exprchaine$_1$ comp exprchaine$_2$

```
GEE25 : BSR   WCHAS

(X) WHENC : BSR   WDCOMP          comparateur

            EXT   D0
 x          BEQ   ERREX      ->  mauvais mélange de types (err comparaison)
 x          BMI   GEF30      ->  { not in / in
            MOVE  D0,-(SP)
(répète YCMP) -> BSR  XCMPCH (5)130a
```

$$d3.L = \begin{cases} 1 & \text{si } e_1 < e_2 \\ 0 & e_1 = e_2 \\ -1 & e_1 > e_2 \end{cases}$$

D0

res \ cod	3A #	3B <=	3C <	3D =	3E >	3F >=
1	−1	−1	−1	0	0	0
0	0	−1	0	−1	0	−1
−1	−1	0	0	0	−1	−1

```
            ADDQ.L #1,D3
            ASL   #3,D3

            ADD   (SP)+,D3
            LEA   GEE27-$3A,A0
            ADD   D3,A0
            MOVE.B (A0),D3
            NEG.L D3

            BRA   MB93            ôte p0 et p-1 et met D3.L

GEE27: D.B  1,0,0,0,1,1,2,2
       D.B  0,1,0,1,0,1,2,2
       D.B  1,1,1,0,0,0
```

③ * [mot] x in vset

GEE85 : ADDQ #1,do
BEQ GAN36 in
BSR GAN36
BRA GAN38 inverse b ↔ -1

GAN36 : BSR WICOND ⊗ $R_1 = x$
GAN36 : BSR WSTVIN P_0 = vset ③136
MOVE.L A5,-(SP)
BSR WLMYC2 ⑤239 do.L = nb d'éléments
MOVEQ #0,D1
GEE86 : ADDQ.L #1,D1
: CMP.L D0,D1
BHI GEE91 → fin [absent]
MOVEQ #1,D1
MOVEM.L D0/D1,-(SP)
BSR XSTDF ③138 pousse $x - a_{D1}$ en P_0 do = type
CMP #1,D0
BNE GAP20 → séquents
BSR XICZERO ↓ un seul élément
BNE GEE90 → faux
GEE88

MOVE D0,-(SP)
BSR XIFLOB
BNE GEE900 → faux x-a ∉ R
CMP #$4000,(A0)
BNE GEE90

MOVE (SP)+,D0
CMP #1,D0
BNE GEE92

vrai
GEE88 : BSR POPN
GEE89 : BSR POPN
ADDQ #8,SP
MOVE.L (SP)+,A5 → ôte x et vset -1
BRA LB607
GEE900 : ADDQ #2,SP
GEE90 : BSR POPN
MOVEM.L (SP)+,D0/D1
BRA GEE86

