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002  
003  
004  
005  
  
(DEFPROP INCR  
(LAMBDA (L) (LIST (QUOTE SETS) (CADR L) (LIST (QUOTE ADD1) (CADR L))))  
MACRO)

001 (DEFFPROP COMPILE  
002 (LAMBDA (L)  
003 (PROG (DATA)  
004 (SETQ  
005 DATA  
006 (MAPCAR (FUNCTION (LAMBDA (J) (COND ( (SETQ DATA  
007 008 (GETL J (QUOTE (EXPR FEXPR)))  
009 (COMPILE J (CAR DATA) (CADR DATA))))  
010  
011 (LOC TV)  
012 (RETURN DATA)))  
013  
014 FEXPR)  
015 (DEFFPROP CMP  
016 (LAMBDA (X) (PROG NIL  
017 (PUTPROP (QUOTE TRY) (CAR X) (QUOTE EXPR))  
018 (RETURN (COMPILE TRY))))  
019  
020 FEXPR)  
021 (DEFFPROP COM2  
022 (LAMBDA (NAME FLAG EXP)  
023 (PROG (LOUT SCNT SPVARS LOCVARS CNT LSJBRF)  
024 (COND ((EQ FLAG (QUOTE EXP)) (SETQ FLAG (QUOTE SUBR)))  
025 ((EQ FLAG (QUOTE FEXPR))  
026 (SETQ FLAG (QUOTE FSUBR)))  
027 (SETQ EXP (PIA EXP)))  
028 (SETQ DATA NIL)  
029 (SETQ LOUT (LIST (QUOTE LAP) NAME FLAG))  
030 (SETQ SCNT CNT)  
031 (PHASE2 EXP)  
032 (OUTPUT (OUTPUT NIL))  
033 (TERPRI)  
034 (TERPRI)  
035 (TERPRI)  
036 (TERPRI)  
037 (TERPRI)  
038 (TERPRI)  
039 (TERPRI)  
040 (DEFFPROP CMP1  
041 (LAMBDA NIL  
042 (PROG (X FL DATA)  
043 (COND ((EQ T (SETQ DATA (READ))) (RETURN T)) — ((PENHAR KAR DATA) (QUOTE (SPECIAL UNSPECIFIED)))  
044 ((AND (EQ (CAR DATA) (QUOTE DEFFPROP))  
045 (SETQ X (ASSOC (SETQ FL (CADDR DATA))  
046 (QUOTE ((EXPR \* \*EXPR)  
047 (FEXPR \* #FEXPR))))  
048 (PUTPROP (CADR DATA) T (CDR X))  
049 (COM2 (SETQ X (CADR DATA)) FL (CADDR DATA))  
050 (PRINTN X))  
051 ((AND (EQ (CAR DATA) (QUOTE DEFFPROP))  
052 (EQ (CADDR DATA) (QUOTE MACRO)))  
053 (EVAL DATA)  
054 (PRINT DATA)  
055 (PRINT DATA))  
056 (GO A)))  
057 FEXPR)

```

001 (DEFFPROP INIT (LAMBDA NIL (SPECIAL SPVARS
002                               MACROS
003                               SPFL
004                               LOCVARS
005                               CLIST
006                               EFFS
007                               NACS
008                               LDLIST
009                               SPLDLST
010                               LO
011                               HI
012                               NO
013                               ARGND
014                               BVARS
015                               DATA
016                               RSL
017                               RSSL
018                               PRSSL
019                               CTAG
020                               VGO
021                               VGOL
022                               EXIT
023                               EXITN
024                               PVR
025                               LOUT
026                               LIS
027                               SLOTLIST
028                               CNT
029                               END
030                               G2
031                               SELG
032                               PROGSN
033                               IVAR
034                               GL
035                               PVRL
036                               LSUBRF
037                               VL
038                               RNL
039                               PISONT
040                               PISTCNT
041                               PILL
042                               HLAC PISCV)
043                               EXPR)
044                               EXPR)
045                               EXPR)
046                               DEFPROP FREEZE
047                               (LAMBDA (X)
048                               (PROG (Z)
049                               (SETD Z SLOTLIST)
050                               (COND ((NULL Z) (RETURN NIL))
051                               ((EQ X (CDR Z)) (RPLACA Z (CONS X CNT)))
052                               (COND ((NULL (CDR Z)) (RPLACA Z (QUOTE DJP)))
053                               ((EQ (CDR Z) (QUOTE DJP))
054                               (RPLACA Z NIL)))))
055                               (SETD Z (CDR Z)))
056                               (GO LP)))
057                               EXPR)

```

001 (DEFPROP CWORLD  
002 (LAMBDA NIL (PROG (K)  
003 (SETQ K 0))  
004 (COND ((EQ K NACS) (RETURN NIL)))  
005 (CPUSH (SETQ K (ADD1 K)))  
006 (GO A)))

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007  
008  
009 (DEFPROP COMP1 (LAMBDA (X ARGNO) (COMP X)) EXPR)  
010  
011 (DEFPROP COMP (LAMBDA (X) (COMPW X NIL)) EXPR)  
012  
013 (DEFPROP COMPE (LAMBDA (X) (REMOVE (COMPW X T))) EXPR)  
014  
015 (DEFPROP COMPM  
016 (LAMBDA (X EFFS)  
017 (PROG (Y)  
018 (COND ((ATOM X) (GO A))  
019 (((AND (ATOM (CAR X)) (SET (CAR X) (QUOTE OPEN)))  
020 (SETQ X (LIST (CONS (SETQ Y (GENSYM))  
021 (CONS (CAR X)  
022 (COMP (CADR X)))))))  
023 (SETQ SPULDST (NCONC SPULDST X))  
024 (SETQ Y (LIST Y))  
025 (GO B))  
026  
027 (T (SETQ Y (COMP=JNC (CAR X) (CDR X) ARGNO))  
028 (GO B)))  
029 A (SETQ Y (CONS X (SETQ CNT (ADD1 CNT))))  
030 (COND ((SPECIALP X)  
031 (SETQ SPULDST (NCONC SPULDST (LIST Y))))  
032 (SETQ LDLSLT (CONS Y LD\_ST))  
033 (RETURN Y)))  
034  
035 (DEFPROP NACS (NIL + 5) VALUE)  
036  
037 (DEFPROP NACSI (LAMBDA NIL (CDDDR SLOTLIST)) EXPR)  
038  
039 (DEFPROP LOAD  
040 (LAMBDA (X) (PROG (L HLAC)  
041 (SETQ HLAC (SETQ L (LENGTH X)))  
042 (COND ((ZEROP L) (RETURN NIL)))  
043 (LOADI L (CAR X))  
044 (SETQ X (CDR X))  
045 (SETQ L (SUBLI L))  
046 (GO A)))  
047  
048  
049 (DEFPROP P1BUG  
050 (LAMBDA (LO HI PTR)  
051 (MAPC (FUNCTION (LAMBDA (X) (COND ((GREATERP (CDR X) LO)  
052 (RPLACD X HI))))))  
053 (PTR))  
054 EXPR)

```
001 (DEFPROP CLRACS
002   (LAMBDA NIL (PROG (Z)
003     (SETQ Z NACS)
004     (CSPLD)
005     A
006       (COND ((ZEROP Z) (RETURN NIL)))
007       (CPUSH Z)
008       (CONT Z NIL)
009       (SETQ Z (SUBL Z))
010       (GO A)))
011
012
013 (DEFPROP OPUSH
014   (LAMBDA (L) (PROG NIL (OUT1 (QUOTE PJSH)) (QUOTE P) L) (SPUSH)))
015
016 (DEFPROP OPUSHS
017   (LAMBDA (LL)
018     (PROG NIL (OPUSH (LISP (QUOTE SPECIAL) L)) (CONT 0 (LIST L))))
019
020
021 (DEFPROP POP (LAMBDA (L) (PROG2 (OUT1 (QUOTE PJP)) (QUOTE P) L) (SPOP))) EXPR)
022
023 (DEFPROP LOCATE
024   (LAMBDA (X AC)
025     (PROG (Z)
026       (SETQ Z (LLOC X))
027       (COND ((NOT (NUMBERP Z)) NIL)
028             ((GREATERP Z 0) (REMOVE X) (CPUSH Z) (RETURN Z)))
029       (LOAD1 (SETQ Z AC) X)
030       (GO A)))
031
EXPR)
```

001 (DEFPROP RESTORE  
002 (LAMBDA (X)  
003 (PROG (C V R TEM)  
004 (COND ((NULL X) (RETURN NIL))  
005 ((GREATERP (LENGTH X) (LENGTH SLOTLIST))  
006 (PRINTTY (LIST X SLOTLIST))  
007 (BARF RESTORE LOSSAGE)))  
008  
A1 (SETQ C 0)  
009 (COND ((EQUAL (LENGTH X) (LENGTH SLOTLIST)) (RETURN (R1 C)))  
010 ((DVP (SETQ R (CADR (NACSI))) (GO CPP1)))  
011 (SETQ C (ADD1 C))  
012 (SPOP)  
013 (GO A1)  
014 (CPP (R1 C))  
015 (CPP1 (SETQ V (CDDDR (CDR X))))  
016 (SETQ C NACS)  
017 CPP3 (COND  
018 ((NULL V) (OPOP (SETQ V (IFREAC))) (CONT V R) (GO A1))  
019 ((AND (CAR V)  
020 (EQ (CAAR V) (CAR R))  
021 (NOT (DVP (CONTENTS (SETQ TEM  
022 (PLUS (MINUS C)  
023 (NACS  
024 (MINUS (LENGTH X))  
025 (NACS  
026 (MINUS (LENGTH SLOTLIST)))))))  
027 (SETQ C (ADD1 C))  
028 (SETQ V (CDR V))  
029 (GO CPP3)  
030 CPP2 (CONT TEM R)  
031 (OPOP TEM)  
032 (GO A1))  
033 EXPR)  
034  
035 (DEFPROP R1  
036 (LAMBDA (C) (COND ((NULL (ZEROP C))  
037 (OUTPUT (LIST QUOTE SUB)  
038 (QUOTE P)  
039 (LIST (QUOTE C) 0 0 C C))))))  
040 EXPR)  
041  
(DEFPROP BARF (LAMBDA (L) (PROG2 (PRINTTY L) (LOC G))) FEXPR)

