(CKEQ (IGREATERP 0 65534)
NIL)
(CKEQ (IPLUS 0 65534)
65534)
(CKEQ (IDIFFERENCE 0 65534)
-65534)
(CKEQ (LOGOR 0 65534)
65534)
(CKEQ (LOGAND 0 65534)
0)
(CKEQ (LOGXOR 0 65534)
65534)
(CKEQ (IGREATERP 0 -65537)
T)
(CKEQ (IPLUS 0 -65537)
-65537)
(CKEQ (IDIFFERENCE 0 -65537)
65537)
(CKEQ (LOGOR 0 -65537)
-65537)
(CKEQ (LOGAND 0 -65537)
0)
(CKEQ (LOGXOR 0 -65537)

```

-65537)
(CKEQ (IGREATERP 1 0)
T)
(CKEQ (IPLUS 1 0)
1)
(CKEQ (IDIFFERENCE 1 0)
1)
(CKEQ (LOGOR 1 0)
1)
(CKEQ (LOGAND 1 0)
0)
(CKEQ (LOGXOR 1 0)
1)
(CKEQ (IGREATERP 1 1)
NIL)
(CKEQ (IPLUS 1 1)
2)
(CKEQ (IDIFFERENCE 1 1)
0)
(CKEQ (LOGOR 1 1)
1)
(CKEQ (LOGAND 1 1)
1)
(CKEQ (LOGXOR 1 1)
0)
(CKEQ (IGREATERP 1 -1)
T)
(CKEQ (IPLUS 1 -1)
0)
(CKEQ (IDIFFERENCE 1 -1)
2)
(CKEQ (LOGOR 1 -1)
-1)
(CKEQ (LOGAND 1 -1)
1)
(CKEQ (LOGXOR 1 -1)
-2)
(CKEQ (IGREATERP 1 2)
NIL)
(CKEQ (IPLUS 1 2)
3)
(CKEQ (IDIFFERENCE 1 2)
-1)
(CKEQ (LOGOR 1 2)
3)
(CKEQ (LOGAND 1 2)
0)
(CKEQ (LOGXOR 1 2)
3)
(CKEQ (IGREATERP 1 -2)
T)
(CKEQ (IPLUS 1 -2)
-1)
(CKEQ (IDIFFERENCE 1 -2)
3)
(CKEQ (LOGOR 1 -2)
-1)
(CKEQ (LOGAND 1 -2)
0)
(CKEQ (LOGXOR 1 -2)
-1)
(CKEQ (IGREATERP 1 65535)
NIL)
(CKEQ (IPLUS 1 65535)
65536)
(CKEQ (IDIFFERENCE 1 65535)
-65534)
(CKEQ (LOGOR 1 65535)
65535)
(CKEQ (LOGAND 1 65535)
1)
(CKEQ (LOGXOR 1 65535)
65534)
(CKEQ (IGREATERP 1 -65536)
T)
(CKEQ (IPLUS 1 -65536)
-65535)
(CKEQ (IDIFFERENCE 1 -65536)
65537)
(CKEQ (LOGOR 1 -65536)
-65535)
(CKEQ (LOGAND 1 -65536)
0)
(CKEQ (LOGXOR 1 -65536)
-65535)
(CKEQ (IGREATERP 1 65534)
NIL)

```

(CKEQ (IPLUS 1 65534)
65535)
(CKEQ (IDIFFERENCE 1 65534)
-65533])

(!NUMTEST2

(* bvm: " 8-MAR-82 22:59")

[LAMBDA NIL
(MTCHECKSTK (CKEQ (LOGOR 1 65534)
65535)
(CKEQ (LOGAND 1 65534)
0)
(CKEQ (LOGXOR 1 65534)
65535)
(CKEQ (IGREATERP 1 -65537)
T)
(CKEQ (IPLUS 1 -65537)
-65536)
(CKEQ (IDIFFERENCE 1 -65537)
65538)
(CKEQ (LOGOR 1 -65537)
-65537)
(CKEQ (LOGAND 1 -65537)
1)
(CKEQ (LOGXOR 1 -65537)
-65538)
(CKEQ (IGREATERP -1 0)
NIL)
(CKEQ (IPLUS -1 0)
-1)
(CKEQ (IDIFFERENCE -1 0)
-1)
(CKEQ (LOGOR -1 0)
-1)
(CKEQ (LOGAND -1 0)
0)
(CKEQ (LOGXOR -1 0)
-1)
(CKEQ (IGREATERP -1 1)
NIL)
(CKEQ (IPLUS -1 1)
0)
(CKEQ (IDIFFERENCE -1 1)
-2)
(CKEQ (LOGOR -1 1)
-1)
(CKEQ (LOGAND -1 1)
1)
(CKEQ (LOGXOR -1 1)
-2)
(CKEQ (IGREATERP -1 -1)
NIL)
(CKEQ (IPLUS -1 -1)
-2)
(CKEQ (IDIFFERENCE -1 -1)
0)
(CKEQ (LOGOR -1 -1)
-1)
(CKEQ (LOGAND -1 -1)
-1)
(CKEQ (LOGXOR -1 -1)
0)
(CKEQ (IGREATERP -1 2)
NIL)
(CKEQ (IPLUS -1 2)
1)
(CKEQ (IDIFFERENCE -1 2)
-3)
(CKEQ (LOGOR -1 2)
-1)
(CKEQ (LOGAND -1 2)
2)
(CKEQ (LOGXOR -1 2)
-3)
(CKEQ (IGREATERP -1 -2)
T)
(CKEQ (IPLUS -1 -2)
-3)
(CKEQ (IDIFFERENCE -1 -2)
1)
(CKEQ (LOGOR -1 -2)
-1)
(CKEQ (LOGAND -1 -2)
-2)
(CKEQ (LOGXOR -1 -2)
1)
(CKEQ (IGREATERP -1 65535)

NIL)
(CKEQ (IPLUS -1 65535)
65534)
(CKEQ (IDIFFERENCE -1 65535)
-65536)
(CKEQ (LOGOR -1 65535)
-1)
(CKEQ (LOGAND -1 65535)
65535)
(CKEQ (LOGXOR -1 65535)
-65536)
(CKEQ (IGREATERP -1 -65536)
T)
(CKEQ (IPLUS -1 -65536)
-65537)
(CKEQ (IDIFFERENCE -1 -65536)
65535)
(CKEQ (LOGOR -1 -65536)
-1)
(CKEQ (LOGAND -1 -65536)
-65536)
(CKEQ (LOGXOR -1 -65536)
65535)
(CKEQ (IGREATERP -1 65534)
NIL)
(CKEQ (IPLUS -1 65534)
65533)
(CKEQ (IDIFFERENCE -1 65534)
-65535)
(CKEQ (LOGOR -1 65534)
-1)
(CKEQ (LOGAND -1 65534)
65534)
(CKEQ (LOGXOR -1 65534)
-65535)
(CKEQ (IGREATERP -1 -65537)
T)
(CKEQ (IPLUS -1 -65537)
-65538)
(CKEQ (IDIFFERENCE -1 -65537)
65536)
(CKEQ (LOGOR -1 -65537)
-1)
(CKEQ (LOGAND -1 -65537)
-65537)
(CKEQ (LOGXOR -1 -65537)
65536)
(CKEQ (IGREATERP 2 0)
T)
(CKEQ (IPLUS 2 0)
2)
(CKEQ (IDIFFERENCE 2 0)
2)
(CKEQ (LOGOR 2 0)
2)
(CKEQ (LOGAND 2 0)
0)
(CKEQ (LOGXOR 2 0)
2)
(CKEQ (IGREATERP 2 1)
T)
(CKEQ (IPLUS 2 1)
3)
(CKEQ (IDIFFERENCE 2 1)
1)
(CKEQ (LOGOR 2 1)
3)
(CKEQ (LOGAND 2 1)
0)
(CKEQ (LOGXOR 2 1)
3)
(CKEQ (IGREATERP 2 -1)
T)
(CKEQ (IPLUS 2 -1)
1)
(CKEQ (IDIFFERENCE 2 -1)
3)
(CKEQ (LOGOR 2 -1)
-1)
(CKEQ (LOGAND 2 -1)
2)
(CKEQ (LOGXOR 2 -1)
-3)
(CKEQ (IGREATERP 2 2)
NIL)
(CKEQ (IPLUS 2 2)
4)


```

(CKEQ (IDIFFERENCE 2 2)
0)
(CKEQ (LOGOR 2 2)
2)
(CKEQ (LOGAND 2 2)
2)
(CKEQ (LOGXOR 2 2)
0)
(CKEQ (IGREATERP 2 -2)
T)
(CKEQ (IPLUS 2 -2)
0)
(CKEQ (IDIFFERENCE 2 -2)
4)
(CKEQ (LOGOR 2 -2)
-2)
(CKEQ (LOGAND 2 -2)
2)
(CKEQ (LOGXOR 2 -2)
-4)
(CKEQ (IGREATERP 2 65535)
NIL)
(CKEQ (IPLUS 2 65535)
65537)
(CKEQ (IDIFFERENCE 2 65535)
-65533)
(CKEQ (LOGOR 2 65535)
65535)
(CKEQ (LOGAND 2 65535)
2)
(CKEQ (LOGXOR 2 65535)
65533])

