1 Pose en libre $\langle A2\rangle = \tanh(\langle A0\rangle)$ $\quad \frac{1-e^{-2x}}{1+e^{-2x}}$

```
XFFTH : MOVE.L  (A0),-(SP)
        MOVE.L  A0,-(SP)
        BCLR    #7,2(A0)
        BSR     XFFTH1
        MOVE.L  (SP)+,A0
        MOVE.L  (SP)+,(A0)+
        TST 2(A0) MOVE (SP)+,(A0)+
        BPL     GAP39
                { ADDQ #2,A2
                  CHGS
                  SUBQ #2,A2
GAP39 : RTS
```

```
XFFTH : LEA   XFFTH1,A3
        BRA   GAP64   ① 163
```

```
XFFTH1: SUBQ  #1,(A0)+      x → 2x
        BVS   XPOSF1        ② si dépassement : pose 1
        BSR   XFFHYP
        BMI   GAP44         → |x| < 1/16
                            ↓ |x| > 1/16
```

```
LL
CMP   #$4000,(A0)
BEQ   KL73          → 0
BCHG  #7,(A0)       2x → -2x
SUBQ  #2,A0
MOVE.L A6,-(SP)
```

```
~~MOVE.L  A6,-(SP)~~
BSR     XFFEXP      e^{-2x}
BSR     XPOSF1
MOVE.L  A2,A0
MOVE.L  (SP),A1
MOVE.L  A0,-(SP)    1 - e^{-2x}
BSR     XFLSUB
MOVE.L  (SP)+,A0    1
MOVE.L  (SP),A1     e^{-2x}
MOVE.L  A2,-(SP)
BSR     XFLADD      1 + e^{2x}
MOVE.L  A2,A1
MOVE.L  (SP)+,A0
GAP42 : BSR   XFLDIV    (1 - e^{-2x}) / (1 + e^{-2x})
        BRA   KL860     → mis en libre
```

```
GAP44 : BSR    XFFEXPA                 a1   e^-2x - 1
        ~~MOVE.L   A1,-(SP)~~
⊗       MOVE.L   A1,-(SP)              e^-2x - 1    ) ≠ libre

        BSR    XPOSF1                  }  2~
        SUBQ   #1,(A2)
        MOVE.L (SP)+,A0
        MOVE.L A2,A1
        BSR    XFLADD                  e^-2x + 1
⊗       MOVE.L (SP)+,A0
        MOVE.L A2,A1
        LEA    2(A0),A2
        CHGS                           1 - e^-2x
        BRA    GAP42
```