001 (DEFPROP DVP  
002 (LAMBDA (X))  
003 (PROG (Y))

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(RETURN (COND ((NULL X) NIL)  
005 (((EQ (CAR X) (QUOTE QUOTE)) NIL)  
006 (((EQ (CDR X) (QUOTE TAKE)) T))  
007 (((EQ (CDR X) (QUOTE DUP)) NIL)  
008 (((AND (SPECIALP (CAR X)) (NOT (CDR X))) NIL)  
009 (((AND (SETQ Y (ASSOC (CAR X) LOCVARS))  
010 (NOT (CDR X)))  
011 (NOT (CDR X)))  
012 (LESSP CNT (CDR Y))))  
013 (T (PROG (Z)  
014 (SETQ Z LDLST))  
015 A (COND ((NULL Z)  
016 (RETURN (COND ((SETQ Z (ASSOC (CAR X) VLI))  
017 (DVP (CONS (CDR Z)  
018 (CDR X))))  
019 (((AND (EQ (CAAR Z) (CAR X))  
020 (EQUAL (LOC (COND ((NUMBERP (CDR X))  
021 X))  
022 (T (CONS (CAR X)  
023 (CONS (CAR X)  
024 (CONS (CAR X)  
025 (CONS (CAR X)  
026 (Y)  
027 (RETURN T))  
028 (SETQ Z (CDR Z))  
029 (GO A))))))  
EXPR)  
030 (PROG (P)  
031 (DEFPROP COMSTO  
032 (LAMBDA (X Y) (PROG (ITEM)  
033 (LOC (SETQ TEM (COMP (CADR Y))))  
034 (COND ((EQ X (QUOTE NSTORE))  
035 (LOADI 1 TEM)  
036 (OPUSH 2))  
037 (CONT 2 NIL))  
038 (OUTPUT (QUOTE (IPUSHJ P NUMVAL)))  
039 (CONT 1 (SETQ TEM (LIST (GENSYM))))  
040 (SETQ LDLST (CONS TEM LDLST))  
041 ))  
042 (COMPE (CAR Y))  
043 (OUTI (QUOTE DB)) (LOCATE TEM 1) 2)  
044 ))  
045 (DEFPROP COMPFUNC  
046 (LAMBDA (X Y NO))  
047 (PROG (ITEM ARGNO Z FNARGS VALAC INST NARGS HOME TI CAC FNLOC)  
048 (SETQ ARGNO NO)  
049 (SETQ VALAC 1)  
050 (COND ((AND (SETQ TI (NOT (ATOM X)))  
051 (EQ (CDR X) (QUOTE SUBR)))  
052 (LOADI 1 (COMP Y))  
053 (SETQ X (CAR X))  
054 (GO FX1))  
055 ((AND TI (EQ (CAR X) (QUOTE LAMBDA)))  
056 (SETQ FNARGS TI))  
057 (GO A))  
058 (TI (SETQ FNARGS (COMP X)) (SETQ X NIL)) (GO A))  
059 ((AND LSJBRF (EQ X (QUOTE ARG))))  
060

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(COMARIG (COMP (CAR Y)))  
(GO RET2))  
(MEMBER X (QUOTE (AND OR NULL EQ))) (GO B00))  
((EQ X (QUOTE PROG2))  
(COMPE (CAR Y))  
(SETQ TI (COMP (CADR Y)))  
(IMAPC (FUNCTION COMPE) (CDR Y))  
(RETURN TI))  
(GET X (QUOTE *FEXPR)) (GO FX2))  
(MEMBER X (QUOTE (INSTORE STORE))) (COMSTO X Y)  
((EQ X (QUOTE RETURN)) (GO COMRET))  
((OR (GETL X (QUOTE (SUBR EXPR *EXPR)))  
(COND ((OR (MEMBER X SPVARS)  
        (ASSOC X LOCVARS))  
        (SETQ FNARGS (COMP X))))))  
(GO A))  
((EQ X (QUOTE CONDI) (GO COMCOND))  
((EQ X (QUOTE PROG)) (GO COMPROG))  
((EQ X (QUOTE SETQ)) (GO COMSETQ))  
((EQ X (QUOTE QUOTE)) (GO COMQ))  
((EQ X (QUOTE GO)) (GO COMGO))  
((GET X (QUOTE LSJBR)) (GO COMLI))  
((NOT (GETL X (QUOTE (FSUBR FEXPR))))  
  (PRINTY (LIST X (QUOTE UNDEFINED)))  
  (PUTPROP XT (QUOTE *EXPR))  
  (GO A)))  
FX2  
(CSPLD)  
(LOAD1 1 (LIST (QUOTE QJOTE) Y))  
FX1  
(SETQ NARGS 1)  
(SETQ DAC 17)  
(GO H)  
COML  
(COND ((AND (EQ X (QUOTE EVAL)) (NULL (CDR Y)))  
       (SETQ X (QUOTE *EVAL)))  
       (GO A)))  
(COMPLC X Y)  
(GO RET)  
COMCOND  
CC1  
(COND ((NULL TI) (GO CC2))  
      ((ASSOC (CAR TI) LDLST) (GO CC3)))  
CC6  
(SETQ TI (CDR TI))  
(GO CC1)  
CC2  
(CLEAR1)  
(DDCOND (CDR Y) (SETQ VALAC NO))  
(SETQ CNT (PLUS CNT 2))  
(GO RET)  
CC3  
(SETQ Z (LOC (CONS (CAR TI) CNT)))  
(COND ((NOT (NUMBERP Z)) (GO CC4))  
      ((NOT (DVP (CONTENTS Z)))  
       (CONT Z (CONS (CAR TI) CNT)))  
       (GO CC1)))  
CC4  
(OPUSH Z)  
CC5  
(COND 0 (CONS (CAR TI) CNT))  
(GO CC6)  
B00  
(B004 (CONS X Y))  
RET2  
(SETQ VALAC NO)  
(GO RET1)  
A  
(SETQ ARGNO 0)  
(COND ((NULL Y) (GO I)))
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121 (SETQ ARGNO (ADD1 ARGNO))  
122 A1 (SETQ Z (CONS (COMP (CAR Y)) Z))  
123 (SETQ Y (CDR Y))  
124  
125 (GO A2)  
126 (COND ((EQ FNARGS T) (RETURN (P2LAM X Z)))  
127 ((MEMBER X (QUOTE (RPLACD RPLACA)))  
128 ((LLOC1 (CADR Z) NO))  
129 ((LOC (CAR Z))  
130 (REMOVX (CADR Z))  
131 (REMOVX (CAR Z))  
132 (CSPLD))  
133 (COND ((EQUAL (CAR Z) (QUOTE (QUOTE NIL)))  
134 (OUTI (GET X (QUOTE INSTN)))  
135 D  
136 (LLOC (CADR Z)))  
137 (REMOVE (CAR Z)))  
138 (T (OUTI (GET X (QUOTE INSTI)))  
139 (LOCATE (CAR Z) (FRAC1))  
140 (LLOC (CADR Z))))  
141  
142 (RETURN (CADR Z)))  
143 ((NOT (EQ X (QUOTE CONS))) (GO T1))  
144 ((EQUAL (CAR Z) (QUOTE (QUOTE NIL)))  
145 (REMOVE (CAR Z))  
146 (SETQ Z (CDR Z))  
147 (SETQ NARGS (LENGTH Z))  
148 (COND ((AND (EQ NARGS 2)  
149 (EQ (LLOC (CAR Z)) 1)  
150 (SETQ TEM (GET X (QUOTE COMMU))))  
151 (SETQ Z (REVERSE Z))  
152 (SETQ X TEM))  
153 (COND ((SETQ TEM (GET X (QUOTE ACS)))  
154 (SPLDLST (CSPLD3 Z)))  
155 (LOAD Z))  
156 (COND (TEM) (SPLDLST (CSPLD1)))  
157 H1 (COND ((AND FNARGS (GREATERP (LLOC FNARGS) 0))  
158 (SETQ FNLOC (LLOC FNARGS))  
159 (REMOVE FNARGS)))  
160 (SETQ ARGNO (COND ((GET X (QUOTE ACS))) (T 37)))  
161 (SETQ INST 0)  
162 (COND (INST (ADDU INST1))  
163 (SETQ INST (ADDU INST1))  
164 ((NOT (ZEROP ARGNO) (GO LP3)))  
165 ((COND ((DVP (BODDLE 1 1 ARGNO)))  
166 (COND ((DVP (CONTENTS INST)) (CPUSH INST)))  
167 (CONT INST NIL)))  
168 (SETQ ARGNO (LSH ARGNO -1))  
169 (GO LP2))  
LP3 (COND (FNARGS (OUTI (QUOTE CALLF#))  
170 (NARGS  
171 (COND (FNLOC) (T (LLOC FNARGS))))  
172 (REMOVE FNARGS))  
173 (T (OUTPUT (LIST (QUOTE CALL))  
174 (COND (CAC) (T NARGS))  
175 (LIST (QUOTE E) X))))  
176 RET  
177 RET1 (RETURN (CAR (CONT VALAC (LIST (GENSYM)))))  
178 COMSETO  
179 (RETURN (CSETO Y))  
180 COMPROG