```

(!NUMTEST3

[LAMBDA NIL

(MTCHECKSTK (CKEQ (IGREATERP 2 -65536)

```

T)
(CKEQ (IPLUS 2 -65536)
-65534)
(CKEQ (IDIFFERENCE 2 -65536)
65538)
(CKEQ (LOGOR 2 -65536)
-65534)
(CKEQ (LOGAND 2 -65536)
0)
(CKEQ (LOGXOR 2 -65536)
-65534)
(CKEQ (IGREATERP 2 65534)
NIL)
(CKEQ (IPLUS 2 65534)
65536)
(CKEQ (IDIFFERENCE 2 65534)
-65532)
(CKEQ (LOGOR 2 65534)
65534)
(CKEQ (LOGAND 2 65534)
2)
(CKEQ (LOGXOR 2 65534)
65532)
(CKEQ (IGREATERP 2 -65537)
T)
(CKEQ (IPLUS 2 -65537)
-65535)
(CKEQ (IDIFFERENCE 2 -65537)
65539)
(CKEQ (LOGOR 2 -65537)
-65537)
(CKEQ (LOGAND 2 -65537)
2)
(CKEQ (LOGXOR 2 -65537)
-65539)
(CKEQ (IGREATERP -2 0)
NIL)
(CKEQ (IPLUS -2 0)
-2)
(CKEQ (IDIFFERENCE -2 0)
-2)
(CKEQ (LOGOR -2 0)
-2)
(CKEQ (LOGAND -2 0)
0)
(CKEQ (LOGXOR -2 0)
-2)
(CKEQ (IGREATERP -2 1)
NIL)
(CKEQ (IPLUS -2 1)

```

(* bvm: " 8-MAR-82 23:00")

-1)
(CKEQ (IDIFFERENCE -2 1)
-3)
(CKEQ (LOGOR -2 1)
-1)
(CKEQ (LOGAND -2 1)
0)
(CKEQ (LOGXOR -2 1)
-1)
(CKEQ (IGREATERP -2 -1)
NIL)
(CKEQ (IPLUS -2 -1)
-3)
(CKEQ (IDIFFERENCE -2 -1)
-1)
(CKEQ (LOGOR -2 -1)
-1)
(CKEQ (LOGAND -2 -1)
-2)
(CKEQ (LOGXOR -2 -1)
1)
(CKEQ (IGREATERP -2 2)
NIL)
(CKEQ (IPLUS -2 2)
0)
(CKEQ (IDIFFERENCE -2 2)
-4)
(CKEQ (LOGOR -2 2)
-2)
(CKEQ (LOGAND -2 2)
2)
(CKEQ (LOGXOR -2 2)
-4)
(CKEQ (IGREATERP -2 -2)
NIL)
(CKEQ (IPLUS -2 -2)
-4)
(CKEQ (IDIFFERENCE -2 -2)
0)
(CKEQ (LOGOR -2 -2)
-2)
(CKEQ (LOGAND -2 -2)
-2)
(CKEQ (LOGXOR -2 -2)
0)
(CKEQ (IGREATERP -2 65535)
NIL)
(CKEQ (IPLUS -2 65535)
65533)
(CKEQ (IDIFFERENCE -2 65535)
-65537)
(CKEQ (LOGOR -2 65535)
-1)
(CKEQ (LOGAND -2 65535)
65534)
(CKEQ (LOGXOR -2 65535)
-65535)
(CKEQ (IGREATERP -2 -65536)
T)
(CKEQ (IPLUS -2 -65536)
-65538)
(CKEQ (IDIFFERENCE -2 -65536)
65534)
(CKEQ (LOGOR -2 -65536)
-2)
(CKEQ (LOGAND -2 -65536)
-65536)
(CKEQ (LOGXOR -2 -65536)
65534)
(CKEQ (IGREATERP -2 65534)
NIL)
(CKEQ (IPLUS -2 65534)
65532)
(CKEQ (IDIFFERENCE -2 65534)
-65536)
(CKEQ (LOGOR -2 65534)
-2)
(CKEQ (LOGAND -2 65534)
65534)
(CKEQ (LOGXOR -2 65534)
-65536)
(CKEQ (IGREATERP -2 -65537)
T)
(CKEQ (IPLUS -2 -65537)
-65539)
(CKEQ (IDIFFERENCE -2 -65537)
65535)

```

(CKEQ (LOGOR -2 -65537)
-1)
(CKEQ (LOGAND -2 -65537)
-65538)
(CKEQ (LOGXOR -2 -65537)
65537)
(CKEQ (IGREATERP 65535 0)
T)
(CKEQ (IPLUS 65535 0)
65535)
(CKEQ (IDIFFERENCE 65535 0)
65535)
(CKEQ (LOGOR 65535 0)
65535)
(CKEQ (LOGAND 65535 0)
0)
(CKEQ (LOGXOR 65535 0)
65535)
(CKEQ (IGREATERP 65535 1)
T)
(CKEQ (IPLUS 65535 1)
65536)
(CKEQ (IDIFFERENCE 65535 1)
65534)
(CKEQ (LOGOR 65535 1)
65535)
(CKEQ (LOGAND 65535 1)
1)
(CKEQ (LOGXOR 65535 1)
65534)
(CKEQ (IGREATERP 65535 -1)
T)
(CKEQ (IPLUS 65535 -1)
65534)
(CKEQ (IDIFFERENCE 65535 -1)
65536)
(CKEQ (LOGOR 65535 -1)
-1)
(CKEQ (LOGAND 65535 -1)
65535)
(CKEQ (LOGXOR 65535 -1)
-65536)
(CKEQ (IGREATERP 65535 2)
T)
(CKEQ (IPLUS 65535 2)
65537)
(CKEQ (IDIFFERENCE 65535 2)
65533)
(CKEQ (LOGOR 65535 2)
65535)
(CKEQ (LOGAND 65535 2)
2)
(CKEQ (LOGXOR 65535 2)
65533)
(CKEQ (IGREATERP 65535 -2)
T)
(CKEQ (IPLUS 65535 -2)
65533)
(CKEQ (IDIFFERENCE 65535 -2)
65537)
(CKEQ (LOGOR 65535 -2)
-1])

```

(!NUMTEST4

[LAMBDA NIL

```

(MTCHECKSTK (CKEQ (LOGAND 65535 -2)
65534)
(CKEQ (LOGXOR 65535 -2)
-65535)
(CKEQ (IGREATERP 65535 65535)
NIL)
(CKEQ (IPLUS 65535 65535)
131070)
(CKEQ (IDIFFERENCE 65535 65535)
0)
(CKEQ (LOGOR 65535 65535)
65535)
(CKEQ (LOGAND 65535 65535)
65535)
(CKEQ (LOGXOR 65535 65535)
0)
(CKEQ (IGREATERP 65535 -65536)
T)
(CKEQ (IPLUS 65535 -65536)
-1)
(CKEQ (IDIFFERENCE 65535 -65536)

```

(* bvm: " 8-MAR-82 23:00")

