

1

Poser en litre  $\langle A2 \rangle = \log_1(x) = \log_2(x+1)$   
 $\uparrow$   
 $\langle A0 \rangle$

XFFLOG1: MOVE.L A6, -(SP)

XFFLOG1: BSR XFFHYP @160 compare |x| et 1/6

BMI GAR24 |x| < 1/6

MOVE.L A0, -(SP) |x| > 1/6

BSR XPOSF1 in

MOVE.L A2, A1

MOVE.L (SP)+, A0

BSR XFLADD 1+x

MOVE.L A2, A0

BSR XFFLOG

BRA KL860 met en litre

GAR24: BSR XUNFL

MOVE.L A2, A0

LEA TCONST1, A1

BSR XADDS2 1+x] exact

BRA GAR26 @138 comme log

① pas en ligne  $\langle A2 \rangle = \ln(\langle A0 \rangle)$

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XFFLOG: MOVE 2(A0), D0
        BMI  ERRRG
        CMP #4000, D0
        BEQ  ERRRG
        MOVE.L A6, -(SP)
        MOVE TPREC, D0
        CMP  TPRECL, D0
        BLE  KM360

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cas log2 non calculé

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        BSR  XUNFL          → P/q
GAR26: MOVE.L A2, A0      ⊗
        BSR  XALOG
        BRA  KM29

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KM360: MOVE (A0)+, A2    R=A2    x = A / 2^R

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        BSR  XBNB          s=D1.L = nb de bits de A    2^s ≤ A < 2^{s+1}

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        MOVE.L D1, D2
        SUB.L  A2, D2
        MOVE.L D2, -(SP)  s-k    x = A / 2^s * 2^{s-k}

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        MOVE  D1, (A6)+
        BSR  XPOSE
        LEA  -2(A2), A0    <A0> = A / 2^s ∈ [1, 2[

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X { MOVE TPREC, D0
  CMP #43, D0
  BLE KM362          → calcul par polynome

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        BSR  XUNFL          → P/q
        MOVE.L A2, A0
        BSR  XALOG          → log(A / 2^s)

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KM362 { MOVE.L A2, A0
       BSR  XFLO           → flottant

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⊗ KM361: MOVE.L (SP)+, D0  $s-k$   
 MOVE.L A2, -(SP)  $\log\left(\frac{A}{2^s}\right)$   
 BSR LA88  $\{A2\} = s-k$  signé

⊗ { MOVE.L A2, A0  
 BSR XINTE1 en flottant  
 MOVE.L A2, A1  $s-k$   
 MOVE #4, D4 }  
 BSR LB95C }  
 ADDQ #2, A0 }  $\langle A0 \rangle = \log 2$   
 BSR XFLMUL  $(s-k) \log 2$   
 MOVE.L A2, A0  
 MOVE.L (SP)+, A1  $\log\left(\frac{A}{2^s}\right)$   
 BSR XFLADD  
 BRA KL860

KM362: LEA TCONSFL1, A1  $= 1^v$  précision 52  
 BSR XFLSUB  $x-1$

MOVE.L A2, A0  
 LEA DFLOG, A1  $\leftarrow$  polynome pour  $\frac{\log(x-1)}{x-1}$   
 BSR FTPOL1 calcule  $\log(x-1)$   
 BRA KM361