Initialize Register R1 to #15

```
.ORIG x3000
; fill R0 with something
AND R1,R1,#0
ADD R1,R1,#15
```

Initialize R1 to #15 and R3 to x30.

To set R1 to #15, use an AND and an ADD.

Initialize Register R3 to x30 (ASCII '0')

```
.ORIG x3000
; fill R0 with something
AND R1,R1,#0
ADD R1,R1,#15
LD R3,ZERO

(and just before .END)

ZERO .FILL x30
```

Initialize R1 to 15 and R3 to x30.

To set R3 to x30, use LD.

At Start of Loop, Copy ASCII '0' from R3 into R2

```
BITLOOP ; main loop
ADD R2,R3,#0
```

Copy R3 into R2.

Is there an LC-3 instruction for that?

Check Bit 15 of R0: Is It a 1 Bit?

```
BITLOOP ; main loop
ADD R2,R3,#0
ADD R0,R0,#0
```

Check bit 15 of R0.

After this ADD, N condition is set iff R0[15] is 1.

Is there an LC-3 instruction for that?