131071)
(CKEQ (LOGOR 65535 -65536
-1)
(CKEQ (LOGAND 65535 -65536)
0)
(CKEQ (LOGXOR 65535 -65536)
-1)
(CKEQ (IGREATERP 65535 65534)
T)
(CKEQ (IPLUS 65535 65534)
131069)
(CKEQ (IDIFFERENCE 65535 65534)
1)
(CKEQ (LOGOR 65535 65534)
65535)
(CKEQ (LOGAND 65535 65534)
65534)
(CKEQ (LOGXOR 65535 65534)
1)
(CKEQ (IGREATERP 65535 -65537)
T)
(CKEQ (IPLUS 65535 -65537)
-2)
(CKEQ (IDIFFERENCE 65535 -65537)
131072)
(CKEQ (LOGOR 65535 -65537)
-65537)
(CKEQ (LOGAND 65535 -65537)
65535)
(CKEQ (LOGXOR 65535 -65537)
-131072)
(CKEQ (IGREATERP -65536 0)
NIL)
(CKEQ (IPLUS -65536 0)
-65536)
(CKEQ (IDIFFERENCE -65536 0)
-65536)
(CKEQ (LOGOR -65536 0)
-65536)
(CKEQ (LOGAND -65536 0)
0)
(CKEQ (LOGXOR -65536 0)
-65536)
(CKEQ (IGREATERP -65536 1)
NIL)
(CKEQ (IPLUS -65536 1)
-65535)
(CKEQ (IDIFFERENCE -65536 1)
-65537)
(CKEQ (LOGOR -65536 1)
-65535)
(CKEQ (LOGAND -65536 1)
0)
(CKEQ (LOGXOR -65536 1)
-65535)
(CKEQ (IGREATERP -65536 -1)
NIL)
(CKEQ (IPLUS -65536 -1)
-65537)
(CKEQ (IDIFFERENCE -65536 -1)
-65535)
(CKEQ (LOGOR -65536 -1)
-1)
(CKEQ (LOGAND -65536 -1)
-65536)
(CKEQ (LOGXOR -65536 -1)
65535)
(CKEQ (IGREATERP -65536 2)
NIL)
(CKEQ (IPLUS -65536 2)
-65534)
(CKEQ (IDIFFERENCE -65536 2)
-65538)
(CKEQ (LOGOR -65536 2)
-65534)
(CKEQ (LOGAND -65536 2)
0)
(CKEQ (LOGXOR -65536 2)
-65534)
(CKEQ (IGREATERP -65536 -2)
NIL)
(CKEQ (IPLUS -65536 -2)
-65538)
(CKEQ (IDIFFERENCE -65536 -2)
-65534)
(CKEQ (LOGOR -65536 -2)
-2)

(CKEQ (LOGAND -65536 -2)
-65536)
(CKEQ (LOGXOR -65536 -2)
65534)
(CKEQ (IGREATERP -65536 65535)
NIL)
(CKEQ (IPLUS -65536 65535)
-1)
(CKEQ (IDIFFERENCE -65536 65535)
-131071)
(CKEQ (LOGOR -65536 65535)
-1)
(CKEQ (LOGAND -65536 65535)
0)
(CKEQ (LOGXOR -65536 65535)
-1)
(CKEQ (IGREATERP -65536 -65536)
NIL)
(CKEQ (IPLUS -65536 -65536)
-131072)
(CKEQ (IDIFFERENCE -65536 -65536)
0)
(CKEQ (LOGOR -65536 -65536)
-65536)
(CKEQ (LOGAND -65536 -65536)
-65536)
(CKEQ (LOGXOR -65536 -65536)
0)
(CKEQ (IGREATERP -65536 65534)
NIL)
(CKEQ (IPLUS -65536 65534)
-2)
(CKEQ (IDIFFERENCE -65536 65534)
-131070)
(CKEQ (LOGOR -65536 65534)
-2)
(CKEQ (LOGAND -65536 65534)
0)
(CKEQ (LOGXOR -65536 65534)
-2)
(CKEQ (IGREATERP -65536 -65537)
T)
(CKEQ (IPLUS -65536 -65537)
-131073)
(CKEQ (IDIFFERENCE -65536 -65537)
1)
(CKEQ (LOGOR -65536 -65537)
-1)
(CKEQ (LOGAND -65536 -65537)
-131072)
(CKEQ (LOGXOR -65536 -65537)
131071)
(CKEQ (IGREATERP 65534 0)
T)
(CKEQ (IPLUS 65534 0)
65534)
(CKEQ (IDIFFERENCE 65534 0)
65534)
(CKEQ (LOGOR 65534 0)
65534)
(CKEQ (LOGAND 65534 0)
0)
(CKEQ (LOGXOR 65534 0)
65534)
(CKEQ (IGREATERP 65534 1)
T)
(CKEQ (IPLUS 65534 1)
65535)
(CKEQ (IDIFFERENCE 65534 1)
65533)
(CKEQ (LOGOR 65534 1)
65535)
(CKEQ (LOGAND 65534 1)
0)
(CKEQ (LOGXOR 65534 1)
65535)
(CKEQ (IGREATERP 65534 -1)
T)
(CKEQ (IPLUS 65534 -1)
65533)
(CKEQ (IDIFFERENCE 65534 -1)
65535)
(CKEQ (LOGOR 65534 -1)
-1)
(CKEQ (LOGAND 65534 -1)
65534)
(CKEQ (LOGXOR 65534 -1)

-65535)
(CKEQ (IGREATERP 65534 2)
T])

(!NUMTEST5

(* bvm: " 8-MAR-82 23:00")

[LAMBDA NIL
(MTCHECKSTK (CKEQ (IPLUS 65534 2)
65536)
(CKEQ (IDIFFERENCE 65534 2)
65532)
(CKEQ (LOGOR 65534 2)
65534)
(CKEQ (LOGAND 65534 2)
2)
(CKEQ (LOGXOR 65534 2)
65532)
(CKEQ (IGREATERP 65534 -2)
T)
(CKEQ (IPLUS 65534 -2)
65532)
(CKEQ (IDIFFERENCE 65534 -2)
65536)
(CKEQ (LOGOR 65534 -2)
-2)
(CKEQ (LOGAND 65534 -2)
65534)
(CKEQ (LOGXOR 65534 -2)
-65536)
(CKEQ (IGREATERP 65534 65535)
NIL)
(CKEQ (IPLUS 65534 65535)
131069)
(CKEQ (IDIFFERENCE 65534 65535)
-1)
(CKEQ (LOGOR 65534 65535)
65535)
(CKEQ (LOGAND 65534 65535)
65534)
(CKEQ (LOGXOR 65534 65535)
1)
(CKEQ (IGREATERP 65534 -65536)
T)
(CKEQ (IPLUS 65534 -65536)
-2)
(CKEQ (IDIFFERENCE 65534 -65536)
131070)
(CKEQ (LOGOR 65534 -65536)
-2)
(CKEQ (LOGAND 65534 -65536)
0)
(CKEQ (LOGXOR 65534 -65536)
-2)
(CKEQ (IGREATERP 65534 65534)
NIL)
(CKEQ (IPLUS 65534 65534)
131068)
(CKEQ (IDIFFERENCE 65534 65534)
0)
(CKEQ (LOGOR 65534 65534)
65534)
(CKEQ (LOGAND 65534 65534)
65534)
(CKEQ (LOGXOR 65534 65534)
0)
(CKEQ (IGREATERP 65534 -65537)
T)
(CKEQ (IPLUS 65534 -65537)
-3)
(CKEQ (IDIFFERENCE 65534 -65537)
131071)
(CKEQ (LOGOR 65534 -65537)
-65537)
(CKEQ (LOGAND 65534 -65537)
65534)
(CKEQ (LOGXOR 65534 -65537)
-131071)
(CKEQ (IGREATERP -65537 0)
NIL)
(CKEQ (IPLUS -65537 0)
-65537)
(CKEQ (IDIFFERENCE -65537 0)
-65537)
(CKEQ (LOGOR -65537 0)
-65537)
(CKEQ (LOGAND -65537 0)
0)

(CKEQ (LOGXOR -65537 0)
-65537)
(CKEQ (IGREATERP -65537 1)
NIL)
(CKEQ (IPLUS -65537 1)
-65536)
(CKEQ (IDIFFERENCE -65537 1)
-65538)
(CKEQ (LOGOR -65537 1)
-65537)
(CKEQ (LOGAND -65537 1)
1)
(CKEQ (LOGXOR -65537 1)
-65538)
(CKEQ (IGREATERP -65537 -1)
NIL)
(CKEQ (IPLUS -65537 -1)
-65538)
(CKEQ (IDIFFERENCE -65537 -1)
-65536)
(CKEQ (LOGOR -65537 -1)
-1)
(CKEQ (LOGAND -65537 -1)
-65537)
(CKEQ (LOGXOR -65537 -1)
65536)
(CKEQ (IGREATERP -65537 2)
NIL)
(CKEQ (IPLUS -65537 2)
-65535)
(CKEQ (IDIFFERENCE -65537 2)
-65539)
(CKEQ (LOGOR -65537 2)
-65537)
(CKEQ (LOGAND -65537 2)
2)
(CKEQ (LOGXOR -65537 2)
-65539)
(CKEQ (IGREATERP -65537 -2)
NIL)
(CKEQ (IPLUS -65537 -2)
-65539)
(CKEQ (IDIFFERENCE -65537 -2)
-65535)
(CKEQ (LOGOR -65537 -2)
-1)
(CKEQ (LOGAND -65537 -2)
-65538)
(CKEQ (LOGXOR -65537 -2)
65537)
(CKEQ (IGREATERP -65537 65535)
NIL)
(CKEQ (IPLUS -65537 65535)
-2)
(CKEQ (IDIFFERENCE -65537 65535)
-131072)
(CKEQ (LOGOR -65537 65535)
-65537)
(CKEQ (LOGAND -65537 65535)
65535)
(CKEQ (LOGXOR -65537 65535)
-131072)
(CKEQ (IGREATERP -65537 -65536)
NIL)
(CKEQ (IPLUS -65537 -65536)
-131073)
(CKEQ (IDIFFERENCE -65537 -65536)
-1)
(CKEQ (LOGOR -65537 -65536)
-1)
(CKEQ (LOGAND -65537 -65536)
-131072)
(CKEQ (LOGXOR -65537 -65536)
131071)
(CKEQ (IGREATERP -65537 65534)
NIL)
(CKEQ (IPLUS -65537 65534)
-3)
(CKEQ (IDIFFERENCE -65537 65534)
-131071)
(CKEQ (LOGOR -65537 65534)
-65537)
(CKEQ (LOGAND -65537 65534)
65534)
(CKEQ (LOGXOR -65537 65534)
-131071)
(CKEQ (IGREATERP -65537 -65537)

```

NIL)
(CKEQ (IPLUS -65537 -65537)
-131074)
(CKEQ (IDIFFERENCE -65537 -65537)
0)
(CKEQ (LOGOR -65537 -65537)
-65537)
(CKEQ (LOGAND -65537 -65537)
-65537)
(CKEQ (LOGXOR -65537 -65537)
0)
(CKEQ (LRSH 0 1)
0)
(CKEQ (LLSH 0 1)
0)
(CKEQ (LRSH 0 8)
0)
(CKEQ (LLSH 0 8)
0)
(CKEQ (LRSH 1 1)
0)
(CKEQ (LLSH 1 1)
2)
(CKEQ (LRSH 1 8)
0)
(CKEQ (LLSH 1 8)
256)
(CKEQ (LLSH -1 1)
-2)
(CKEQ (LLSH -1 8)
-256])