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(SETQ TEM (LMB (CADR Y) NIL))  
(SETQ SFLG NIL)  
(COND ((EQUAL (CAR Y) (ADD1 CNT)) (CLEAR1)))  
(CPRNG Y TEM)  
(GO RET2)  
COMGO(CPURL)  
(COND ((ATOM (CAR Y))  
       (OUTJ (QUOTE JRST) 0 (ADR (CAR Y))))  
     (T (LOAD1 1 (COMP (CAR Y))))  
     (OUTJ (QUOTE JRST) 0 VGO)))  
(GO RET1)  
COMRET  
(CRET Y)  
(GO RET1))  
EXPR)  
(LAMBDA (X Y)  
  (PROG (NARGS HOME INST T1 T2)  
    (CLEAR1)  
    (SETQ NARGS (LENGTH Y))  
    (OPUSH (LIST (QUOTE C) 0 0 (SETQ T1 (GENSYM))))  
    (COML1 (CONT 0 (QUOTE (NIL . TAKEN)))  
           (COND ((NULL Y) (GO COML2)))  
           (SETQ HOME (APPEND SLOTLIST NIL))  
           (SETQ INST (COMP (CAR Y)))  
           (RESTORE HOME))  
    (OPUSH (LOC INST))  
    (REMOVE INST)  
    (SETQ Y (CDR Y))  
    (GO COML1))  
  COML2(SETQ T2 (LENGTH SLOTLIST))  
  (CWORDL)  
  (COND ((NOT (EQ (LENGTH SLOTLIST) T2)) (BARD LSLOSSAGE)))  
  (OUTPUT (LIST (QUOTE MCJN)) 6 NARGS))  
  (OUTPUT (LIST (QUOTE JCALL) 16 (LIST (QUOTE E) X)))  
  (OUTPUT T1))  
COML3(SPROP)  
(COND ((ZEROP NARGS) (CLRACS) (RETURN NIL))  
      (SETQ NARGS (SUB1 NARGS))  
      (GO COML3)))  
EXPR)
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001  
002 (DEFPROP PLAM (LAMBDA (X Y))  
003 (PROG (SF TEM TL ACL))  
004 (SETQ TEM (CADR X))  
005 (SETQ Y (REVERSE Y))  
006 A (COND ((NULL TEM) (GO B)))  
007 (SETQ TL (LLOC1 (CAR Y)) (FREAC)))  
008 (REMOVE (CAR Y))  
009 (COND ((SPECIALP (CAR TEM))  
010 (COND ((SPECIALP (CAR TEM))  
011 (SETQ SF T))  
012 (COND ((OR (NOT (NUMBERP TL)) (LESSP TL 1))  
013 (LOADI (SETQ TL (FREAC)) (CAR Y))))  
014 (OR (NOT (NUMBERP TL)) (DVP (CONTENTS TL))))  
015 (OPUSH TL))  
016 (SETQ TL 0))  
017 (CONT TL (CONS (CAR TEM) (QUOTE TAKEN)))  
018 (SETQ ACL (CONS TL ACL))  
019 (SETQ Y (CDR Y))  
020 (SETQ TEM (CDR TEM))  
021 (GO A))  
022 (COND (SF (OUTPUT (QUOTE (JSP 6 SPECBIND)))) (T (GO D)))  
023 (SETQ TEM (CADR X))  
024 (COND ((NULL TEM) (GO D))  
025 (SPECIALP (CAR TEM))  
026 (PROG (Z))  
027 (SETQ Z SUDLIST)  
028 A (COND ((NULL Z) (RETURN NIL))  
029 ((NULL (CAR Z)))  
030 (AND (EQ (CAAR Z) (CAR TEM))  
031 (NULL (CDAR Z)))  
032 (RPLACA Z NIL))  
033 (SETQ Z (CDR Z))  
034 (GO A))  
035 (OUTPUT (LIST 0  
036 (ILOC (CONS (CAR TEM) CNT))  
037 (LIST (QUOTE SPECIAL) (CAR TEM))))  
038 (SETQ TEM (CDR TEM))  
039 (GO C))  
040 D (COND ((NULL ACL) (GO E)))  
041 (RPLACD (CONTENTS (CAR ACL)) NIL)  
042 (SETQ ACL (CDR ACL))  
043 (GO D))  
044 (SETQ TEM ((COMP (CADDR X)))  
045 (COND (SF (OUTPUT (QUOTE (PUSHJ P SPECSTR))))  
046 (SETQ CNT (ADD1 CNT))  
047 (RETURN TEM))  
048 (EXPR))  
049 (DEFPROP CRET (LAMBDA (Y) (PROG NIL  
050 (CPVRL)  
051 (SETQ ARGND PVR))  
052 (COND ((EQUAL Y (QUOTE (QUOTE NIL)))  
053 (OUTJ (QUOTE JRST) 0 EXITN))  
054 ((LOADI PVR (COMP (CAR Y)))  
055 (T (OUTJ (QUOTE JRST) 0 EXIT))))  
056 (OUTJ (QUOTE JRST) 0 EXIT)))  
057 EXPR))  
058 (DEFPROP CSETQ (LAMBDA (Y))

061 (PROG (FNARGS HOME Z TEM DATA) PAGE 8.1  
062 (ILOC1 (SETQ Z (COMP (CADR Y))) NO)  
063 (COND ((ASSOC (CAR Y) SPDLST) (GO COMS1)))

064 (SETQ FNA RGS (LLOC Z))  
065 (FREEZE (CAR Y))  
066 (SETQ FNARGS (LLOC Z))

067 (SETQ HOME  
068 (COND ((SPECIALP (CAR Y)) T)  
069 ((NOT (ILOC (SETQ TEM (CONS (CAR Y) CNT))))  
070 NIL))  
071 (IT (NOT (DVP (CONTENTS (LOC TEM)))))))

072 (SETQ CNT (ADD1 CNT))  
073 (COND ((AND EFFS (NOT HOME) (NOT (SPECIALP (CAR Y))))  
074 (COND ((AND (NUMBERP FNARGS)  
075 (NOT (DVP (CONTENTS FNARGS))))  
076 (COND FNARGS (LIST (CAR Y)))  
077 (RETURN NIL))  
078 (IT (OPUSH FNARGS))  
079 (COND D (LIST (CAR Y)))  
080 (RETURN NIL)))  
081 (COND ((AND HOME (EQUAL (CADR Y) (QUOTE (QUOTE NIL))))  
082 (SETQ TEM T))  
083 (OUT1 (COND ((OR EFFS (DVP (CONTENTS NO)))  
084 (SETQ TEM NIL)  
085 (QUOTE CLEARB))  
086 (T (QUOTE CLEARB))))  
087 (T NO))  
088 (SETQ Z  
089 (COND ((SPECIALP (CAR Y))  
090 ((LIST (QUOTE SPECIAL) (CAR Y)))  
091 (T (ILOC (CONS (CAR Y)  
092 (SUB1 CNT)))))))  
093 (COND ((NUMBERP Z) (COND Z (LIST (CAR Y))))  
094 (COND (TEM (COND NO (CONS (CAR Y)  
095 (COND (ITEM (COND NO (CONS (CAR Y)  
096 (COND ((NUMBERP Z)  
097 (COND (ITEM (COND (NUMBERP Z)  
098 (COND ((NUMBERP Z)  
099 (COND ((OR (NOT (NUMBERP FNARGS))  
100 (LESSP FNARGS 0)  
101 (DVP (CONTENTS FNARGS)))  
102 (LOAD1 (SETQ ND (COND (EFFS (FREAC)) (T NO))) Z))  
103 (SETQ FNARGS ND))  
104 (COND FNARGS (LIST (CAR Y))))  
105 (COND ((SPECIALP (CAR Y))  
106 (COND ((ZEROP FNARGS)  
107 (POP (LIST (QUOTE SPECIAL) (CAR Y))))  
108 (TOP (LIST (QUOTE SPECIAL) (CAR Y)))  
109 (T (OUTPUT (LIST (QUOTE MOVEM)  
110 FNARGS  
111 (LIST (QUOTE SPECIAL)  
112 (LIST (CAR Y)))))))  
113 (COND (EFFS (RETURN NIL)))  
114 (SETQ CNT (SUB1 CNT))  
115 (RETURN (COMP (CAR Y)))  
116 (COMS1 (OPUSH (SETQ DATA (CAR Y)))  
117 (REMOVL (FUNCTION (LAMBDA (L) (EQ DATA (CAR L)))))  
118 (QUOTE SPLDLST))  
119 (GO COMS3)))  
120 (EXPR))

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121
122 (DEFPROP CSPLD3
123   (LAMBDA (DATA)
124     (REMOVEV (FUNCTION (LAMBDA (L) (COND ((AND (NOT (ATOM (CDR L)))
125       (NOT (ASSOC (CAR L)
126         DATA)))) (CSFUN L 1)
127
128       NIL)
129       (T NIL))))))
130
131   (QUOTE SPLDLST)))
132
133   (DEFPROP CSPLD1
134     (LAMBDA NIL (REMOVEV (FUNCTION (LAMBDA (L)
135       (COND (((NOT (ATOM (CDR L))) NIL)
136         (T (CSPVAR L) T))))))
137
138       (QUOTE SPLDLST)))
139
140   (DEFPROP CSPLD2
141     (LAMBDA (DATA LO)
142       (PROG NIL (REMOVEV (FUNCTION (LAMBDA (L)
143         (COND (((NOT (ATOM (CDR L)))
144           (CSPFUN L DATA)
145             LO)
146             (T (CSPVAR L) T))))))
147
148       (QUOTE SPLDLST)))
149
150   (DEFPROP CSFUN
151     (LAMBDA (L AC) (PROG (Y) (COND ((AND (SETQ Y (ASSOC (CAR L) LDLST))
152       (NOT (ILOC Y)))
153         (CAR CDR L AC))))))
154
155
156   (DEFPROP CSPLD (LAMBDA NIL (CSPLD2 1 Y)) EXPR)
157
158   (DEFPROP CSPVAR
159     (LAMBDA (L) (PROG NIL (COND ((NOT (INNUMBERP (ILDC (CONS (CAR L) CNT)))
160       (OPUSHS (CAR L)))
161         (CONT D (CONS (CAR L) CNT))))))
162
163
164   (DEFPROP P1A
165     (LAMBDA (X)
166       (PROG (Z BVARS RNL LL P1SCNT P1TCNT P1SCV)
167         (SETQ CNT 1)
168         (SETQ LOCVARS (SETQ SPVARS NIL))
169         (COND ((NULL (EQ (CAR X) (QUOTE LAMBDA))) (BARRF ER2-1))
170           ((AND (CADR X) (ATOM (CADR X)))
171             (SETQ LSUBRF T))
172             (SETQ X (CONS (BARF-X QUOTE LAMBDA)
173               (CONS (LIST (CADR X)) (CDDR X))))))
174
175         (SETQ LL (P1LMB (SETQ Z (CADR X))))
176         (COND ((GREATERP (LENGTH Z) NACS) (BARF TMA)))
177           (RETURN (LIST (CAR X) LL (P1 (CADR X))))))
178
179       B
180
181   EXPR)

