⑤ permute $S(k_1..k_n), n, P, P(q_1..q_n)$

$S_i \leftarrow S_{P(i)}$ [doc]

(a, b, c, d)

M ← [a, b] c d
b a
c a
d a

répète YSORT
~~YREOR~~ YPERMUTE

```
~~YREOR~~ : BSR   WTSRC
           TST   D2
           BNE   GEH14
           LEA   REOIB,A0
           SUBQ  #1,D3
           BMI   GEH12
           LEA   REOIW,A0
           BEQ   GEH10
           LEA   REOIL,A0
           ADD.L D0,D0
GEH10 :    ADD.L D0,D0
GEH12 :    MOVE.L A3,-(SP)
           BRA   GEH18
GEH14 :    LEA   REOVC,A0
```

incrément
N
adresse/n° de S

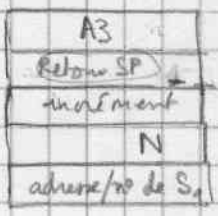
```
H          MOVE.L D3,-(SP)
           NEG.L  D0
GEH18 :    MOVEM.L D0/D1,-(SP)
X          MOVE.L A0,GEH24
           BSR    DECCRVE      ②
           MOVE.L 4(SP),D1
           BSR    WTPER        P(k..1)  index *32
           BSR    XPEROK       vérifie que P est une permutation
                               A2=fin
           BSR    XPEREF       réarranger
           ADDQ   #12,SP       rectifie pile
           RTS
```

(5)

```
XPER EF: MOVE.L  A3,-(SP)
         MOVE.L  A3,A1
GEH20:   CMP.L   A2,A1
         BCC     GEH26          → fin
         TST.L   (A1)+
         BMI     GEH20

         MOVE.L  A1,A0
GEH22:   MOVE.L  -(A0),D0
         MOVE.L  D0,D4
         ADD.L   D4,D4
         ADD.L   D4,D4
         NEG.L   D0
         MOVE.L  D0,(A0)
         NEG.L   D0
         LEA     -4(A3,D4.L),A4
         MOVE.L  (A4)+,D1
         BMI     GEH20
         MOVE.L  A1,D6
         JMP     0.L
GEH24 = *-4
         MOVE.L  D6,A1
         MOVE.L  A4,A0
         BRA     GEH22
GEH26:   MOVE.L  (SP)+,A3

GEH28:   NEG.L   (A3)+
         CMP.L   A2,A3
         BLT     GEH28

         RTS
```

entrée A3 [4 | 1 | 3 | 2] A2 (2)

permutati de 1...n



MOVE.L GEH24,A0
JSR (A0)
} permuter d0 et d1 ou compter le n° (pour i')

{ SUBQ.L #1,D0
{ SUBQ.L #1,D1

conserve A4, ~~A5~~, A2, A3, D6

remettre la permutation

```
REOIL: BSR  CMPCAL
       MOVE.L  (A0),D0
       MOVE.L  (A1),(A0)
       MOVE.L  D0,(A1)
       RTS

REOIW: BSR  CMPCAL
       MOVE  (A0),D0
       MOVE  (A1),(A0)
       MOVE  D0,(A1)
       RTS

REOIB: BSR  CMPCAL
       MOVE.B  (A0),D0
       MOVE.B  (A1),(A0)
       MOVE.B  D0,(A1)
       RTS

REOVC: BSR  CMPCAL          d0 et d2
       MOVEM.L  A0/A2/A3,-(SP)
       BSR  MG79            échange d0 et d2
       MOVEM.L  (SP)+,A0/A2/A3
       RTS
```