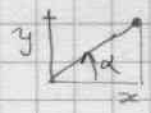


①

Entrée : $\langle A0 \rangle_x, \langle A1 \rangle_y$



Sortie en ligne $\langle A2 \rangle = \text{angle}(x, y) \in]-\pi, \pi]$

② Met $\langle A0 \rangle = |\langle A0 \rangle|$ ($\frac{\pi}{4}$ est connu)

```
XFFANG: BCLR #7, 2(A0)
        BNE ML94
```

x
y
ML86

```
ML86: MOVE.L A6, -(SP)
        MOVE.L (A1), -(SP)
        BCLR #7, 2(A1)
```

```
CMP #4000, 2(A0)
BNE ML86
BIST #7, 2(A0)
BPL ML86
MOVE.L A0, A2
BSR ML82
BSET #7, 2(A2)
RTS
```

```
BSR XFLCMP
MOVE.L (SP)+, A2
MOVE.L A2/A2, (A1)
```

```
BMI ML92
EXG A0, A1
```

```
BSR XFLDIV
MOVE.L A2, A0
BSR XFFATN3
BRA KL860
```

```
ML92: BSR XFLDIV
        MOVE.L A2, A0
        BSR XFFATN3
        BRA ML800
```

```
ML94: MOVE.L A6, -(SP)
```

```
BSR ML86
ADDQ #2, (A2) BSR XFFDIV4
```

```
BCLR #7, 2(A2)
BEQ ML96
BSR ML82
```

```
ML96: BSR ML82
SUBQ #1, (A2)
BRA ML801
BSR ML82
SUBQ #1, (A2)
BRA KL860
```

$x < 0$
 $x > 0$

$x < |y|$
 $|y| < x$
 $u = y/x$

$u = x/y$
 $\beta = \text{Arctg}(u)$
not $\alpha = (\frac{\pi}{2} - \beta) \text{sgn}(\beta)$

$\beta = \text{angle}(-x, y)$
 $|\beta|$
 $\frac{\pi}{2} + \frac{\beta}{2}$
 $\pi - \beta$

$\frac{\pi}{2} - \frac{\beta}{2}$
 $\pi - \beta$
 $\rightarrow \text{BPL ML96}$

TST (SP)+
BPL ML96 $\rightarrow y \geq 0$

ML92: MOVE 2(A1), -(SP)

signe (y)

BSR XFLDIV

$$u = \frac{x}{y}$$

MOVE.L A2, A0

BSR XFFATN3

$$\beta = \text{Arctg}(u)$$

répète
ML800 →

BSR XFFDV2

BCR #7, 2(A2)

TST (SP)+

BPL ML80 →

BRA ML802

$$\frac{\beta}{2}$$

testes (y) car β peut être nul, avec $y < 0$

$$\beta \geq 0$$

$$\text{met } \alpha = \left(\frac{\pi}{2} - \beta\right) \text{sgn}(y)$$

$$\left[\text{angle} \left(\frac{1}{\varepsilon}, \frac{-\varepsilon}{y}\right)\right]$$