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| **NO** | **Instruction** | **Description** | **Result** |
| 1 | LDI R0,0X2 | R0🡨2 | R0 = 2 |
| 2 | INC R1,R0 | R1🡨R0+1 | R1 = 3 |
| 3 | MOV R3,R0 | R3🡨R0 | R3 = 2 |
| 4 | ADD R2,R0,R1 | R2🡨R0+R1 | R2 = 5 |
| 5 | DEC R0,R2 | R0🡨R2-1 | R0 = 4 |
| 6 | SUB R3,R2,R1 | R3🡨R2-R1 | R3 = 2 |
| 7 | OR R1,R1,R2 | R1🡨R1 OR R2 | R1= (0011)OR(0101)=(0111)=7 |
| 8 | NOT R3,R0 | R3🡨R0¯ | R3=(0100)¯=(1011)= 11 |
| 9 | AND R2,R1,R3 | R2🡨 R1 AND R3 | R2=(0111)AND(1011)=(0011)=3 |
| 10 | XOR R0,R0,R1 | R0🡨 R0 XOR R1 | R0=(0100)XOR(0111)=(0011)=3 |
| 11 | ST R1,R3 | [R1]\*🡨R3 | [0x7]\*= 11 |
| 12 | SUBI R2,R0,0X2 | R2🡨R0-2 | R2 = 1 |
| 13 | LD R0,R1 | R0🡨[ R1]\* | R0 = [0x7]\*= 11 |
| 14 | ADI R1,R1,0X3 | R1🡨R1+3 | R1 = 10 |
| 15 | NOP | No operation |  |
| 16 | SHL R0,R0 | R0=R0<<1 | R0=(1011)<<1=(0111)=7 |