

00 load H'20
 01 add H'21
 02 add H'22
 03 store H'23
 04 jump H'04

5
5
5
5
4
+1 (reset-pc)

Nº ciclos máquina

25

reset-pc

$PC \leftarrow X^{''00''}$
 $AC \leftarrow X^{''0000''}$

$MEM_{adr} \leftarrow PC$
 $MEM_{we} \leftarrow '0'$
 $MEM_{data} \leftarrow \text{don't care}$

~~fetch 0~~

fetch 1

$IR \leftarrow MEM_9$
 $PC \leftarrow PC + 1$

$MEM_{adr} \leftarrow IR(7 \text{ downto } 0)$
 $MEM_{we} \leftarrow '0'$
 $MEM_{data} \leftarrow \text{don't care}$

decode

$IR(15 \text{ downto } 8) = X^{''00''}$

~~add 0~~

add 1

$AC \leftarrow AC + MEM_9$

$MEM_{adr} \leftarrow PC$
 $MEM_{we} \leftarrow '0'$
 $MEM_{data} \leftarrow \text{don't care}$

store 0

store 1

$MEM_{adr} \leftarrow IR(7 \text{ downto } 0)$
 $MEM_{we} \leftarrow '1'$
 $MEM_{data} \leftarrow AC$

$X^{''01''}$

$X^{''02''}$

~~load 0~~

load 1

$AC \leftarrow MEM_9$

$X^{''03''}$

jump

$PC \leftarrow IR(7 \text{ downto } 0);$
 $MEM_{adr} \leftarrow IR(7 \text{ downto } 0)$
 $MEM_{we} \leftarrow '0'$
 $MEM_{data} \leftarrow \text{don't care}$