faux
GEE91 : BSR POPN ôte vset
MOVE.L (SP)+,A5
BRA LB608 → ôte x et vset 0

GAP20 : MOVE D0,-(SP)
BSR XIFLOB
BNE GEE900 → faux
MOVE (SP)+,D0
GEE92

```
GEE92: ADDQ.L  #1,4(SP)

       CMP #2,D0
       BNE  GEE98
                                    ↓ cas [a...
GEE94: TST (A0)                       il faut x-a≥0
       BMI  GEE90   → échec

       BSR  POPN
       MOVE.L 4(SP),D1
       BSR  XSTDF1  (3)138   pousse x-b_d1 en p0  d0=type
       CMP.B #3,D0
       BNE  ERR92        → erreur comparaison nulle
                  ← MOVE D0,-(SP)   ⊗
       BSR  XIFLOB
       BNE  ERRCP        → b-a ∉ R
                  ← MOVE (SP)+,D0   ⊗
       CMP #$4000,(A0)
       BNE  GEE96
       BTST #8,D0
       BNE  GEE88        → b accepté

GEE96: TST (A0)
       BMI  GEE88        vrai
       BRA  GEE90

GEE98: CMP #$102,D0
       BNE  GEF10                cas ]a...
       CMP #$4000,(A0)
       BEQ  GEE90
       BRA  GEE94
```

```
GEF10:CMP.B #4,D0
      BNE   ERRCP92
      CMP   #$4000,(A0)
      BEQ   GEE88   GEF16 → x=a        ⊗ GEF16
      CMP   #4,D0
      BEQ   GEF14
      TST   (A0)                       ↓ cas  b<a
      BMI   GEF16                      x<a

GEF12:ADDQ.L #1,4(SP)
      BRA   GEE90

GEF14:TST   (A0)
      BMI   GEF12

GEF16:BSR   XSTKH          pousse b ③139        x
      CMP.B #5,D0                               vdef
      BNE   ERRCP92                             x-a
      MOVE  D0,-(SP)                            b
repète XSTDF→ MOVE  TVARN,D0
      MOVE  D0,D2
      MOVE  D0,D1          x-b                  x
      SUBQ  #3,D0                               vdef
      BSR   XHSUB                               x-a
                                                x-b
      BSR   XIFLOB
      BNE   ERRCP          → b-a ∉ R
      MOVE  (SP)+,D0
      ADDQ.L #1,4(SP)
      CMP   #5,D0
      BEQ   GEF18                      ↓ b<a
      TST   (A0)
      BMI   GEF20          → x<b
      BRA   GEF22
GEF18:CMP   #$4000,(A0)                a<b
      BEQ   GEF22
      TST   (A0)
      BMI   GEF22
GEF20:BSR   POPN           ↓ x>b
      BRA   GEE90
```

(3)

x
vdet
x − a
c

```
GEF22: BSR   POPN
       BSR   XSTKH          pousse c
       CMP   #6,D0
       BNE   ERROP92
       BSR   YMODR1         modr(x-a,c)
       BSR   XIFLOB
       CMP   #$4000,(A0)
       BNE   GEE90
       BRA   GEE88
```


x [in] cset x => P0

```
        GEF30: ADDQ  #1,d0
               BEQ   GAN40     in
               BSR   GAN40     not in
               BRA   GAN38

repete GEE89 → GAN40:
        ~~GEF30~~: BSR   WSTCIN

                              P-1  x
                              P0   cset

        MOVE.L  A5,-(SP)
        BSR     WLMYC1        d0.L = nb de élément de cset
        MOVEQ   #0,D1

GEF32:  ADDQ.L  #1,D1
        CMP.L   D0,D1
        BHI     GEE91
        MOVEM.L D0/D1,-(SP)
        BSR     XSTCF         ← d0 = type de ad1  (d1 ème élément de cset)
                                d3 = cmp (ad1, x)
                                          ↑ élément
        CMP     #$8001,D0
        BNE     GEF36

                                cas élément seul
        TST     D3
        BEQ     GEE89         → (vrai)
GEF34:  MOVEM.L (SP)+,D0/D1
        BRA     GEF32
```

```
GEF36:CMP.B #2,D0
      BNE   ERR92          → erreur cset
      ADDQ.L #1,4(SP)
      TST   D3
      BNE   GEF38
      BTST  #8,D0                cas a_d1 = x
      BNE   GEF34          → égalité exclue
      BRA   GEE89          ⊗
GEF38:MOVE  D3,-(SP)       ← MOVE.L (SP),D1 ⊗
      BSR   XSTCF                  d0 = type de b_d1
                                   d3 = cmp (b_d1, x)
      CMP.B #3,D0
      BNE   ERR92          → erreur cset
      TST   D3             ← MOVE (SP)+,D4
      BNE   GEF40
      BTST  #8,D0
      ~~BEQ   GEF34~~          → égalité exclue
      BRA   GEF41          ⊗
GEF40:CMP   D3,D4
GEF41:BEQ   GEF34          ⊗  → x ∉ ]a,b[
      BRA   GEE89          → (Vrai)
```