

① Pose $\{A_2\} = \text{approximatif de } \{A_0\}$ à la précision $\{A_1\}$ ($= 2^{-k}$ près)

$\{A_0\}$ est positif α'

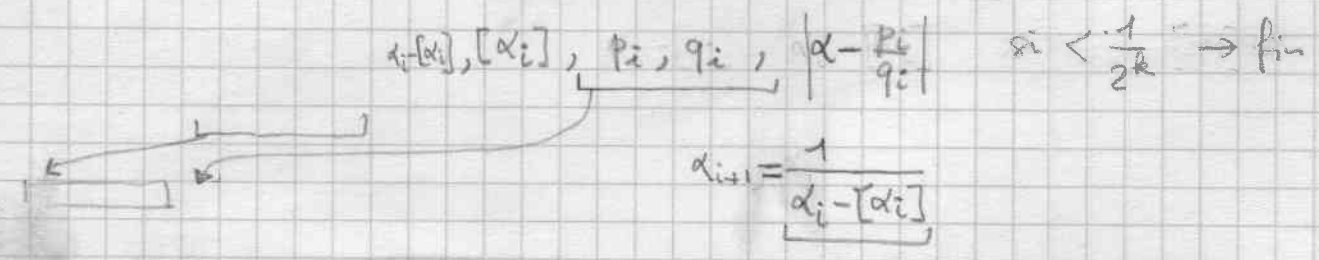
$$\alpha' = a_1 + \frac{1}{a_2 + \frac{1}{a_3 + \dots}} = \frac{p_n}{q_n}$$

$$\begin{cases} p_{-1} = 0 \\ q_{-1} = 1 \end{cases} \begin{cases} p_0 = 1 \\ q_0 = 0 \end{cases} \begin{cases} p_1 = a_1 \\ q_1 = 1 \end{cases} \begin{cases} p_2 = a_2 a_1 + 1 \\ q_2 = a_2 \end{cases}$$

$$\begin{cases} p_n = a_n p_{n-1} + p_{n-2} \\ q_n = a_n q_{n-1} + q_{n-2} \end{cases}$$

init $p_{-1}, q_{-1}, p_0, q_0, \alpha$

$p_{i-2}, q_{i-2}, p_{i-1}, q_{i-1}, \alpha_i$



XAFR1: MOVEM.L A0/A1, -(SP)

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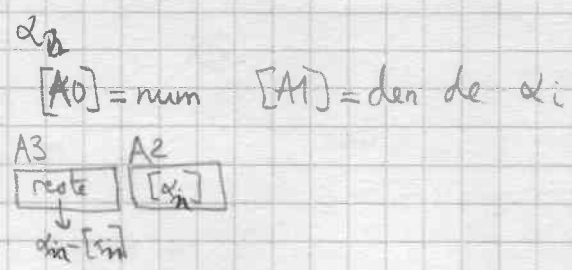
XAFR1:  MOVE.L A6, -(SP)
        MOVE # $4000, (A6)+
        MOVE.L A6, -(SP)
        MOVE # $4001, (A6)+
        MOVE.L A6, -(SP)
        MOVE # $4001, (A6)+
        MOVE.L A6, -(SP)
        MOVE # $4000, (A6)+
        BSR  XPOSE
        MOVE.L A2, -(SP)
    
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0	α_i
4	q_0
8	p_0
12	q_{-1}
16	p_{-1}
20	α'
24	ϵ

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KL50: MOVE.L (SP), A2
      BSR  KB255
      BSR  XDIV1

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MOVEM.L A2/A3, -(SP)
MOVE.L  A2, A0     $[\alpha_i] = \alpha_i$ 

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→ MOVE.L 16(SP), A1     $p_{n-1}$ 
   BSR  XMUL1     $\alpha_i p_{n-1}$ 
   MOVE.L A2, A0    ↓
   MOVE.L 24(SP), A1     $p_{n-2}$ 
   MOVE.L A2, -(SP)

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   BSR  XADD1     $\alpha_i p_{n-1} + p_{n-2} = p_n$ 
   MOVE.L (SP), A0

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   BSR  XLB76
   MOVE.L 4(SP), A0     $\alpha_n = [\alpha_n]$ 
   MOVE.L 16(SP), A1     $q_{n-1}$ 

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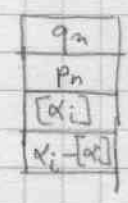
   BSR  XMUL1
   MOVE.L A2, A0     $\alpha_n q_{n-1}$ 
   MOVE.L 24(SP), A1     $q_{n-2}$ 
   MOVE.L A2, -(SP)

```

```

   BSR  XADD1
   MOVEM.L (SP), A0/A1     $q_n = \alpha_n q_{n-1} + q_{n-2}$ 

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   MOVE.L A0, A3
   BSR  XLB76
   CMP  #5, (A3)
   BEQ  KL52
   BSET #5, (A1)

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→ si $q_n = 1$ (1^{er} passage)

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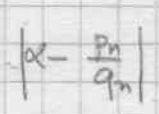
KL52: MOVE.L 36(SP), A0     $\alpha$ 

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   BSR  XSUBS2
   BCLR #7, (A2)
   MOVE.L 40(SP), A0     $\epsilon$ 
   MOVE.L A2, A1     $\delta$ 

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   BSR  XCMPS    compare A0-A1

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   BMI  KL54    →  $|\delta| > \epsilon$  continuer

```

X

①

fin :

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ADDQ #4, SP
MOVE.L (SP)+, A0      Pn/qn
ADD #24, SP
MOVE.L (SP)+, A6      Pn-1
BSR XPOSE
MOVEM.L (SP)+, A0/A1
RTS

```

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MOVE.L 8(SP), A1 [xi]
MOVE.L 16(SP), A0 xi
BSR XSUBS2 ← MOVE.L A6, -(SP)
MOVE.L A2, A0

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KL54: MOVE.L A1, A6      efface δ
MOVE.L 12(SP), A0
BSR XINVS2

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MOVEM.L A1/A6, 8(SP)
MOVE.L (SP)+, A0
MOVE.L A0, A1
BSR XLB76

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MOVEM.L 32(SP), A0      Pn-2
MOVEM.L 20(SP), A1/A2  qo po

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MOVE.L A1, A6
BSR XLB76      déplace Pn-1
MOVE.L A0, 28(SP)  nouveau qi-2
MOVE.L A1, A2      A2 = A6 = qi-1
MOVE.L 16(SP), A6

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```

BSR XLB76      déplace
MOVE.L A0, 24(SP)  nouveau Pi-1

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```

MOVEM.L (SP)+, A1, A2  qn Pn
MOVE.L A1, A6

```

```

BSR XLB76      déplace pi
MOVE.L A0, 12(SP)  nouveau qi-1

```

```

MOVE.L A1, A2
MOVE.L (SP), A6

```

```

BSR XLB76      déplace qi
MOVEM.L (SP)+, A2/A6
MOVE.L A0, (SP)  nouveau xi

```

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BSR XLB76
BRA KL50

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