

① Calcule $\{A2\} = \log \frac{\{A0\}}{x}$
 $x > 0$

$\Delta\{A2\} = 2^Y$

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XALOG: CLR D0
        CMP #4001, (A0)
        BEQ XPOSE D0 Z
        MOVE.L A0, A2
        BSR KB255
        BSR XCMP1
        BCC KL87
        MOVE.L A2, A0
        BSR XINVS2
        MOVE.L A2, -(SP)
        BSR KL87
        BSET #7, (A2)

```

$\log 1 = 0$

$x = \frac{[A0]}{[A1]}$

cmp A1, A0

$\rightarrow x > 1$

$\downarrow 0 < x < 1$

```

KL860: MOVE.L (SP), A0
        BSR XLB76
        MOVE.L (SP)+, A2
        RTS

```

② $\log\{A2\}$ met $\log\{A2\}$ $\{A2\} > 1$

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KL87: MOVE.L A2, A0
        MOVE TPREC1, D3
        BSR XINTE
        CLR -(SP)

```

$X+$

$\langle A2 \rangle = (\alpha, X)$

$x = 2^{-\alpha} \frac{X}{X+\epsilon}$

$x \sim 2^{X-\alpha}$

```

KL88: MOVE TPREC1, D3
        SUB (A2), D3

```

X

$X-\alpha$

$\frac{1-X\epsilon}{2} \approx \frac{X+\epsilon-1}{2}$

determine $x_i = x_0 \frac{1}{2^i}$
 x_{i-1} à la précision λ
 arrêt si $x_{i-1} \approx 2^{-\lambda}$

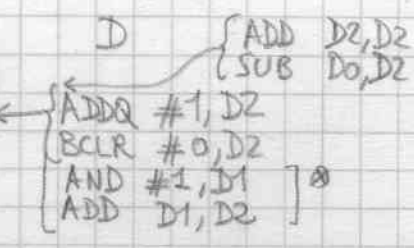
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KL87: MOVE.L A2, A0      x0
      LEA TCONST1, A1    1
      BSR XSUBSR          x0-1
      MOVE TPREC1, D3
      MOVE.L A2, -(SP) ← CLR.L -(SP) i=0
      MOVE.L A2, A0
      BSR XINTE          x0-1 = (x, D0) = 2^-alpha * D/x
      MOVE.L (SP), A0
```

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KL88: BSR XLB76
      MOVE.L (SP), A2
      BSR XAORD
```



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BEQ KL89 → fin
ADDQ #1, 6(SP) i=i+1
LEA 2(A2), A0 ⊗
MOVE TPREC1, D2
BSR XROT
MOVE.L (SP), A0
ADD (A0), D2
MOVE D2, -(SP)
MOVE D2, D1
MOVE.L A2, A0
BSR XXP2N
MOVE.L A2, A1
BSR XADDS1
MOVE.L A2, A0
BSR SQRT1F ⊗
MOVE.L A2, A0
MOVE (SP), D1
ASR #1, D1
BSR XXP2N
```

$x_i \approx 2^u \cdot x_{i-1} = 2^{-\alpha} \frac{A}{p}$
 2^{2u-p}



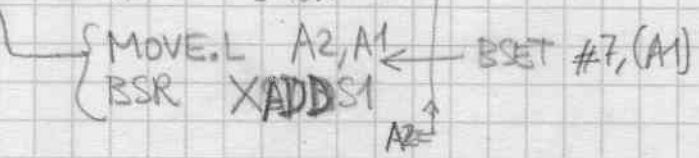
$A_0 \cdot D_i = 2^{-\beta} (x_i - 1)$
 1^β

$2^\beta + D_i$

$\otimes \sqrt{2^\beta + D_i} = 2^\beta x_{i+1}$

```
ASR #1, D1
BSR XXP2N
MOVE (SP)+, D1
ASR #1, D1
MOVE.L (SP), A0
MOVE D1, (A0)+
BRA KL88
```

$D_{i+1} = 2^\beta [x_{i+1} - 1]$



1

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KL89: BSET #7, (A0)
KL89: MOVE.L (SP), A0
SUBQ #2, A0

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BSET #7, 2(A0)
LEA XSER3L, A3
BSR XSERIE
MOVE.L (SP), A0 <math>x_{N-1}</math>

```

met signe -
 $\langle A0 \rangle = x_N - 1 = (x', D) = 2^{x'} D$

$A2 = 2^{x'} S$

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ADDQ #2, A0 <math>\leftarrow \text{BCLR #7, (A0)}</math>
MOVE.L A2, A1

```

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BSR XMULS1
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⊗ KL91: MOVE.L (SP)+, A0
MOVE.L (SP)+, D1
MOVE.L A0, -(SP)

```

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MOVE.L (SP)+, A0
MOVE (A0), D2
KL90: BSR XORR
MOVE.L A2, A1

```

⊗ $A2 \rightarrow \frac{[A2]}{2^{D2}}$

```

SUB (A0) D1
BSR XXP2N
MOVE.L A2, A0
BSR XMULS2
BRA KL860

```

$2^{N-x'}$