```

(!NUMTEST6

(* bvm: " 8-MAR-82 23:00")

```

[LAMBDA NIL
(MTCHECKSTK (CKEQ (LRSH 2 1)
1)
(CKEQ (LLSH 2 1)
4)
(CKEQ (LRSH 2 8)
0)
(CKEQ (LLSH 2 8)
512)
(CKEQ (LLSH -2 1)
-4)
(CKEQ (LLSH -2 8)
-512)
(CKEQ (LRSH 65535 1)
32767)
(CKEQ (LLSH 65535 1)
131070)
(CKEQ (LRSH 65535 8)
255)
(CKEQ (LLSH 65535 8)
16776960)
(CKEQ (LLSH -65536 1)
-131072)
(CKEQ (LLSH -65536 8)
-16777216)
(CKEQ (LRSH 65534 1)
32767)
(CKEQ (LLSH 65534 1)
131068)
(CKEQ (LRSH 65534 8)
255)
(CKEQ (LLSH 65534 8)
16776704)
(CKEQ (LLSH -65537 1)
-131074)
(CKEQ (LLSH -65537 8)
-16777472)
(CKEQ (IQUOTIENT 0 1)
0)
(CKEQ (IREMAINDER 0 1)
0)
(CKEQ (ITIMES 0 1)
0)
(CKEQ (IQUOTIENT 0 8)
0)
(CKEQ (IREMAINDER 0 8)
0)
(CKEQ (ITIMES 0 8)
0)
(CKEQ (IQUOTIENT 1 1)
1)
(CKEQ (IREMAINDER 1 1)
0)

```


(CKEQ (ITIMES 1 1)
1)
(CKEQ (IQUOTIENT 1 8)
0)
(CKEQ (IREMAINDER 1 8)
1)
(CKEQ (ITIMES 1 8)
8)
(CKEQ (IQUOTIENT -1 1)
-1)
(CKEQ (IREMAINDER -1 1)
0)
(CKEQ (ITIMES -1 1)
-1)
(CKEQ (IQUOTIENT -1 8)
0)
(CKEQ (IREMAINDER -1 8)
-1)
(CKEQ (ITIMES -1 8)
-8)
(CKEQ (IQUOTIENT 2 1)
2)
(CKEQ (IREMAINDER 2 1)
0)
(CKEQ (ITIMES 2 1)
2)
(CKEQ (IQUOTIENT 2 8)
0)
(CKEQ (IREMAINDER 2 8)
2)
(CKEQ (ITIMES 2 8)
16)
(CKEQ (IQUOTIENT -2 1)
-2)
(CKEQ (IREMAINDER -2 1)
0)
(CKEQ (ITIMES -2 1)
-2)
(CKEQ (IQUOTIENT -2 8)
0)
(CKEQ (IREMAINDER -2 8)
-2)
(CKEQ (ITIMES -2 8)
-16)
(CKEQ (IQUOTIENT 65535 1)
65535)
(CKEQ (IREMAINDER 65535 1)
0)
(CKEQ (ITIMES 65535 1)
65535)
(CKEQ (IQUOTIENT 65535 8)
8191)
(CKEQ (IREMAINDER 65535 8)
7)
(CKEQ (ITIMES 65535 8)
524280)
(CKEQ (IQUOTIENT -65536 1)
-65536)
(CKEQ (IREMAINDER -65536 1)
0)
(CKEQ (ITIMES -65536 1)
-65536)
(CKEQ (IQUOTIENT -65536 8)
-8192)
(CKEQ (IREMAINDER -65536 8)
0)
(CKEQ (ITIMES -65536 8)
-524288)
(CKEQ (IQUOTIENT 65534 1)
65534)
(CKEQ (IREMAINDER 65534 1)
0)
(CKEQ (ITIMES 65534 1)
65534)
(CKEQ (IQUOTIENT 65534 8)
8191)
(CKEQ (IREMAINDER 65534 8)
6)
(CKEQ (ITIMES 65534 8)
524272)
(CKEQ (IQUOTIENT -65537 1)
-65537)
(CKEQ (IREMAINDER -65537 1)
0)
(CKEQ (ITIMES -65537 1)
-65537)
(CKEQ (IQUOTIENT -65537 8)

```

-8192)
(CKEQ (IREMAINDER -65537 8)
-1)
(CKEQ (ITIMES -65537 8)
-524296)
(CKEQ (IQUOTIENT 3 1)
3)
(CKEQ (IREMAINDER 3 1)
0)
(CKEQ (ITIMES 3 1)
3)
(CKEQ (IQUOTIENT 3 8)
0)
(CKEQ (IREMAINDER 3 8)
3)
(CKEQ (ITIMES 3 8)
24)
(CKEQ (IQUOTIENT -3 1)
-3)
(CKEQ (IREMAINDER -3 1)
0)
(CKEQ (ITIMES -3 1)
-3)
(CKEQ (IQUOTIENT -3 8)
0)
(CKEQ (IREMAINDER -3 8)
-3)
(CKEQ (ITIMES -3 8)
-24)
(CKEQ (IQUOTIENT 4 1)
4)
(CKEQ (IREMAINDER 4 1)
0)
(CKEQ (ITIMES 4 1)
4)
(CKEQ (IQUOTIENT 4 8)
0)
(CKEQ (IREMAINDER 4 8)
4)
(CKEQ (ITIMES 4 8)
32)
(CKEQ (IQUOTIENT -4 1)
-4)
(CKEQ (IREMAINDER -4 1)
0)
(CKEQ (ITIMES -4 1)
-4)
(CKEQ (IQUOTIENT -4 8)
0)
(CKEQ (IREMAINDER -4 8)
-4)
(CKEQ (ITIMES -4 8)
-32])

```

(!RANDNUMTEST

[LAMBDA NIL

```

(* Imm " 5-JAN-82 20:03")
(* (PROG (FORMS FORM ARG1 ARG2)
(FRPTQ 30 (SETQ ARG1 (SELECTQ
(RAND 0 2) (0 (RAND -65536 65535))
(1 (RAND -5 5)) (RAND -2147483648 2147483647))))
(SETQ ARG2 (SELECTQ (RAND 0 2)
(0 (RAND -65536 65535)) (1 (RAND -5 5))
(RAND -2147483648 2147483647))))
for FN in (QUOTE (ITIMES IQUOTIENT IPLUS IDIFFERENCE
(SETQ FORM (APPLY* (PACK*
(QUOTE F) (SUBATOM FN 2 -1))
(FLOAT ARG1) (FLOAT ARG2))))
(COND ((AND (FGREATERP FORM -2147483648)
(FLESSP FORM -2147483648)) (SETQ FORM
(LIST FN ARG1 ARG2)) (push FORMS
(LIST (QUOTE CKEQ) FORM (EVAL FORM)))))))))
(RETURN (CONS (QUOTE MTCHECKSTK) FORMS))))

```

IREMAINDER)) do (COND ((OR (NEQ ARG2 0) (NEQ FN (QUOTE IQUOTIENT))))

```

(!RANDNUMTEST1)
(!RANDNUMTEST2)
(!RANDNUMTEST3)
(!RANDNUMTEST4])