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025

(DEFPROP PLIMB  
(LAMBDA (Z)  
(MAPCAR (FUNCTION (LAMBDA (J)  
(PROG NIL  
(COND (GET J (QUOTE SPECIAL))  
(SETQ SPVARS (ADD J SPVARS))  
(GO A))  
(MEMBER J BVARSI)  
(SETQ RNL  
(CONS (CONS J (SETQ J (GENSYM)))  
RNL))))  
(PLOC J 0)  
A  
(SETQ BVARSI (ADD J BVARSI))  
(RETURN J)))  
EXPR)  
Z ))

(DEFPROP PLAM  
(LAMBDA (Z RNL)  
(PROG (TEM LL)  
(SETQ TEM (MAPCAR (FUNCTION PI) (CDR Z)))  
(SETQ LL (PLIMB (CADDR Z)))  
(SETQ CNT (ADD1 CNT))  
(RETURN (CONS (LIST (QUOTE LAMBDA) LL (PI (CADDR Z)))  
TEM)))  
EXPR)

DEFPROP PLIMB  
(LAMBDA (Z)  
(MAPCAR (FUNCTION (LAMBDA (J)  
(PROG NIL  
(COND (GET J (QUOTE SPECIAL))  
(SETQ SPVARS (ADD J SPVARS))  
(GO A))  
(MEMBER J BVARSI)  
(SETQ RNL  
(CONS (CONS J (SETQ J (GENSYM)))  
RNL))))  
(PLOC J 0)  
A  
(SETQ BVARSI (ADD J BVARSI))  
(RETURN J)))  
EXPR)  
Z ))  
  
