Bit Manipulation - Power of Two

Check if integer n is power of 2

if $n \leq 0$, no

if $n = 1$ yes

if $n > 1$, check least sig bit $(n \& 1)$

1 → NO

0 → $n = n >> 1$ (delete last bit of n)

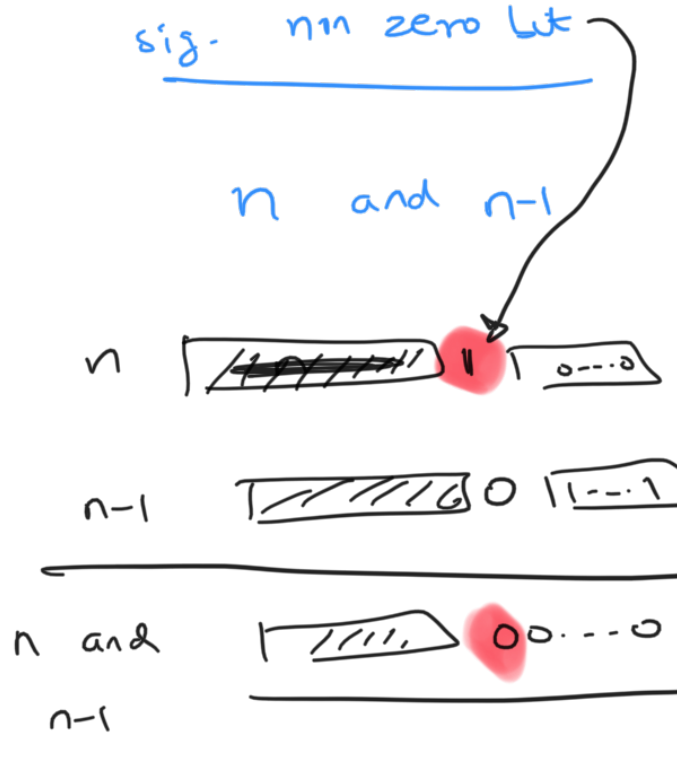
Another way

power of 2 $\iff$ exactly 1 non zero bit

2	10
4	100
8	1000
16	10000

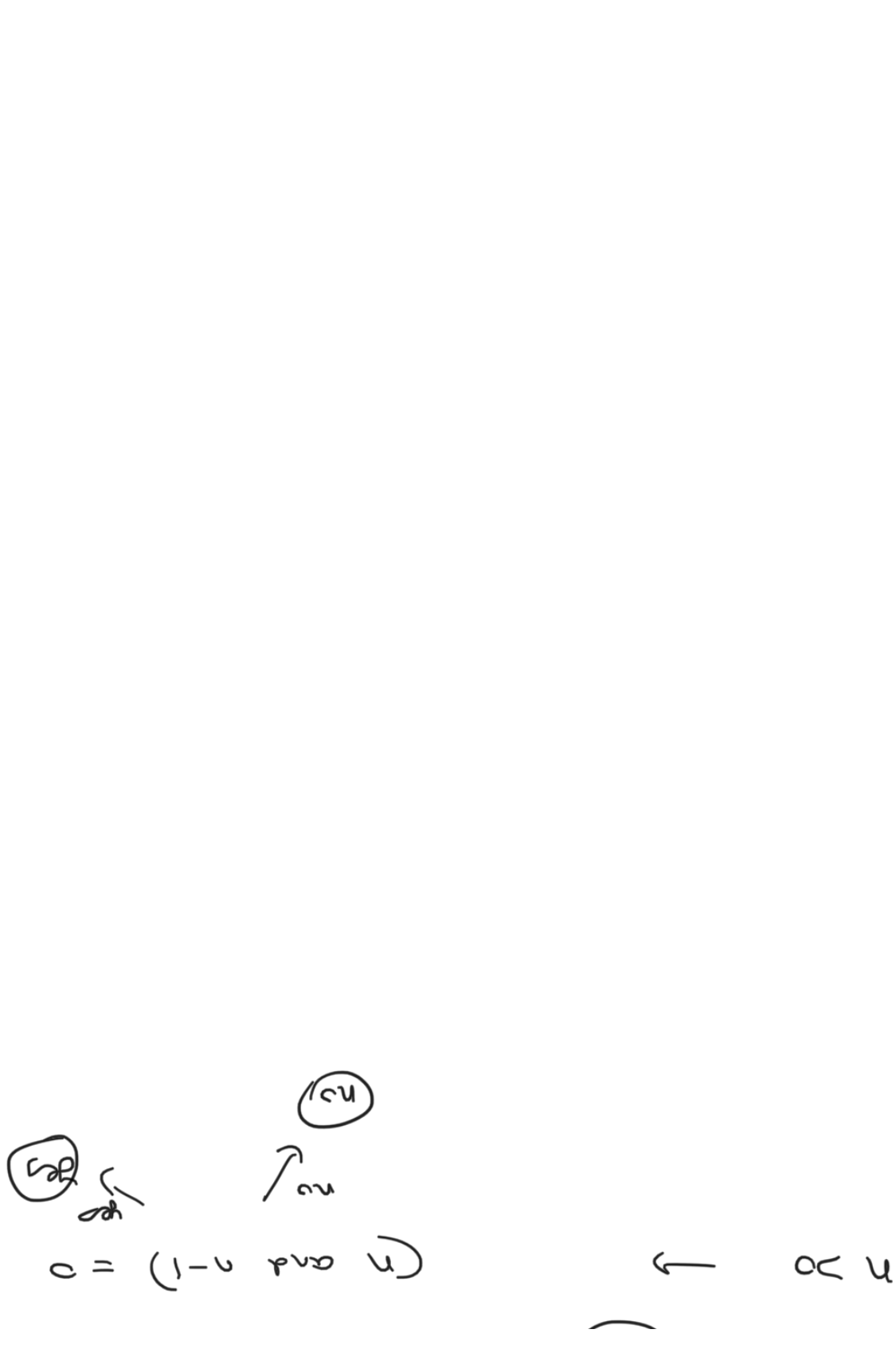
To find least sig. non zero bit

n and n-1



So

$n \leq 0 \rightarrow$ NO


n > 0
(n and n-1) = 0