```

(!RANDNUMTEST1

[LAMBDA NIL

```

(MTCHECKSTK (CKEQ (IDIFFERENCE 39093777 -17132)
39110909)
(CKEQ (IPLUS 39093777 -17132)
39076645)
(CKEQ (IQUOTIENT 39093777 -17132)
-2281)

```

(* Imm " 5-JAN-82 20:00")

(CKEQ (IDIFFERENCE 23177 -61593)
84770)
(CKEQ (IPLUS 23177 -61593)
-38416)
(CKEQ (IQUOTIENT 23177 -61593)
0)
(CKEQ (ITIMES 23177 -61593)
-1427540961)
(CKEQ (IDIFFERENCE 1029627294 845206456)
184420838)
(CKEQ (IPLUS 1029627294 845206456)
1874833750)
(CKEQ (IQUOTIENT 1029627294 845206456)
1)
(CKEQ (IDIFFERENCE 19947 52870)
-32923)
(CKEQ (IPLUS 19947 52870)
72817)
(CKEQ (IQUOTIENT 19947 52870)
0)
(CKEQ (ITIMES 19947 52870)
1054597890)
(CKEQ (IDIFFERENCE -285899720 319146973)
-605046693)
(CKEQ (IPLUS -285899720 319146973)
33247253)
(CKEQ (IQUOTIENT -285899720 319146973)
0)
(CKEQ (IDIFFERENCE -1427 598403593)
-598405020)
(CKEQ (IPLUS -1427 598403593)
598402166)
(CKEQ (IQUOTIENT -1427 598403593)
0)
(CKEQ (IDIFFERENCE -1638750017 -24489)
-1638725528)
(CKEQ (IPLUS -1638750017 -24489)
-1638774506)
(CKEQ (IQUOTIENT -1638750017 -24489)
66917)
(CKEQ (IDIFFERENCE 60246 390291231)
-390230985)
(CKEQ (IPLUS 60246 390291231)
390351477)
(CKEQ (IQUOTIENT 60246 390291231)
0)
(CKEQ (IDIFFERENCE 307545632 27069)
307518563)
(CKEQ (IPLUS 307545632 27069)
307572701)
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(CKEQ (IPLUS -1171986183 806601306)
-365384877)
(CKEQ (IQUOTIENT -1171986183 806601306)
-1)
(CKEQ (IREMAINDER -2 -4)
-2)
(CKEQ (IDIFFERENCE -2 -4)
2)
(CKEQ (IPLUS -2 -4)
-6)
(CKEQ (IQUOTIENT -2 -4)
0)
(CKEQ (ITIMES -2 -4)
8)
(CKEQ (IREMAINDER 30107019 -855698290)
30107019)
(CKEQ (IDIFFERENCE 30107019 -855698290)
885805309)
(CKEQ (IPLUS 30107019 -855698290)
-825591271)
(CKEQ (IQUOTIENT 30107019 -855698290)
0)
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-2)
(CKEQ (IDIFFERENCE -2 3)
-5)
(CKEQ (IPLUS -2 3)
1)
(CKEQ (IQUOTIENT -2 3)
0)
(CKEQ (ITIMES -2 3)
-6)
(CKEQ (IREMAINDER -7207 -62157)
-7207)
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54950)
(CKEQ (IPLUS -7207 -62157)
-69364)
(CKEQ (IQUOTIENT -7207 -62157)
0)
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447965499)
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-622869140)
(CKEQ (ITIMES -622869140 0)
0)
(CKEQ (IREMAINDER 4 31306697)
4)
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-31306693)
(CKEQ (IPLUS 4 31306697)
31306701)
(CKEQ (IQUOTIENT 4 31306697)
0)
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125226788)
(CKEQ (IREMAINDER 1106717819 -1787842586)
1106717819)
(CKEQ (IPLUS 1106717819 -1787842586)
-681124767)
(CKEQ (IQUOTIENT 1106717819 -1787842586)
0)
(CKEQ (IREMAINDER -266740781 1899715348)
-266740781)
(CKEQ (IPLUS -266740781 1899715348)
1632974567)
(CKEQ (IQUOTIENT -266740781 1899715348)
0)
(CKEQ (IREMAINDER -5 -2)
-1)
(CKEQ (IDIFFERENCE -5 -2)
-3)
(CKEQ (IPLUS -5 -2)
-7)
(CKEQ (IQUOTIENT -5 -2)
2)
(CKEQ (ITIMES -5 -2)
10)
(CKEQ (IREMAINDER -5633 -43853)

-5633)
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38220)
(CKEQ (IPLUS -5633 -43853)
-49486)
(CKEQ (IQUOTIENT -5633 -43853)
0)
(CKEQ (ITIMES -5633 -43853)
247023949)
(CKEQ (IREMAINDER -60673 -3607)
-2961)
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-57066)
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-64280)
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16)
(CKEQ (ITIMES -60673 -3607)
218847511)
(CKEQ (IREMAINDER 582999370 -45007)
23699)
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583044377)
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582954363)
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-12953)
(CKEQ (IREMAINDER 4 -5)
4)
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9)
(CKEQ (IPLUS 4 -5)
-1)
(CKEQ (IQUOTIENT 4 -5)
0)
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-20)
(CKEQ (IREMAINDER 52431 710935966)
52431)
(CKEQ (IDIFFERENCE 52431 710935966)
-710883535)
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710988397)
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0)
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32286)
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-23246)
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0)
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-125502320)
(CKEQ (IREMAINDER -5 -13814)
-5)
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13809)
(CKEQ (IPLUS -5 -13814)
-13819)
(CKEQ (IQUOTIENT -5 -13814)
0)
(CKEQ (ITIMES -5 -13814)
69070)
(CKEQ (IREMAINDER 38851 -392958832)
38851)
(CKEQ (IDIFFERENCE 38851 -392958832)
392997683)
(CKEQ (IPLUS 38851 -392958832)
-392919981)
(CKEQ (IQUOTIENT 38851 -392958832)
0)
(CKEQ (IPLUS 156390710 0)
156390710)
(CKEQ (ITIMES 156390710 0)
0)
(CKEQ (IDIFFERENCE -4 0)
-4)
(CKEQ (IPLUS -4 0)
-4)
(CKEQ (ITIMES -4 0)
0)
(CKEQ (IREMAINDER 1 -684041608)
1)
(CKEQ (IDIFFERENCE 1 -684041608)
684041609)

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(CKEQ (IPLUS 1 -684041608)
-684041607)
(CKEQ (IQUOTIENT 1 -684041608)
0)
(CKEQ (ITIMES 1 -684041608)
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(CKEQ (IREMAINDER 0 38774)
0)
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-38774)
(CKEQ (IPLUS 0 38774)
38774)
(CKEQ (IQUOTIENT 0 38774)
0)
(CKEQ (ITIMES 0 38774)
0)
(CKEQ (IREMAINDER -5 3)
-2)
(CKEQ (IDIFFERENCE -5 3)
-8)
(CKEQ (IPLUS -5 3)
-2)
(CKEQ (IQUOTIENT -5 3)
-1)
(CKEQ (ITIMES -5 3)
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(CKEQ (IREMAINDER 5 -51903)
5)
(CKEQ (IDIFFERENCE 5 -51903)
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(CKEQ (IPLUS 5 -51903)
-51898)
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0)
(CKEQ (ITIMES 5 -51903)
-259515)
(CKEQ (IREMAINDER 1678 -1031791030)
1678)
(CKEQ (IDIFFERENCE 1678 -1031791030)
1031792708)
(CKEQ (IPLUS 1678 -1031791030)
-1031789352)
(CKEQ (IQUOTIENT 1678 -1031791030)
0)
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45625)
(CKEQ (IDIFFERENCE 637843753 -55326)
637899079)
(CKEQ (IPLUS 637843753 -55326)
637788427)
(CKEQ (IQUOTIENT 637843753 -55326)
-11528)
(CKEQ (IREMAINDER 0 2)
0)
(CKEQ (IDIFFERENCE 0 2)
-2)
(CKEQ (IPLUS 0 2)
2)
(CKEQ (IQUOTIENT 0 2)
0)
(CKEQ (ITIMES 0 2)
0))

```

(!FNUMTEST

```

[LAMBDA NIL
(!FNUMTEST1)
(!FNUMTEST2)
(!FNUMTEST3)
(!FNUMTEST4)
(!FNUMTEST5)]

```

(* JonL " 7-Nov-84 17:57")

(!FNUMTEST1