DEFPROP PLAM  
(LAMBDA (Z RNL)  
(PROG (TEM LL)  
(SETQ TEM (MAPCAR (FUNCTION PI) (CDR Z)))  
(SETQ LL (PLIMB (CADDR Z)))  
(SETQ CNT (ADD1 CNT))  
(RETURN (CONS (LIST (QUOTE LAMBDA) LL (PI (CADDR Z)))  
TEM)))  
EXPR)

```

001 (DEFPROP P1
002   (LAMBDA (X)
003     (PROG (Z Y TEM IVAR)
004       (COND
005         ((ATOM X) (GO A))
006         ((ATOM (CAR X)) (GO B))
007         ((EQ (CAAR X) (QUOTE LAMDA)) (RETURN (P1LAM X RNL)))
008         ((EQ (CAAR X) (QUOTE LABEL))
009           (RETURN (P1 (LIST (QUOTE PROG)
010             (LIST (QUOTE RETURN)
011               (LIST (QUOTE SETQ)
012                 (CADAR X)
013                   (P1 (LIST (QUOTE FUNCTION)
014                     (CADDAR X))))
015                   (LIST (QUOTE RETURN))
016                     (CONS (CADAR X) (CDR X)))))))
017         A (COND
018           ((OR (NUMBERP X) (MEMBER X (QUOTE (T NIL)))) (RETURN (P1 (Z X))))
019           ((SETQ Z (ASSOC X RNL)) (RETURN (P1 (CDR Z))))
020           ((GET X (QUOTE SPECIAL)) (SETQ SPVARS (ADD X SPVARS)))
021           ((VARB X) (GO A))
022           ((T (PLOC X (ADD1 CNT)))) AA
023           (SETQ CNT (ADD1 CNT)))
024           (SETQ CNT (ADD1 CNT)))
025           (RETURN X)
026           B (COND
027             ((SETQ Z (ASSOC (CAR X) RNL))
028               (RETURN (P1 (CONS (CDR Z) (CDR X)))))
029               ((EQ (CAR X) (QUOTE MACRO)) (RETURN (P1 (Z X))))
030               ((EQ (CAR X) (QUOTE SETQ)) (GO P1SETQ))
031               ((EQ (CAR X) (QUOTE LIST)) (RETURN (ITER (QUOTE CONS) (APPEND (CDR X) (LIST NIL)))))
032               ((AND (EQ (LENGTH (CDR X)) 2) (SETQ Z (ASSOC (CAR X) (QUOTE ((GREATERP . *GREAT)
033                 (LESSP . *LESS)
034                 (PLUS . *PLUS)
035                 (APPEND . *APPEND)
036                 (DIFFERENCE . *DIF)
037                 (TIMES . *TIMES)
038                 (QUOTIENT . *QUO)))))))
039               ((SETQ X (CONS (CDR Z) (CDR X))))
040               ((EQ (CAR X) (QUOTE PROG)) (P1PSTP)
041                 (RETURN (P1PROG (CDR X) RNL)))
042               ((EQ (CAR X) (QUOTE NOT)) (RETURN (P1PNOT (CDR X) RNL)))
043               ((SETQ X (CONS (QUOTE NULL) (CDR X))) (P1PNULL (CDR X) RNL))
044               ((EQ (CAR X) (QUOTE CONDI)) (GO P1COND))
045               ((AND (EQ (CAR X) (QUOTE ERRESET)) (NOT (ATOM (CADR X)))) (P1ERRESET (CDR X) RNL))
046               ((SETQ X (CONS (CAR X) (RETURN (CONS (CAR X)
047                 (RETURN (CONS (CAR X)
048                   (CONS (LIST (GFY (LIST (QUOTE LAMBDA)
049                     (CONS (NIL (CADR X)))) (CDDR X)))) (P1PSTP)
050                     ((EQ (CAR X) (QUOTE GO)) (P1PSTP) (RETURN X))
051                     ((EQ (CAR X) (QUOTE RETURN)) (P1PSTP))
052                     ((SETQ Z (ASSOC (CAR X) (QUOTE ((FUNCTION . QUOTE)
053                       (*FUNCTION . *FUNCTION)))) (P1PFUNCTION (CDR X) RNL)))
054                     ((RETURN (LIST (CDR Z) (GFY (CADR X))))) (P1PFUNCTION (CDR X) RNL))
055                     ((MEMBER (CAR X) (QUOTE (AND OR)))) (P1PFUNCTION (CDR X) RNL))
056                     ((SETQ TEM LOCVARS)
057                       ((SETQ Y CNT)
058                         ((SETQ Z (MAPCAR (FUNCTION P1) (CDR X)))) (P1PFUNCTION (CDR X) RNL))
059                         ((GO A0S1))
060                         ((GO A0S1)))) (P1PFUNCTION (CDR X) RNL)))

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051 ((GETL (CAR X) (QUOTE (EXPR SUBR \*EXPR)))) PAGE 10.1  
052 ((MEMBER (CAR X) (QUOTE (SSTORE NSTORE)))  
053  
054 (SETQ Z (P1 (CADR X)))  
055 (RETURN (LIST (CAR X) (P1 (CADR X)) Z)))  
056 ((GETL (CAR X) (QUOTE (FEXPR FSUBR \*FEXPR))) (RETURN X))  
057 ((OR (GET (CAR X) (QUOTE SPECIAL)) (MEMBER (CAR X) BVARSL))  
058 (SETQ X (CONS (P1 (CAR X)) (CDR X))))  
059 (SETQ Z (MAPCAR (FUNCTION P1) (CDR X)))  
060 (COND ((AND (EQ (CAR X) (QUOTE EVAL))  
061 (NOT (CDDR X))  
062 (EQ (CAAR Z) (QUOTE CONS))  
063 (EQ (CAADR Z) (QUOTE QUOTE))  
064 (GETL (SETQ TEM (CADDDR (CAR Z)))  
065 (QUOTE (FEXPR FSUBR \*FEXPR))))  
066 (QUOTE (FEXPR FSUBR \*FEXPR)))  
067 ((OR (GET (CAR X) (QUOTE SPECIAL))  
068 (MEMBER (CAR X) BVARSL))  
069 (SETQ X (CONS (P1 (CAR X)) (CDR X))))  
070 (COND ((AND (EQ (CAR X) (QUOTE EVAL))  
071 (NOT (CDDR X))  
072 (EQ (CAAR Z) (QUOTE CONS))  
073 (EQ (CAADR Z) (QUOTE QUOTE))  
074 (GETL (SETQ TEM (CADDDR (CAR Z)))  
075 (QUOTE (FEXPR FSUBR \*FEXPR))))  
076 (QUOTE (FEXPR FSUBR \*FEXPR)))  
077 ((RETURN (CONS (CAR X) Z)))  
078  
C  
079 (P1SETD (RETURN (CONS (CAR X) Z)))  
080 (VARB (SETQ Y (COND ((SETQ Z (ASSOC (CADR X) RNL)) (CDR Z))  
081  
082 (T (CADR X))))))  
083 (SETQ P1SCV (CONS Y P1SCV))  
084 (SETQ Z (P1 (CADDR X)))  
085 (SETQ CNT (ADD1 CNT))  
086 (RETURN (LIST (CAR X) Y Z))  
087 (P1COND)  
088 (SETQ TEM LOCVARS)  
089 (SETQ Y CNT))  
090 (P1BUG Y CNT TEM)  
091 (SETQ CNT (ADD1 CNT))  
092 (GO C))  
093 EXPR)  
094 (DEFPROP PICDC  
095 (LAMBDA (X) (PROG (P1SCV T1)  
096 (SETQ T1 (MAPCAR (FUNCTION (LAMBDA (J)  
097 (MAPCAR (FUNCTION P1)  
098 (J))))  
099 J))  
100 K)))  
101 (RETURN (CONS P1SCV T1)))  
102 EXPR)  
103  
104 (DEFPROP GFY  
105 (LAMBDA (X) (COND ((ATOM X) X) (T (CDD2 (GENSYM) (QUOTE EXPR) X)))))  
106 EXPR)  
107  
108 (DEFPROP PIPSTP (LAMBDA NIL (COND ((ZEROP P1SCNT) (SETQ P1SCNT P1STCNT))) EXPR))

001 (DEFPROP PIPROG  
002 (LAMBDA (X RNL)  
003 (PROG (GL P1SCNT PR TEM PILL P1SCNT)  
004 (SETQ PILL (P1LMA (CAR X)))  
005 (SETQ TEM LOCVARS)  
006 (SETQ P1SCNT 0)  
007 (SETQ P1SCNT CNT)  
008 (SETQ  
009 PR  
010 (MAPCAR (FUNCTION (LAMBDA (Y)  
011 (PROG2 (SETQ P1SCNT (INCR CNT))  
012 (COND ((ATOM Y)  
013 (P1PSTP)  
014 (SETQ GL  
015 (CONS (CONS Y (GENSYM))  
016 GL))  
017 Y)  
018 (T (P1 Y))))  
019  
020 (SETQ CNT (ADD1 CNT))  
021 (COND ((NOT (ZEROP P1SCNT)) (P1BUG P1SCNT CNT TEM)))  
022 (REMOVL (FUNCTION (LAMBDA (X)  
023 (PROG (Z)  
024 (RETURN (COND ((SETQ Z  
025 (RETURNS (ASSOC X LOCVARS))  
026 (ZEROP (CDR Z)))))))  
027 (QUOTE P1LL))  
028 (SETQ CNT (ADD1 CNT))  
029 (RETURN (LIST (QUOTE PROG) P1SCNT GL P1LL PR)))  
030  
031  
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EXPR)  
  
(DEFFPROP OUTG  
 (LAMBDA (X) (PROG NIL  
 (OUTPUT (CAR X))  
 (SETQ X (CDR X))  
 (COND ((NULL X)  
 (RETURN (OUTPUT (QUOTE (PUSHJ P \*UDT))))))  
 (OUTPUT (LIST (QUOTE CAIN) 1 (LIST (QUOTE QUOTE)  
 (CAAR X))))  
 (OUTPUT (LIST (QUOTE JRST) 0 (CDAR X)))  
 (GO A))  
EXPR)  
  
(DEFFPROP CPROG  
 (LAMBDA (X PSFLG)  
 (PROG (GL EXIT EXITN PVR Z PRSSL PROGSW VGO VCL)  
 (SETQ VCL (CAR X))  
 (SETQ X (CDR X))  
 (SETQ PROGSW T)  
 (SETQ PVR NO)  
 (SETQ EXIT (GENSYM))  
 (SETQ EXITN (GENSYM))  
 (SETQ VGO (GENSYM))  
 (SETQ GL (CONS (CONS NIL EXIT)  
 (CONS (CONS NIL EXITN)  
 (CONS (CONS NIL VGO) (CAR X))))  
 (SETQ Z (CADR X))  
 (COND ((NULL Z) (GO L2))  
 ((SPECIALP (CAR Z))  
 (T (SETQ PVRL (CCONS (CAR Z) PVRL))))  
 L1

051 (SETQ Z (CDR Z))  
052  
053 (GO L1)  
054  
055 L2 (COND ((AND (NOT PROGSW) (NOT (ZEROP VCL)))  
056 (NOT (EQ (LENGTH SLOTLIST) (LENGTH PRSSL))))  
057 (RESTORE PRSSL)))  
058  
059 (COND ((NULL X) (GO L4)))  
060 ((EQUAL VCL (INCR CNTI) (CLEAR1)))  
061 (COND ((ATOM (CAR X)))  
062  
063 (CLRACS)  
064  
065 L3 (COND ((AND (NOT PROGSW) (NOT (ZEROP VCL)))  
066 (NOT (EQ (LENGTH SLOTLIST) (LENGTH PRSSL))))  
067 (RESTORE PRSSL)))  
068  
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(CVRRL)  
(RESTORE PRSSL)  
(SETQ Z (ADR (CAR X)))  
(COND ((NOT (ATOM LOUT)))  
(PUTPROP Z LOUT (QUOTE PREV)))  
(OUTPUT Z))  
(AND (NULL (CDR X)) (EQ (CAAR X) (QUOTE RETURN)))  
(COND ((OR (NULL (CDAR X)) (NULL (CADAR X)))  
(PUTPROP EXITN T (QUOTE USED)))  
(GO L4))  
(T (LOADI PVRL (COMP (CADAR X)))  
(COND ((GET EXITN (QUOTE USED))  
(OUTJ (QUOTE JRST) 0 EXIT)  
(GO L4))  
(T (GO L5))))  
(T (CDRPE (CAR X)))  
(SETQ X (CDR X))  
(GO L3))  
L4  
(DUTTAG EXITN)  
(COND ((OR (NOT (EQ (CAR DOUT) (QUOTE JRST)))  
(GET EXITN (QUOTE USED)))  
(OUTPUT (LIST (QUOTE MOVEI))  
PVRL  
PV2  
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(DEFPROP CPVRL  
(LAMBDA NIL (PROG NIL  
(COND ((NOT PROGSW) (RETURN NIL)))  
L (SETQ PROGSW NIL)  
(COND ((NULL PVRL) (SETQ PRSSL (APPEND SLOTLIST NIL))  
T4 ((NOT (ILOC (CONS (CAR PVRL) CNTI)))  
V (INITZ (CAR PVRL)))  
V1 (SETQ PVRL (CDR PVRL))  
(GO L)))  
EXPR)  
(DEFPROP INITZ  
(LAMBDA (X) (PROG NIL (PUSHQUOTE ((QUOTE NIL)))) (CONT 0 (LIST X))))  
EXPR)

001 (DEFPROP VARB  
002 (LAMBDA (X) (PROG  
003 (COND ((NUMBER X B VARS) (RETURN NIL))  
004 ((GET X (QUOTE SPECIAL)) (GO A)))  
005 (PRINTY (LIST X (QUOTE UNDECLARED)))  
006 (PUTPROP X T (QUOTE SPECIAL)))  
007 A  
008 (SETQ SVARs (ADD X SVARs))  
009 (SETQ BVARs (ADD X BVARs))  
010 (RETURN T)))

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011 )  
012 (DEFPROP LOAD1  
013 (LAMBDA (ACNO VAR)  
014 (PROG (Z OLDAcc DATAORG DAC DOD)  
015 (REMOVE VAR)  
016 (SETQ Z (ILOC1 VAR ACNO))  
017 (SETQ OLDAcc (CONTENTS ACNO))  
018 (SETQ DATAORG  
019 (COND ((NOT (NUMBERP Z)) NIL) (T (CONTENTS Z))))  
020 (SETQ DAC (DVP OLDAcc))  
021 (COND ((EQ DAC Z) (COND (DOD (DACPUSH ACNO)) (RETURN NIL)))  
022 (SETQ DOD (DVP DATAORG))  
023 (COND ((EQ ACNO Z) (COND (DACPUSH ACNO)) (RETURN NIL)))  
024 ((AND (EQ Z 0) (NOT DOD) (NOT DAC)) (GO COMPOP))  
025 ((AND (NOT DOD)  
026 OLDAcc  
027 (NUMBERP Z))  
028 (OR (LESSP Z 1)  
029 (GREATERP Z HLAC))  
030 (COND X))  
031 (LESSP Z ACNO))  
032 ((GO EXCOMP))  
033 ((NOT DAC) (GO ACFREE))  
034 (T (GO PUSHAC))  
EXCOMP  
035 (CONT Z OLDAcc)  
036 (OUT1 (QUOTE EXCH) ACNO Z)  
037 (GO T4)  
PUSHAC  
038 (CPUSH ACNO)  
039 (SETQ Z (LOC VAR))  
ACFREE  
040 (COND ((NOT (NUMBERP Z)) (GO T3)))  
041 (OUT1 (QUOTE MOVE) ACNO Z)  
042 (RETURN (CONT ACNO))  
043 (SETQ Z (LOC VAR))  
044 (COND ((NULL (CDR DATAORG))  
045 (CONS (CAR DATAORG) (QUOTE DUP))))  
COMPOP  
046 (POPOP ACNO)  
047 (RETURN (CONT ACNO DATAORG))  
T4  
048 (OUT1 (QUOTE MOVE) ACNO Z)  
049 T3  
050 (RETURN (CONT ACNO  
051 (COND ((EQ (CAAR Z) (QUOTE QUOTE)) (CAR Z))  
052 (COND (T (LIST (CAR VAR)))))))  
053  
054 EXPR)  
055 (DEFPROP LOC (LAMBDA (X) (ILOC1 X NIL)) EXPR)

001 (DEFPROP ILOC  
002 (LAMBDA (X) (PROG (CNTR BEST BESTNO Y)  
003 (SETQ Y SLOTLIST)  
004 (SETQ CNTR 1)  
005 A (COND ((NULL Y) (GO B))  
006 ((AND (CAR Y) (EQ (CAAR Y) (CAR X))) (GO C)))  
007 D (SETQ Y (CDR Y))  
008 (SETQ CNTR (ADDI CNTR))  
009 (SETQ CNTR (ADDI CNTR))  
010 (GO A))

011 TAKEIFN  
012 (COND (BESTNO (GO D)))  
013 (SETQ BESTNO 105105)  
014 (GO TAKELI)  
015 TAKELI  
016 (SETQ BESTNO (CDAR Y))  
017 (SETQ BEST CNTR)  
018 (GO D))

019 (COND (BESTNO (GO REVIVAL))

020 ((SPECIALP (CAR X))  
021 (RETURN (LIST (QUOTE SPECIAL)) (CAR X))))  
022 ((EQ (CAR X) (QUOTE QUOTE)) (RETURN (LIST X)))  
023 (SETQ Y (ASSOCR (CAR X) VLI))  
024 (RETURN (ILOC (CONS (CAR Y) (CDR X)))))  
025 C (COND ((EQ (CAR X) (QUOTE QUOTE)) (GO QT))  
026 ((OR (NULL (NUMBERP (CDAR Y))) (NULL (CDAR Y)))  
027 (GO TAKEFN))  
028 ((AND (NOT (=ESP (CDAR Y)) (CDR X))  
029 (OR (NULL BESTNO)  
030 (GREATERP BESTNO (CDAR Y))))  
031 (GO TAKELI))  
032 (T (GO D)))  
033 QT (COND ((NULL (EQUAL X (CAR Y))) (GO D)))  
034 TAKE (SETQ BEST CNTR)  
035 RETVAL  
036 (RETURN (COND ((NOT (GREATERP BEST NACS)) BEST)  
037 (T (PLUS (MINUS BEST) NACS 1)))))  
038  
039 EXPR)  
040 (DEFPROP ILOC1  
041 (LAMBDA (X AC) (PROG (Z)  
042 A (COND ((SETQ Z (ILOC X)) (RETURN Z))  
043 ((MEMBER (CAR X) PVRL))  
044 (RETURN (QUOTE ((QUOTE NIL))))  
045 ((SETQ Z (ASSOCR (CAR X) VLI))  
046 (RETURN (ILOC1 (CONS (CAR Z) (CDR X)) AC)))  
047 ((SETQ Z (ASSOCR (CAR X) SPDLST))  
048 (RETURN (CARZR Z (COND ((NULL AC) (FREAC))  
049 (T AC))))))  
050 (PRINTY X)  
051 (BARF DS1)))  
052 EXPR)

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001 (DEFFPROP CARCDR
002   (LAMBDA (ITEM AC)
003     (PROG (T3 T4 T5)
004       (COND ((SETQ T5 (EQ (LLOC1 (SETQ T3 (CDR ITEM)) AC) AC)) (REMOVE T3)))
005         (COND ((OR (NULL T5) (DVP (CONTENTS AC))) (CPUSH AC)))
006           (REMOVE T3))
007             (SETQ T4 (CSTEP (CADR ITEM) AC (LLOC T3)))
008               (REMOVE T3))
009                 (COND ((NULL (CDR T4))
010                   (SETQ VL (CONS (CAR (CONTENTS (CAR T4))) (CAR ITEM)) VL))
011                     (RETURN (CAR T4))))
012                       (SETQ T4 (REVERSE T4))
013                         (COND ((NULL (CDR T4)) (GO RET1))
014                           ((EQ (LENGTH T4) 2) (GO L2))
015                             ((AND (EQ AC 1) (EQ (CAR T4) 1))
016                               (OUTPUT (LIST (QUOTE CALL)
017                                 1
018                                   (LIST (QUOTE E)
019                                     (READLIST (CONS (QUOTE C)
020                                       (INCNC (REVERSE (CDR T4)))
021                                         (QUOTE (R)))))))
022                                           (GO RET1)))
023                                             (DOUT1 (GET (CADR T4) (QUOTE INST)) AC (CAR T4)))
024                                               (SETQ T4 (CONS AC (CDDR T4)))
025                                                 (GO L1))
026                                                   RET
027                                                     (CONT AC (LIST (CAR ITEM)))
028                                                       (RETURN AC)))
029                                                         EXPR)
030
031 (DEFFPROP CSTEP
032   (LAMBDA (FUN AC LARGS)
033     (PROG (T2)
034       (RETURN (COND ((NULL FUN) (LIST LARGS))
035         ((SETQ T2 (COPT FUN LARGS)) (LIST T2))
036           (T (CONS (CAR (SETQ T2 (GET FUN
037             (QUOTE OPEN)))) (CSTEP (CDR T2) AC LARGS)))))))
038
039
040 (DEFFPROP COPT
041   (LAMBDA (X Y) (PROG (ITEM T1)
042     (SETQ TEM SPOLDST)
043       (COND ((NULL TEM) (RETURN NIL))
044         ((ATOM (CDAR TEM)) (GO L1))
045           (T (COND ((EQUAL (LLOC (CDDR TEM)) Y)
046             (EQUAL (LLOC (CDAR TEM)) Y)
047               (SETQ T1 (LLOC (LIST (CAAR TEM)))))))
048                 (RETURN T1))
049                   (SETQ TEM (CDR TEM)))
050                     (GO L1)))
051
052
053 (DEFFPROP PHASE2
054   (LAMBDA (X)
055     (PROG (ISLOTLIST LDST
056       SPFL
057       FL
058       ARGNO
059       SFLG
060       PVRL

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051 SPLDLST  
052 RSL  
053 RSS  
054 PROGSN  
055 VGOL  
056 GL  
057 CTAG  
058 VL

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059 HLAC)  
060 (SETQ HLAC -105105)  
061 (SETQ ARGNO 1)  
062 (SETQ CNT 1)  
063 (SETQ FL NACS)  
064 (COND ((ZEROP FL) (GO L2)))  
065 (SETQ SLOTLIST (CONS NIL SLOTLIST))  
066 (SETQ FL (SUB1 FL))  
067 (GO L1)  
068 (COND (LSUBRF (SETQ LOUT (SUBST (QUOTE LSUBR)  
069 (QUOTE SUBR)  
070 (QUOTE LOUT)))  
071 (QUOTE LOUT)))  
072 (SETQ SPFL (LMB (CADR X) T))  
073 (COND ((NOT SPFL) ((NOT (EQ (CAADDR X) (QUOTE PROG))))  
074 (LOADI 1 (COMP (CADDR X)))  
075 (SETQ SFLG NIL))  
076 (COND ((SETQ FL (ASSOC (CAR LOUT)  
077 (LAMBDA (QUOTE (PROG (COND ((NOT SPFL)  
078 (SETQ ARGNO LOUT)  
079 (SETQ LOUT (QUOTE FOO))  
080 (NPDL)  
081 (OUTPUT ARGNO)  
082 (COND ((NOT SPFL)  
083 (SETQ LOUT (CONS (CDR FL)  
084 (CONS (SUBST 0  
085 (QUOTE P)  
086 (QUOTE (CADR LOUT))  
087 (CDR FL))  
088 (COND ((NOT SPFL)  
089 (SETQ ARGNO LOUT)  
090 (NPDL)  
091 (OUTPUT ARGNO)  
092 (SETQ LOUT (QUOTE FOO))  
093 (NPDL)  
094 (OUTPUT ARGNO)  
095 (COND ((NOT SPFL)  
096 (SETQ LOUT (CONS (CDR FL)  
097 (CONS (SUBST 0  
098 (QUOTE P)  
099 (QUOTE (CADR LOUT))  
100 (CDR FL))  
101 (GO EXIT)))  
102 (T (NPDL) (COND ((NOT SPFL)  
103 (OUTPUT (QUOTE (POPJ P)))  
104 (GO EXIT))))  
105 (OUTPUT (QUOTE (JRST 0 SPECSTR)))  
106 (COND (VGOL (OUTG (CAR VGOL))  
107 (SETQ VGOL (CDR VGOL))  
108 (GO EXIT)))  
109 (RETURN (COND (LDLST (PRINTTY LDLST))))  
110 (EXPR))  
111  
112 (DEFPROP NPDL (LAMBDA NIL (RESTORE (QUOTE (NIL NIL NIL NIL NIL)))) EXPR)

