

②  $P_{A_0}$  est-il un carré parfait ?

JEQ oui pose  $var_{A_2} = \sqrt{P_{A_0}}$  (forme factorisée)  
JNE non

Carre A0

```
XCARR1: MOVEM.L A0/A6, -(SP)    test rapide
      MOVE (A0)+, D0             MOVE #1, (A6)+
      ADD D0, D0
      LEA 2(A0, D0.W), A0        printe exp2
```

```
KG30: SUBQ #2, D0
      BMI KG34
      MOVE (A0)+, D1
      BTST #0, D1
      BEQ KG30
```

```
      SUBQ #4, SP
      KG31: ADDQ #4, SP
      non
```

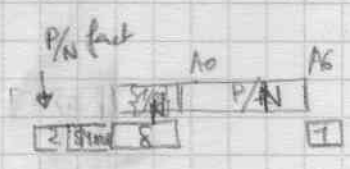
```
KG32: MOVEM.L (SP)+, A0/A6
      MOVEQ #1, D0
      RTS
```

```
      KG34: BTST #7, (A0)
      BNE KG32
```

```
KG34: BSR SQRT2
      TST D4
      BNE KG32
      MOVEM.L (SP), A0/A2
      TST.L (A0)
      BNE KG36
      cas pty = cte
      ADDQ #8, SP
      RTS
```

P/N	factorisé
P/N	factorisé
P	
VN	

```
KG36: BSR XNORP
      MOVE.L A0, -(SP)
      MOVE 2(A0), D0
      BSR XDVP
```



$q = p^2$   
 $q_n = 2pp_n$

```
KG36: ADDQ #6, A6
      BSR XNORP
      MOVE #1, (A6)+
      MOVE.L A6, D0
      SUB.L A0, D0
      MOVE.L A0, A1
      MOVE.L D0, -(A1)
      MOVE.L #24001, -(A1)
      MOVEM A1/A6, -(SP)
      MOVE 2(A0), D0
```

1er littéral

KG36: MOVEM.L (SP), A0/A6

BSR XPSAF1

$P_{fact} = \lambda f x^k$



LEA 2(A0), A0 {λ}

BTST #7, (A0)

BNE KG32 → non carré

BSR SQRT2

TST D4

BNE KG32

MOVE.L A2, A6

MOVE.L 4(SP), A0 P\_fact

CMR #2, (A0)

BNE KG37 → cas P\_fact a des facteurs x<sup>k</sup>

MOVE.L (SP), A0 P

MOVE 2(A0), D0 x = 1<sup>er</sup> littéral de P

BSR XDVP P'\_x

MOVE.L A2, -(SP)

MOVE.L A2, A0

BSR XPSAF1 P'\_x factorisé

MOVE.L (SP)+, A0

MOVE.L A0, A1

BSR XLB76

MOVE.L 4(SP), A0 P\_fact

BSR XREDP P\_fact P'\_x plus factorisés

MOVE.L A1, A6

⊗ BSR XREDQM  
remplace var<sub>A0</sub>  
par factorisé  
pour fact<sub>fact</sub>  
multiple

KG37: BSR XRQ4

⊗

est-il carré ?

pour les exposants  
et divise les exposants par 2 → P''

```

MOVE (A0)+, D1
BSR SLNGO
ADD D0, A0
SUBQ #2, D1

```

```

KG38: ADD.L (A0)+, A0
ASR #1, -2(A0)
DBCS D1, KG38
BCS KG32
MOVE.L 4(SP), A0
ADDQ #2, A0
BTST #7, (A0)
BNE KG32
MOVE #1, (A6)+
BSR SQRT2
TST D4
BNE KG32
LEA -2(A2), A1
MOVE.L 4(SP), A0
BSR XCONCI
BSR XLB76
CLR D0
MOVEM.L (SP)+, A0/A2
RTS

```

$\frac{1}{\sqrt{2}}$

eg vrai

7565, 612