```

[LAMBDA NIL

```

```

(CKFEQ (FPLUS -65536.0 1.0)
-65535.0)
(CKFEQ (FDIFFERENCE -65536.0 1.0)
-65537.0)
(CKFEQ (FTIMES -65536.0 1.0)
-65536.0)
(CKFEQ (FQUOTIENT -65536.0 1.0)
-65536.0)
(CKFEQ (FPLUS 65535.0 0.0)
65535.0)
(CKFEQ (FDIFFERENCE 65535.0 0.0)

```

(* JonL " 7-Nov-84 16:29")

(* Some very simple cases especially involving a 16-bit overflow)

```

65535.0)
(CKFEQ (FTIMES 65535.0 0.0)
0.0)
(CKFEQ (FPLUS 65535.0 -1.0)
65534.0)
(CKFEQ (FDIFFERENCE 65535.0 -1.0)
65536.0)
(CKFEQ (FTIMES 65535.0 -1.0)
-65535.0)
(CKFEQ (FQUOTIENT 65535.0 -1.0)
-65535.0)
(CKFEQ (FPLUS 65535.0 1.0)
65536.0)
(CKFEQ (FDIFFERENCE 65535.0 1.0)
65534.0)
(CKFEQ (FTIMES 65535.0 1.0)
65535.0)
(CKFEQ (FQUOTIENT 65535.0 1.0)
65535.0)
(CKFEQ (FPLUS 0.0 -65536.0)
-65536.0)
(CKFEQ (FDIFFERENCE 0.0 -65536.0)
65536.0)
(CKFEQ (FTIMES 0.0 -65536.0)
0.0)
(CKFEQ (FQUOTIENT 0.0 -65536.0)
0.0])

```

(!FNUMTEST2

(* JonL " 7-Nov-84 18:47")

```

[LAMBDA NIL
  (for I F FORM from 0 to (SUB1 BITSPERCELL)
    do [SETQ F (create FLOATP
      FLOATCONTENTS _ (LOGXOR (MASK.1'S I 1)
        (CONSTANT (fetch (FLOATP FLOATCONTENTS)
          of (create FLOATP
            EXPONENT _ 129]
      (SETQ FORM (LIST (QUOTE FPLUS)
        0.0
        (CONCAT "{ 2.0 xor 2^" I)))
      (!CKFEQ (FPLUS 0.0 F)
        F FORM)
      (!CKFEQ (FTIMES 1.0 F)
        F
        (QUOTE (FTIMES 1.0 F])

```

(!FNUMTEST3

(* JonL " 7-Nov-84 16:32")
(* Check for coercions)

```

(CKFEQ (FPLUS -65536 1)
-65535.0)
(CKFEQ (FDIFFERENCE -65536 1)
-65537.0)
(CKFEQ (FTIMES -65536 1)
-65536.0)
(CKFEQ (FQUOTIENT -65536 1)
-65536.0)
(CKFEQ (FPLUS -65536.0 1)
-65535.0)
(CKFEQ (FDIFFERENCE -65536.0 1)
-65537.0)
(CKFEQ (FTIMES -65536.0 1)
-65536.0)
(CKFEQ (FQUOTIENT -65536.0 1)
-65536.0)
(CKFEQ (FPLUS -65536 1.0)
-65535.0)
(CKFEQ (FDIFFERENCE -65536 1.0)
-65537.0)
(CKFEQ (FTIMES -65536 1.0)
-65536.0)
(CKFEQ (FQUOTIENT -65536 1.0)
-65536.0])

```

(!FNUMTEST4

(* JonL " 7-Nov-84 20:58")
(* Some random kludgy number tests)

```

[LAMBDA NIL
  (!CKFEQ (FPLUS 1.234568 1.111111)
    2.345679
    (QUOTE (FPLUS 1.234568 1.111111)))
  (!CKFEQ (FPLUS (DEFERREDCONSTANT (create FLOATP
    FLOATCONTENTS _ 1067320913))
    1.111111)
    (DEFERREDCONSTANT (create FLOATP
    FLOATCONTENTS _ 1075191706))

```

(QUOTE (FPLUS "1.2345678" 1.111111))

(!FNUMTEST5

[LAMBDA NIL

(MTCHECK (FGREATERP 1.0 0.0))
(MTCHECK (NOT (FGREATERP -1.0 0.0]))

(* JonL "7-Nov-84 16:33")
(* Check out the comparators)

(!MIXNUMTEST

[LAMBDA NIL

(!RANDNUMTEST)

(PROGN (CKEQ (DIFFERENCE -65536 -65536)
0)
(CKEQ (PLUS -65536 -65536)
-131072)
(CKEQ (QUOTIENT -65536 -65536)
1)
(CKEQ (DIFFERENCE -65536 65535)
-131071)
(CKEQ (PLUS -65536 65535)
-1)
(CKEQ (QUOTIENT -65536 65535)
-1)
(CKFEQ (DIFFERENCE -65536 0.0)
-65536.0)
(CKFEQ (TIMES -65536 0.0)
0.0)
(CKFEQ (PLUS -65536 0.0)
-65536.0)
(CKEQ (DIFFERENCE -65536 0)
-65536)
(CKEQ (TIMES -65536 0)
0)
(CKEQ (PLUS -65536 0)
-65536)
(CKEQ (DIFFERENCE -65536 3)
-65539)
(CKEQ (TIMES -65536 3)
-196608)
(CKEQ (PLUS -65536 3)
-65533)
(CKEQ (QUOTIENT -65536 3)
-21845)
(CKFEQ (DIFFERENCE -65536 -1.0)
-65535.0)
(CKFEQ (TIMES -65536 -1.0)
65536.0)
(CKFEQ (PLUS -65536 -1.0)
-65537.0)
(CKFEQ (QUOTIENT -65536 -1.0)
65536.0)
(CKEQ (DIFFERENCE -65536 -1)
-65535)
(CKEQ (TIMES -65536 -1)
65536)
(CKEQ (PLUS -65536 -1)
-65537)
(CKEQ (QUOTIENT -65536 -1)
65536)
(CKEQ (DIFFERENCE -65536 2)
-65538)
(CKEQ (TIMES -65536 2)
-131072)
(CKEQ (PLUS -65536 2)
-65534)
(CKEQ (QUOTIENT -65536 2)
-32768)
(CKFEQ (DIFFERENCE -65536 1.0)
-65537.0)
(CKFEQ (TIMES -65536 1.0)
-65536.0)
(CKFEQ (PLUS -65536 1.0)
-65535.0)
(CKFEQ (QUOTIENT -65536 1.0)
-65536.0)
(CKEQ (DIFFERENCE -65536 1)
-65537)
(CKEQ (TIMES -65536 1)
-65536)
(CKEQ (PLUS -65536 1)
-65535)
(CKEQ (QUOTIENT -65536 1)
-65536)
(CKEQ (DIFFERENCE 65535 -65536)
131071)

(* Imm "19-Jul-84 18:07")

(CKEQ (PLUS 65535 -65536)
-1)
(CKEQ (QUOTIENT 65535 -65536)
0)
(CKEQ (DIFFERENCE 65535 65535)
0)
(CKEQ (PLUS 65535 65535)
131070)
(CKEQ (QUOTIENT 65535 65535)
1)
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(CKFEQ (TIMES 65535 0.0)
0.0)
(CKFEQ (PLUS 65535 0.0)
65535.0)
(CKEQ (DIFFERENCE 65535 0)
65535)
(CKEQ (TIMES 65535 0)
0)
(CKEQ (PLUS 65535 0)
65535)
(CKEQ (DIFFERENCE 65535 3)
65532)
(CKEQ (TIMES 65535 3)
196605)
(CKEQ (PLUS 65535 3)
65538)
(CKEQ (QUOTIENT 65535 3)
21845)
(CKFEQ (DIFFERENCE 65535 -1.0)
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(CKFEQ (TIMES 65535 -1.0)
-65535.0)
(CKFEQ (PLUS 65535 -1.0)
65534.0)
(CKFEQ (QUOTIENT 65535 -1.0)
-65535.0)
(CKEQ (DIFFERENCE 65535 -1)
65536)
(CKEQ (TIMES 65535 -1)
-65535)
(CKEQ (PLUS 65535 -1)
65534)
(CKEQ (QUOTIENT 65535 -1)
-65535)
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65533)
(CKEQ (TIMES 65535 2)
131070)
(CKEQ (PLUS 65535 2)
65537)
(CKEQ (QUOTIENT 65535 2)
32767)
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65535.0)
(CKFEQ (PLUS 65535 1.0)
65536.0)
(CKFEQ (QUOTIENT 65535 1.0)
65535.0)
(CKEQ (DIFFERENCE 65535 1)
65534)
(CKEQ (TIMES 65535 1)
65535)
(CKEQ (PLUS 65535 1)
65536)
(CKEQ (QUOTIENT 65535 1)
65535)
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(CKFEQ (TIMES 0.0 -65536)
0.0)
(CKFEQ (PLUS 0.0 -65536)
-65536.0)
(CKFEQ (QUOTIENT 0.0 -65536)
0.0)
(CKFEQ (DIFFERENCE 0.0 65535)
-65535.0)
(CKFEQ (TIMES 0.0 65535)
0.0)
(CKFEQ (PLUS 0.0 65535)
65535.0)
(CKFEQ (QUOTIENT 0.0 65535)
0.0)
(CKFEQ (DIFFERENCE 0.0 0.0)