```
001 (DEFPROP LMB (LAMBDA (X Y) (PROG (ACN SFLG1 TEM)
002                                         (SETQ ACN 1))
003                                         A (COND ((NULL X) (RETURN SFLG1))
004                                         ((SPECIALP (CAR X)) (GO SP1))
005                                         ((SETQ TEM (ASSOC (CAR X) LOCVARS)) (GO LV1)))
006                                         SP2 (T (GO SP2)))
007                                         LV1 (COND (Y (CONT ACN (LIST (CAR X))))))
008                                         (SETQ ACN (ADD1 ACN))
009                                         SP2 (SETQ X (CDR X)))
010                                         (GO A))
011                                         LV1 (COND ((NULL SFLG3) (GO B)))
012                                         (COND ((NULL SFLG3) (GO B)))
013                                         B (COND (Y ACN) (T 0))
014                                         (LIST (QUOTE SPECIAL) (CAR X)))
015                                         (GO LV1)
016                                         (SETQ SFLG (SETQ SFLG1 T))
017                                         (OUTPUT (QUOTE (JSP 6 SPECBIND)))
018                                         (GO A)))
019                                         EXPR)
020                                         B (COND ((NOT (EQ LOUT (QUOTE FOO))) (PRINT LOUT)))
021                                         (DEFPROP CONT (LAMBDA (X Y) (REPLACA (FIND X) Y)) EXPR)
022                                         (DEFPROP CONTENTS (LAMBDA (X) (CAR (FIND X))) EXPR)
023                                         (DEFPROP OUTPUT
024                                         (LAMBDA (X) (PROG2 (COND ((NOT (EQ LOUT (QUOTE FOO))) (PRINT LOUT))
025                                         (DEFPROP OUTPUT
026                                         (LAMBDA (X) (COND ((NOT (EQ LOUT (QUOTE FOO))) (PRINT LOUT)))
027                                         (DEFPROP OUTPUT
028                                         (LAMBDA (X) (COND ((NOT (EQ LOUT (QUOTE FOO))) (PRINT LOUT)))
029                                         (DEFPROP OUTPUT
030                                         (LAMBDA (X) (COND ((NOT (EQ LOUT (QUOTE FOO))) (PRINT LOUT)))
031                                         (DEFPROP OUT1
032                                         (LAMBDA (A B C)
033                                         (COND ((OR (ATOM C) (ATOM (CAR C))) A)
034                                         (SETQ C (CAR C))
035                                         (COND ((GETA (QUOTE IMMEDIATE)
036                                         (T (SETQ C (LIST (QUOTE C) 0 0 C))
037                                         (SETQ C (LIST (QUOTE C) 0 0 C))
038                                         (COND B (COND C (COND ((OR (NOT (NUMBERP C))
039                                         (NUMBERP C) 0)
040                                         (GREATERP C 0))
041                                         NIL)
042                                         (QUOTE (P))))))))
043                                         EXPR)
044                                         (DEFPROP ADD (LAMBDA (X Y) (COND ((MEMBER X Y) Y) (T (CONS X Y)))) EXPR)
```

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001 (DEFPROP CPUSH
002   (LAMBDA (X)
003     (PROG (Z ZZ ZZX LK)
004       (COND ((NULL (DVP (SETQ ZZX (CONTENTS X)))) (RETURN NIL)))
005         ((LESSP X 1) (GO NOSLOT1)))
006         A
007         (SETQ ZZ 0)
008         (COND ((NULL Z) (GO NOSLOT1))
009           ((DVP (ICAR Z)))
010             ((AND LK (OR (NOT (NUMBERP (CDAR Z))) (SPECIALP (CAAR Z))))
011               ((GO FNDSLDT))
012                 ((EQ (CAR ZZ) (CAAR Z)) (GO FNDSLDT)))
013                   ((SETQ Z (CDR Z)))
014                     ((SETQ ZZ (SUB1 ZZ)))
015                       (GO A2))
016                         FNDSLDT
017                           (COND ZZ ZZX)
018                             (OUT1 (QUOTE MOVEM) X ZZ)
019                               RET (RETURN (CONT X (CONS (CAR ZZX) (QUOTE DUP)))) )
020                                 NOSLOT
021                                   (COND ((SETQ LK (NOT LK)) (GO A1)))
022                                     NOSLOT1
023                                       (COND ((AND PROGSW (NOT (ASSOC (CAR ZZX) LOCVARS)))
024                                         (SETQ Z (LENGTH SLOLIST))
025                                           (CPVRL)
026                                             (COND ((LESSP X 1)
027                                               (SETQ X
028                                                 (PLUS X
029                                                   (OPUSH X)
030                                                     (CONT D ZZX)
031                                                       (GO RET1)))
032                                         EXPR)
033                                         034
035                                         (DEFPROP SPECIALP (LAMBDA (X) (MEMBER X SPVARS)) EXPR)
036                                         037
037                                         (DEFPROP REMOVL
038                                           (LAMBDA (F VAR) (PROG NIL
039                                             (SETQ VAR (GET VAR (QUOTE VALUE)))
040                                               A
041                                                 (COND ((NULL (CDR VAR)) (RETURN NIL))
042                                                   ((F (CADR VAR)) (RPLACD VAR (CDDR VAR)))
043                                                     (T (SETQ VAR (CDR VAR)))))
044                                                       (GO A)))
045                                         EXPR)
046                                         (DEFPROP REMOVE (LAMBDA (DATA) (REMOVL (FUNCTION REM1) (QUOTE SPLDLST)) ) EXPR)
047                                         048
048                                         (DEFPROP REMOVE
049                                           (LAMBDA (DATA) (PROG NIL
050                                             (REM1 (FUNCTION REM1) (QUOTE LDLST))
051                                               (REMOVL (FUNCTION REM1) (QUOTE SPLDLST)))
052                                               EXPR)
053                                         (DEFPROP REM1 (LAMBDA (X) (EQUAL X DATA)) EXPR)
054

