

LDI (1010) Instruction Cycle

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1010				DR				PCoffset9							

Instruction Fetch

MAR $\leftarrow$ PC

PC $\leftarrow$ PC + 1

MDR $\leftarrow$ memory[MAR]

IR $\leftarrow$ MDR

Decode

IR[15:12] decoded

Evaluate Address

MAR $\leftarrow$ PC + sign_ext₁₆(IR[8:0])

MDR $\leftarrow$ memory[MAR]

MAR $\leftarrow$ MDR

Operand Fetch

MDR $\leftarrow$ memory[MAR]

Execute

n/a

Store Result

R_{IR[11:9]} $\leftarrow$ MDR