```

0.0)
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(CKFEQ (PLUS 0.0 0.0)
0.0)
(CKFEQ (DIFFERENCE 0.0 0)
0.0)
(CKFEQ (TIMES 0.0 0)
0.0)
(CKFEQ (PLUS 0.0 0)
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(CKFEQ (TIMES 0.0 3)
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3.0)
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(CKFEQ (PLUS 0.0 -1.0)
-1.0)
(CKFEQ (QUOTIENT 0.0 -1.0)
0.0)
(CKFEQ (DIFFERENCE 0.0 -1)
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(CKFEQ (TIMES 0.0 -1)
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(CKFEQ (PLUS 0.0 -1)
-1.0)
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-2.0)
(CKFEQ (TIMES 0.0 2)
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2.0)
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-1.0)
(CKFEQ (TIMES 0.0 1.0)
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(CKFEQ (PLUS 0.0 1.0)
1.0)
(CKFEQ (QUOTIENT 0.0 1.0)
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-1.0)
(CKFEQ (TIMES 0.0 1)
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-65536)
(CKEQ (QUOTIENT 0 -65536)
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-65535)
(CKEQ (TIMES 0 65535)
0)
(CKEQ (PLUS 0 65535)
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(CKFEQ (TIMES 0 0.0)
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(CKFEQ (PLUS 0 0.0)
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(CKEQ (TIMES 0 0)
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(CKEQ (PLUS 0 0)
0)

```

```

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0)
(CKEQ (PLUS 0 -1)
-1)
(CKEQ (QUOTIENT 0 -1)
0)
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(CKEQ (PLUS 0 2)
2)
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(CKFEQ (QUOTIENT 0 1.0)
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(CKEQ (PLUS 0 1)
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(CKEQ (PLUS 3 -65536)
-65533)
(CKEQ (QUOTIENT 3 -65536)
0)
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-65532)
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196605)
(CKEQ (PLUS 3 65535)
65538)
(CKEQ (QUOTIENT 3 65535)
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3.0)
(CKFEQ (TIMES 3 0.0)
0.0)
(CKFEQ (PLUS 3 0.0)
3.0)
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3)
(CKEQ (TIMES 3 0)
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(CKEQ (PLUS 3 0)
3)
(CKEQ (DIFFERENCE 3 3)
0)
(CKEQ (TIMES 3 3)
9)
(CKEQ (PLUS 3 3)
6)
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1)
(CKFEQ (DIFFERENCE 3 -1.0)
4.0)
(CKFEQ (TIMES 3 -1.0)

```

```

-3.0)
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-3.0)
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4)
(CKEQ (TIMES 3 -1)
-3)
(CKEQ (PLUS 3 -1)
2)
(CKEQ (QUOTIENT 3 -1)
-3)
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1)
(CKEQ (TIMES 3 2)
6)
(CKEQ (PLUS 3 2)
5)
(CKEQ (QUOTIENT 3 2)
1)
(CKFEQ (DIFFERENCE 3 1.0)
2.0)
(CKFEQ (TIMES 3 1.0)
3.0)
(CKFEQ (PLUS 3 1.0)
4.0)
(CKFEQ (QUOTIENT 3 1.0)
3.0)
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2)
(CKEQ (TIMES 3 1)
3)
(CKEQ (PLUS 3 1)
4)
(CKEQ (QUOTIENT 3 1)
3)
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(CKFEQ (TIMES -1.0 -65536)
65536.0)
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-65537.0)
(CKFUZZYEQ (QUOTIENT -1.0 -65536)
1.525879E-5)
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-65536.0)
(CKFEQ (TIMES -1.0 65535)
-65535.0)
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65534.0)
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-1.525902E-5)
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-1.0)
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0.0)
(CKFEQ (PLUS -1.0 0.0)
-1.0)
(CKFEQ (DIFFERENCE -1.0 0)
-1.0)
(CKFEQ (TIMES -1.0 0)
0.0)
(CKFEQ (PLUS -1.0 0)
-1.0)
(CKFEQ (DIFFERENCE -1.0 3)
-4.0)
(CKFEQ (TIMES -1.0 3)
-3.0)
(CKFEQ (PLUS -1.0 3)
2.0)
(CKFUZZYEQ (QUOTIENT -1.0 3)
-0.3333333)
(CKFEQ (DIFFERENCE -1.0 -1.0)
0.0)
(CKFEQ (TIMES -1.0 -1.0)
1.0)
(CKFEQ (PLUS -1.0 -1.0)
-2.0)
(CKFEQ (QUOTIENT -1.0 -1.0)
1.0)
(CKFEQ (DIFFERENCE -1.0 -1)
0.0)
(CKFEQ (TIMES -1.0 -1)
1.0)
(CKFEQ (PLUS -1.0 -1)
-2.0)

```

```

(CKFEQ (QUOTIENT -1.0 -1)
1.0)
(CKFEQ (DIFFERENCE -1.0 2)
-3.0)
(CKFEQ (TIMES -1.0 2)
-2.0)
(CKFEQ (PLUS -1.0 2)
1.0)
(CKFEQ (QUOTIENT -1.0 2)
-0.5)
(CKFEQ (DIFFERENCE -1.0 1.0)
-2.0)
(CKFEQ (TIMES -1.0 1.0)
-1.0)
(CKFEQ (PLUS -1.0 1.0)
0.0)
(CKFEQ (QUOTIENT -1.0 1.0)
-1.0)
(CKFEQ (DIFFERENCE -1.0 1)
-2.0)
(CKFEQ (TIMES -1.0 1)
-1.0)
(CKFEQ (PLUS -1.0 1)
0.0)
(CKFEQ (QUOTIENT -1.0 1)
-1.0)
(CKEQ (DIFFERENCE -1 -65536)
65535)
(CKEQ (TIMES -1 -65536)
65536)
(CKEQ (PLUS -1 -65536)
-65537)
(CKEQ (QUOTIENT -1 -65536)
0)
(CKEQ (DIFFERENCE -1 65535)
-65536)
(CKEQ (TIMES -1 65535)
-65535)
(CKEQ (PLUS -1 65535)
65534)
(CKEQ (QUOTIENT -1 65535)
0)
(CKFEQ (DIFFERENCE -1 0.0)
-1.0)
(CKFEQ (TIMES -1 0.0)
0.0)
(CKFEQ (PLUS -1 0.0)
-1.0)
(CKEQ (DIFFERENCE -1 0)
-1)
(CKEQ (TIMES -1 0)
0)
(CKEQ (PLUS -1 0)
-1)
(CKEQ (DIFFERENCE -1 3)
-4)
(CKEQ (TIMES -1 3)
-3)
(CKEQ (PLUS -1 3)
2)
(CKEQ (QUOTIENT -1 3)
0)
(CKFEQ (DIFFERENCE -1 -1.0)
0.0)
(CKFEQ (TIMES -1 -1.0)
1.0)
(CKFEQ (PLUS -1 -1.0)
-2.0)
(CKFEQ (QUOTIENT -1 -1.0)
1.0)
(CKEQ (DIFFERENCE -1 -1)
0)
(CKEQ (TIMES -1 -1)
1)
(CKEQ (PLUS -1 -1)
-2)
(CKEQ (QUOTIENT -1 -1)
1)
(CKEQ (DIFFERENCE -1 2)
-3)
(CKEQ (TIMES -1 2)
-2)
(CKEQ (PLUS -1 2)
1)
(CKEQ (QUOTIENT -1 2)
0)
(CKFEQ (DIFFERENCE -1 1.0)

```