```



001 (DEFPROP BOOL3  
002 (LAMBDA (EXP F TAG))  
003 (PROG (W X Y Z AC))  
004 (SETQ X (COMP (CAR EXP)))  
005 (SETQ Y (ILOC1 (SETQ Z (COMPL (CADR EXP) (FRAC1))))  
006 (FRAC1))  
007 (SETQ W (ILOC1 X (FRAC1)))  
008 (COND ((AND (NUMBERP W) (LESSP 0 W)) (SETQ AC W))  
009 (COND ((AND (NUMBERP W) (LESSP 0 W)) (SETQ AC W))  
010 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
011 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
012 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
013 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
014 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
015 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
016 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
017 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
018 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
019 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
020 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
021 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
022 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
023 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
024 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
025 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
026 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
027 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
028 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
029 (COND ((AND (NUMBERP Y) (GREATERP Y 0)) (REMOVE-Z))  
030 (DEFPROP FRAC1 (LAMBDA NIL (COND ((IDVP (CONTENTS 1)) (FREAC)) (T 1))) EXPR)  
031 (DEFPROP RST  
032 (LAMBDA (X) (COND ((NULL X) NIL)  
033 (((ASSOCD X GL) (RESTORE PRSSL))  
034 ((REMPROP X (QUOTE SET1))  
035 ((CWORD))  
036 ((PUTPROP X (APPEND SLOTLIST NIL) (QUOTE LEVEL)))  
037 ((SETQ X (GET X (QUOTE LEVEL))) (RESTORE X))  
038 ((SETQ X (GET X (QUOTE LEVEL))) (RESTORE X))  
039 (EXPR))  
040 (EXPR))  
041 (DEFPROP ASSOC  
042 (LAMBDA (X Y) (PROG NIL  
043 (A (COND ((NULL Y) (RETURN NIL))  
044 ((EQ X (CDAR Y)) (RETURN (ICAR Y))))  
045 ((SETQ Y (CDR Y))  
046 (GO A)))  
047 (EXPR)))

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(DEFPROP BOOL4  
  (LAMBDA (EXPR) (PROG (G)  
    (COND ((EQ (CAR EXP) (QUOTE EQ))  
          (BOOL3 (CDR EXP) NIL NIL))  
          (GO L1))  
          (SETQ G (SENSYM)) T (QUOTE SETV))  
          (PUTPROP (SETQ G (SENSYM)) T (QUOTE SETV))  
          (COND ((NOT (GET G (QUOTE USED))) (CPUSH NO)))  
          (COND ((NOT EFFS) (OUT1 (QUOTE TDZA) NO NO)))  
          (COND ((NOT EFFS) (OUT1 (QUOTE MOVEI) NO T))))))  
EXPR)  
(DEFPROP ITER  
  (LAMBDA (FN ARGS)  
    (COND ((NULL (CDR ARGS)) (P1 (CAR ARGS)))  
          (T (LIST FN (P1 (CAR ARGS)) (ITER FN (CDR ARGS))))))  
EXPR)  
(DEFPROP OUTJ  
  (LAMBDA (X Y Z)  
    (PROG NIL  
      (CWORDL)  
      (CSPLD2 1 NIL)  
      (RST Z)  
      (PUTPROP Z T (QUOTE USED))  
      (COND ((EQUAL LOUT (GET Z (QUOTE PREV)))  
            (RETURN (SETQ LOUT (LIST X Y (LIST Z -1))))))  
      (OUTPUT (LIST X Y Z))))  
EXPR)  
(DEFPROP ADR  
  (LAMBDA (X) (PROG (Z)  
    (COND ((SETQ Z (ASSOC X GL)) (RETURN (CDR Z)))  
          (PRINTY (LIST (QUOTE UNDEFINED) (QUOTE TAG) X)))  
          (RETURN EXIT)))  
EXPR)  
(DEFPROP FREAC  
  (LAMBDA NIL (PROG (Z ZZ SW)  
    L1 (SETQ ZZ 0)  
    (SETQ Z SLOTLIST)  
    L2 (SETQ ZZ (ADD1 ZZ))  
    (COND ((GREATERP ZZ NACS)  
          (COND (SW (CPUSH NACS)) (RETURN NACS))  
              (T (SETQ SW T) (GO L1))))  
          (IOR (NULL (CAR Z)) (AND SW (DVP (CAR Z))))  
          (RETURN ZZ))  
    (SETQ Z (CDR Z))  
    (GO L2))))  
EXPR)  
(DEFPROP OUTTAG  
  (LAMBDA (X) (COND ((GET X (QUOTE USED)) (CLRAICS) (RST X) (OUTPUT X)))  
EXPR)
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(DEFPROP COMARG  
(LAMBDA (Y)  
(PROG NIL  
(COND (EQ (CAR Y) (QUOTE QUOTE))  
(OUT1 (QUOTE MOVE) NO (INDEX))  
(RETURN (OUTPUT (LIST (QUOTE HRRZ) NO Y NO))))  
(LOAD1 NO Y)  
(OUT1 (QUOTE ADD) NO (INDEX))  
(RETURN (OUTPUT (LIST (QUOTE HRRZ) NO 0 NO))))  
(DEFPROP INDEX (LAMBDA NIL (PLUS (MINUS (LENGTH SLOTLIST)) NACS -1)) EXPR)  
(DEFPROP FIND  
(LAMBDA (X) (PROG (ZZ)  
(SETQ ZZ SLOTLIST)  
(COND ((GREATERP X 0) (GO LP3)))  
(SETQ X (PLUS 1 NACS (MINUS X)))  
(SETQ X (SUB1 X))  
(COND ((ZEROP X) (RETURN ZZ))  
(SETQ ZZ (CDR ZZ))  
(GO LP3)))  
EXPR)  
(DEFPROP SPUSH (LAMBDA NIL (REPLACD (NACSI) (CJNS NIL (CDR (NACSI)))))) EXPR)  
(DEFPROP SPOP (LAMBDA NIL (REPLACD (NACSI) (CDDR (NACSI)))))) EXPR)

