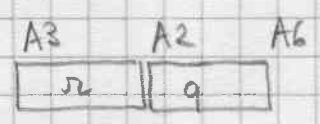


10) division mod p
entree

$$\left. \begin{aligned} PA_0 &= a \\ PA_1 &= b \\ [A3] &= p \end{aligned} \right\} \text{à 1 littéral}$$

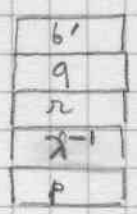
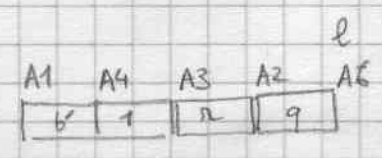
$$\begin{aligned} b &= \lambda b' \text{ normé} \\ a &= q \lambda^{-1} b \end{aligned}$$

ret a libre



$$a \equiv qb + r \pmod{p}$$

```
XMPDIV: MOVEM.L A1/A3, -(SP)
```



```
BSR XMPDIV1
```

```
MOVE.L (SP)+, A0 b
```

```
MOVEM.L A1/A2/A3/A6, -(SP)
```

```
MOVE (A0)+, D0
```

```
ADD D0, D0 } 4 no
```

```
ADD D0, D0 }
```

```
ADDQ #2, D0 6 ou 2
```

```
ADD D0, A0 printe le 1er coef de b = [r]
```

```
MOVE.L 16(SP), A1 p
```

```
BSR XMINVS  $\lambda^{-1}$  [  $\lambda^{-1}$  ]
```

```
MOVE.M 8(SP), A0/A1/A3  
r p
```

```
BSR XMPPM  $r' \equiv r \pmod{p}$  [ r' ]
```

```
MOVEM.L (SP)+, D0/A0  
b' q [ b' ]
```

```
ADDQ #4, SP
```

```
MOVE.M (SP)+, A1/A3  
p  $\lambda^{-1}$  p
```

```
MOVEM.L D0/A2', -(SP)
```

```
BSR XMPCMULS  $q' \equiv \lambda^{-1} q \pmod{p}$  [ q' ]
```

```
MOVE.L (SP)+, A0 b'
```

```
MOVE.L A6, A5 fin q'
```

```
MOVE.L A2, A6 fin r'
```

```
MOVE.L (SP)+, A2 r'
```

```
MOVE.L A0, A3 r'
```

```
BSR XLB76 [ ]
```

```
EXG A5, A6 fin q'
```

```
BSR XLB76
```

```
MOVE.L A5, A2
```

```
RTS
```