```

-2.0)
(CKFEQ (TIMES -1 1.0)
-1.0)
(CKFEQ (PLUS -1 1.0)
0.0)
(CKFEQ (QUOTIENT -1 1.0)
-1.0)
(CKEQ (DIFFERENCE -1 1)
-2)
(CKEQ (TIMES -1 1)
-1)
(CKEQ (PLUS -1 1)
0)
(CKEQ (QUOTIENT -1 1)
-1)
(CKEQ (DIFFERENCE 2 -65536)
65538)
(CKEQ (TIMES 2 -65536)
-131072)
(CKEQ (PLUS 2 -65536)
-65534)
(CKEQ (QUOTIENT 2 -65536)
0)
(CKEQ (DIFFERENCE 2 65535)
-65533)
(CKEQ (TIMES 2 65535)
131070)
(CKEQ (PLUS 2 65535)
65537)
(CKEQ (QUOTIENT 2 65535)
0)
(CKEQ (DIFFERENCE 2 0.0)
2.0)
(CKFEQ (TIMES 2 0.0)
0.0)
(CKFEQ (PLUS 2 0.0)
2.0)
(CKEQ (DIFFERENCE 2 0)
2)
(CKEQ (TIMES 2 0)
0)
(CKEQ (PLUS 2 0)
2)
(CKEQ (DIFFERENCE 2 3)
-1)
(CKEQ (TIMES 2 3)
6)
(CKEQ (PLUS 2 3)
5)
(CKEQ (QUOTIENT 2 3)
0)
(CKFEQ (DIFFERENCE 2 -1.0)
3.0)
(CKFEQ (TIMES 2 -1.0)
-2.0)
(CKFEQ (PLUS 2 -1.0)
1.0)
(CKFEQ (QUOTIENT 2 -1.0)
-2.0)
(CKEQ (DIFFERENCE 2 -1)
3)
(CKEQ (TIMES 2 -1)
-2)
(CKEQ (PLUS 2 -1)
1)
(CKEQ (QUOTIENT 2 -1)
-2)
(CKEQ (DIFFERENCE 2 2)
0)
(CKEQ (TIMES 2 2)
4)
(CKEQ (PLUS 2 2)
4)
(CKEQ (QUOTIENT 2 2)
1)
(CKFEQ (DIFFERENCE 2 1.0)
1.0)
(CKFEQ (TIMES 2 1.0)
2.0)
(CKFEQ (PLUS 2 1.0)
3.0)
(CKFEQ (QUOTIENT 2 1.0)
2.0)
(CKEQ (DIFFERENCE 2 1)
1)
(CKEQ (TIMES 2 1)
2)

```

```

(CKEQ (PLUS 2 1)
3)
(CKEQ (QUOTIENT 2 1)
2)
(CKFEQ (DIFFERENCE 1.0 -65536)
65537.0)
(CKFEQ (TIMES 1.0 -65536)
-65536.0)
(CKFEQ (PLUS 1.0 -65536)
-65535.0)
(CKFUZZYEQ (QUOTIENT 1.0 -65536)
-1.525879E-5)
(CKFEQ (DIFFERENCE 1.0 65535)
-65534.0)
(CKFEQ (TIMES 1.0 65535)
65535.0)
(CKFEQ (PLUS 1.0 65535)
65536.0)
(CKFUZZYEQ (QUOTIENT 1.0 65535)
1.525902E-5)
(CKFEQ (DIFFERENCE 1.0 0.0)
1.0)
(CKFEQ (TIMES 1.0 0.0)
0.0)
(CKFEQ (PLUS 1.0 0.0)
1.0)
(CKFEQ (DIFFERENCE 1.0 0)
1.0)
(CKFEQ (TIMES 1.0 0)
0.0)
(CKFEQ (PLUS 1.0 0)
1.0)
(CKFEQ (DIFFERENCE 1.0 3)
-2.0)
(CKFEQ (TIMES 1.0 3)
3.0)
(CKFEQ (PLUS 1.0 3)
4.0)
(CKFUZZYEQ (QUOTIENT 1.0 3)
0.3333333)
(CKFEQ (DIFFERENCE 1.0 -1.0)
2.0)
(CKFEQ (TIMES 1.0 -1.0)
-1.0)
(CKFEQ (PLUS 1.0 -1.0)
0.0)
(CKFEQ (QUOTIENT 1.0 -1.0)
-1.0)
(CKFEQ (DIFFERENCE 1.0 -1)
2.0)
(CKFEQ (TIMES 1.0 -1)
-1.0)
(CKFEQ (PLUS 1.0 -1)
0.0)
(CKFEQ (QUOTIENT 1.0 -1)
-1.0)
(CKFEQ (DIFFERENCE 1.0 2)
-1.0)
(CKFEQ (TIMES 1.0 2)
2.0)
(CKFEQ (PLUS 1.0 2)
3.0)
(CKFEQ (QUOTIENT 1.0 2)
0.5)
(CKFEQ (DIFFERENCE 1.0 1.0)
0.0)
(CKFEQ (TIMES 1.0 1.0)
1.0)
(CKFEQ (PLUS 1.0 1.0)
2.0)
(CKFEQ (QUOTIENT 1.0 1.0)
1.0)
(CKFEQ (DIFFERENCE 1.0 1)
0.0)
(CKFEQ (TIMES 1.0 1)
1.0)
(CKFEQ (PLUS 1.0 1)
2.0)
(CKFEQ (QUOTIENT 1.0 1)
1.0)
(CKEQ (DIFFERENCE 1 -65536)
65537)
(CKEQ (TIMES 1 -65536)
-65536)
(CKEQ (PLUS 1 -65536)
-65535)
(CKEQ (QUOTIENT 1 -65536)

```

```

0)
(CKEQ (DIFFERENCE 1 65535)
-65534)
(CKEQ (TIMES 1 65535)
65535)
(CKEQ (PLUS 1 65535)
65536)
(CKEQ (QUOTIENT 1 65535)
0)
(CKFEQ (DIFFERENCE 1 0.0)
1.0)
(CKFEQ (TIMES 1 0.0)
0.0)
(CKFEQ (PLUS 1 0.0)
1.0)
(CKEQ (DIFFERENCE 1 0)
1)
(CKEQ (TIMES 1 0)
0)
(CKEQ (PLUS 1 0)
1)
(CKEQ (DIFFERENCE 1 3)
-2)
(CKEQ (TIMES 1 3)
3)
(CKEQ (PLUS 1 3)
4)
(CKEQ (QUOTIENT 1 3)
0)
(CKEQ (DIFFERENCE 1 -1.0)
2.0)
(CKFEQ (TIMES 1 -1.0)
-1.0)
(CKFEQ (PLUS 1 -1.0)
0.0)
(CKFEQ (QUOTIENT 1 -1.0)
-1.0)
(CKEQ (DIFFERENCE 1 -1)
2)
(CKEQ (TIMES 1 -1)
-1)
(CKEQ (PLUS 1 -1)
0)
(CKEQ (QUOTIENT 1 -1)
-1)
(CKEQ (DIFFERENCE 1 2)
-1)
(CKEQ (TIMES 1 2)
2)
(CKEQ (PLUS 1 2)
3)
(CKEQ (QUOTIENT 1 2)
0)
(CKFEQ (DIFFERENCE 1 1.0)
0.0)
(CKFEQ (TIMES 1 1.0)
1.0)
(CKFEQ (PLUS 1 1.0)
2.0)
(CKFEQ (QUOTIENT 1 1.0)
1.0)
(CKEQ (DIFFERENCE 1 1)
0)
(CKEQ (TIMES 1 1)
1)
(CKEQ (PLUS 1 1)
2)
(CKEQ (QUOTIENT 1 1)
1])

```

)

:: Compiler error may prevent some of the above functions from getting compiled

```
(DECLARE: DONTEVAL@LOAD DONTEVAL@COMPILE DOCOPY
```

```
[MAPC (OR (FILEFNLSLT (QUOTE MACROTESTAUX))
(QUOTE (PUSH.TEST)))
(FUNCTION (LAMBDA (X)
(MOVD? (QUOTE NIL)
X])

```

)

FUNCTION INDEX

!FNUMTEST	29	!NUMTEST3	9	CALLS.TOOFEWARGS	2	FN.LASTARG.FVARS	3
!FNUMTEST1	29	!NUMTEST4	11	FAULTTEST	4	FN.LASTARG.FVARS.PVARS ..	3
!FNUMTEST2	30	!NUMTEST5	14	FN.FIRSTARG.FVARS	3	FVAR.FREE	2
!FNUMTEST3	30	!NUMTEST6	16	FN.FIRSTARG.PVARS.FVARS ..	3	FVAR.TEST	2
!FNUMTEST4	30	!RANDNUMTEST	18	FN.FR1	4	FVAR.TEST2	3
!FNUMTEST5	31	!RANDNUMTEST1	18	FN.FR2	4	FVAR.TEST3	3
!FVARTEST	1	!RANDNUMTEST2	20	FN.FR3	4	FVAR.TESTN	3
!MIXNUMTEST	31	!RANDNUMTEST3	23	FN.FREE.SKIPPVARS	3	PUSH.TEST	1
!NUMBERTEST	4	!RANDNUMTEST4	26	FN.FREEARG	4		
!NUMTEST1	4	CALLS.FIRSTARGTEST	2	FN.FREEPVAR	3		
!NUMTEST2	7	CALLS.LASTARGTEST	2	FN.FVAR3	3		

VARIABLE INDEX

F0	4	F1	4	F2	4	F3	4	F4	4	F5	4	F6	4	F7	4	F8	4
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