PAGE 21  
001 (DEFFPROP PLOC  
002 (LAMBDA (IVAR NO)  
003 (RPLACD (SASSOC IVAR  
004 LOCVARS  
005 (FUNCTION (LAMBDA NIL (CAR (SETQ LOCVARS  
006 (NO)))  
007  
008 (CONS (LIST IVAR)  
009 LOCVARS))))  
010 )  
011 (DEFFPROP PRINTTY  
012 (LAMBDA (DATA) (LOG NIL (FUNCTION (LAMBDA NIL (PRINT DATA)))))  
013 EXPR)  
014  
015 (DEFFPROP DOCOND  
016 (LAMBDA (EXP AC)  
017 (PROG (G1 G2 H1 H2 T1 RSL IRSSL JSP CTAG TEM)  
018 (PUTPROP (SETQ G1 (GENSYM))  
019 (SETQ IRSSL (APPEND SLOTLIST NIL))  
020 (QUOTE LEVEL)))  
021 A  
022 (SETQ JSP T)  
023 (SETQ RSL NIL)  
024 (COND (NULL EXP) (COND (T1 (OUT1 (QUOTE MOVE1)  
025 AC  
026 (QUOTE (QUOTE NIL))))  
027 (OUTTAG G1)  
028 (CLRACS)  
029 (RESTORE IRSSL)  
030 (RETURN NIL))  
031 ((NULL (CDAR EXP))  
032 (LOAD1 AC (COMP (CAAR EXP)))  
033 (COND ((CDR EXP) (OUTJ (QUOTE JUMPN) AC G1))  
034 (T (RESTORE IRSSL)))  
035 (GO B))  
036 ((AND (EQUAL (CDAR EXP) (QUOTE ((QUOTE NIL))))  
037 (EQ (CAAR EXP) (QUOTE NULL)))  
038 (OR (ATOM (CADAR EXP))  
039 (NOT (MEMBER (CAR (CADAR EXP))  
040 (QUOTE (AND OR  
041 NULL  
042 EQ  
043 (QUOTE ZERO))))  
044 (LOAD1 AC (COMP (CADAAR EXP)))  
045 (OUTJ (QUOTE JUMPE) AC G1)  
046 (SETQ TI T)  
047 (GO D))  
048 ((OR LDLST (CDDAR EXP)) (GO L2))  
049 ((AND (EQ (CADAR EXP) (QUOTE GO))  
050 (ATOM (SETQ TI (CADDDR (CAR EXP))))  
051 (B00L1 (CAAR EXP) (ADR TI) T)  
052 (GO B))  
053 ((EQUAL (CADAR EXP) (QUOTE (RETURN (QUOTE NIL))))  
054 (B00L1 (CAAR EXP) EXITN T)  
055 (GO B)))  
056 (SETQ JSP (NOT (OR (EQ (SETQ H2 (CAAR (LAST (CAR EXP))))  
057 (QUOTE RETURN))  
058 (EQ H2 (QUOTE GO))))  
059 (PUTPROP (SETQ G2 (SETQ CTAG (GENSYM)))  
060 (IRSL (QUOTE LEVEL))))

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(SETQ RSL NIL)  
(B00L1 (CAAR EXP) G2 NIL)  
(SETQ H2 (COND ((AND RSL (NOT (ATOM RSL)))  
IT (APPEND SLOTLIST NIL)))) RSL)  
(SETQ H1 (APPEND SLOTLIST NIL))  
LPI  
(COND ((NULL (CDR T1)) (GO L1)))  
(COMPE (CAR T1))  
(SETQ T1 (CDR T1))  
(GO LPI)  
L1  
(COND (EFFS (COMPE (CAR T1)))  
IT (LOAD AC (CDR (CAR T1))))  
(CWORDL)  
(SETQ SPLDLST H1)  
(SETQ H1 SLDLST)  
(SETQ SLDLST H2)  
(SETQ TEM (EQUAL (CONTENTS AC) (QUOTE (QUOTE NIL))))  
(SETQ SLOTLIST H1)  
(SETQ T1 NIL)  
(COND (JSP (COND (OR (CDR EXP)  
AND (NOT EFFS)  
NOT TEM)  
(SETQ T1  
(GET G2 (QUOTE USED))))  
OUT J (QUOTE JRST) 0 G1))  
T (RESTORE IRSSL)))  
(SETD SLOTLIST H2)  
(OUTPUT G2)  
(GO D)  
B  
(SETQ T1 NIL)  
D  
(SETQ EXP (CDR EXP))  
(GO A))  
EXPR)  
  
(DEFPROP SPECIAL  
(LAMBDA (X) (PROG NIL  
L  
(COND ((NULL X) (RETURN T))  
(PUTPROP (CAR X) T (QUOTE SPECIAL))  
(SETQ X (CDR X))  
(GO L)))  
FEXPR)  
  
(DEFPROP CLEAR (LAMBDA NIL (PROG NIL (CSPLD) (CWORDL) (RETURN (CPVRL)))) EXPR)  
L)  
(DEFPROP CLEAR1  
(LAMBDA NIL (PROG NIL  
(CSPLD3 NIL)  
(CSPLD2 1 NIL)  
(CWORDL)  
(RETURN (CPVRL))))  
EXPR)  
  
(DEFPROP A HLRZ# INST)  
(DEFPROP D HRRZ# INST)  
(DEFPROP HRRZ# HRRZ IMMED)  
(DEFPROP HLRZ# HLRZ IMMED)

121  
122 (DEFPROP MOVE MOVE1 IMMED)  
123  
124  
125 (DEFPROP CANN CAIN IMMEDI)  
126  
127 (DEFPROP CAR (A) OPEN)  
128  
129 (DEFPROP CDR (D) OPEN)  
130  
131 (DEFPROP CAAR (A . CAR) OPEN)  
132  
133 (DEFPROP CADR (A . CDR) OPEN)  
134  
135 (DEFPROP CDAR (D . CAR) OPEN)  
136  
137 (DEFPROP CDDR (D . CDR) OPEN)  
138  
139 (DEFPROP ADD1 3 ACS)  
140  
141  
142 (DEFPROP SUB1 3 ACS)  
143  
144 (DEFPROP CONS XCONS COMMU)  
145  
146 (DEFPROP CONS 3 ACS)  
147  
148 (DEFPROP ATOM 1 ACS)  
149  
150 (DEFPROP NUMBERP 1 ACS)  
151  
152 (DEFPROP GENSYM 7 ACS)  
153  
154 (DEFPROP CAAR (A . CAAR) OPEN)  
155  
156 (DEFPROP CADDR (A . CADR) OPEN)  
157  
158 (DEFPROP CADAR (A . CDAR) OPEN)  
159  
160 (DEFPROP CDAAR (D . CAAR) OPEN)  
161  
162 (DEFPROP CDDAR (D . CADR) OPEN)  
163  
164 (DEFPROP CDDAR (D . CDAR) OPEN)  
165  
166 (DEFPROP CDDDR (D . CDDR) OPEN)  
167  
168 (DEFPROP CADDR (A . CDDR) OPEN)  
169 (DEFPROP \*PLUS \*PLUS COMMU)  
170  
171 (DEFPROP EQUAL EQUAL COMMU)  
172  
173 (DEFPROP EQUAL 7 ACS)  
174  
175 (DEFPROP \*TIMES \*TIMES COMMU)  
176  
177 (DEFPROP XCONS 3 ACS)  
178  
179 (DEFPROP NCONS 3 ACS)

181 (DEFPROP \*APPEND 37 ACS)  
182  
183 (DEFPROP MINUS 3 ACS)  
184  
185 (DEFPROP GET 1 ACS)  
186  
187 (DEFPROP \*GREAT \*LESS COMMU)  
188  
189 (DEFPROP \*LESS \*GREAT COMMU)  
190  
191 (DEFPROP MEMBER 37 ACS)  
192  
193 (DEFPROP LENGTH 7 ACS)  
194  
195 (DEFPROP LAST 3 ACS)  
196  
197 (DEFPROP CAAAR (A . CAAAR) OPEN)  
198 (DEFPROP CAAADR (A . CAADR) OPEN)  
199  
200 (DEFPROP CAADDR (A . CADAR) OPEN)  
201  
202 (DEFPROP CAADDR (A . CADDR) OPEN)  
203  
204 (DEFPROP CADAAR (A . CDAAR) OPEN)  
205  
206 (DEFPROP CADDDR (A . CDDDR) OPEN)  
207  
208 (DEFPROP CADDAR (A . CDDR) OPEN)  
209  
210 (DEFPROP CADDAR (A . CDDAR) OPEN)  
211  
212 (DEFPROP CDDDR (D . CDDDR) OPEN)  
213  
214 (DEFPROP CDDAR (D . CDDR) OPEN)  
215  
216 (DEFPROP CDDAR (D . CDAAR) OPEN)  
217  
218 (DEFPROP CDDAR (D . CADDR) OPEN)  
219  
220 (DEFPROP CDDAR (D . CADDR) OPEN)  
221  
222 (DEFPROP CDADDR (D . CADAR) OPEN)  
223  
224 (DEFPROP CDADDR (D . CAADR) OPEN)  
225  
226 (DEFPROP CDAAR (D . CAAAR) OPEN)  
227  
228 (DEFPROP CDAAR (D . CAADR) OPEN)  
229  
230 (DEFPROP RPLACD HRRM<sup>E</sup> INST)  
231 (DEFPROP RPLACA HRLM<sup>E</sup> INST)  
232  
233 (DEFPROP RPLACD HLLZS<sup>E</sup> INSTN)  
234  
235 (DEFPROP RPLACA HRRZS<sup>E</sup> INSTN)