

m times

(11) ... 01 ... 10 ... 01 ... 10 ... 01 ... (000)

m 01

m-1, m, m+1 10

Ans -  $\binom{n+1}{2m+1}$

1 - 1 - 1 - 1 - 1 - 1 0

→ n+1  
2m+1  
↑

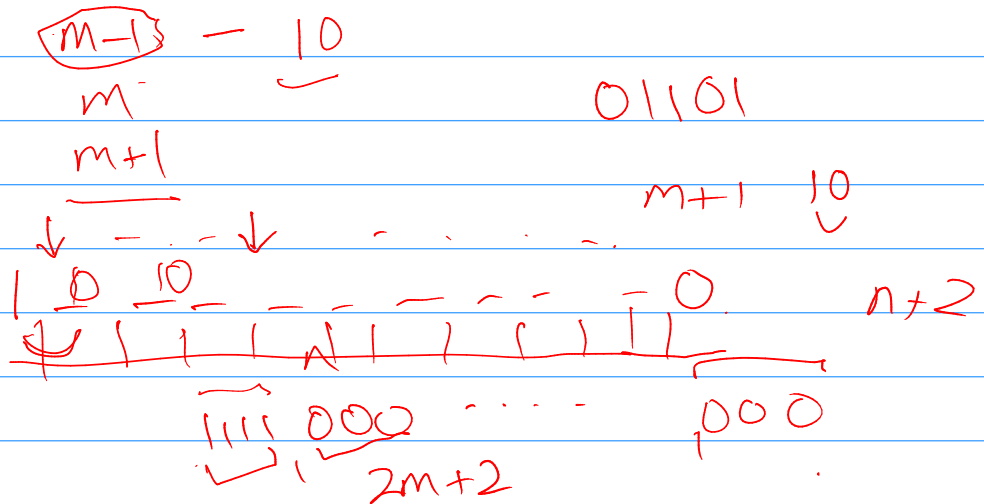
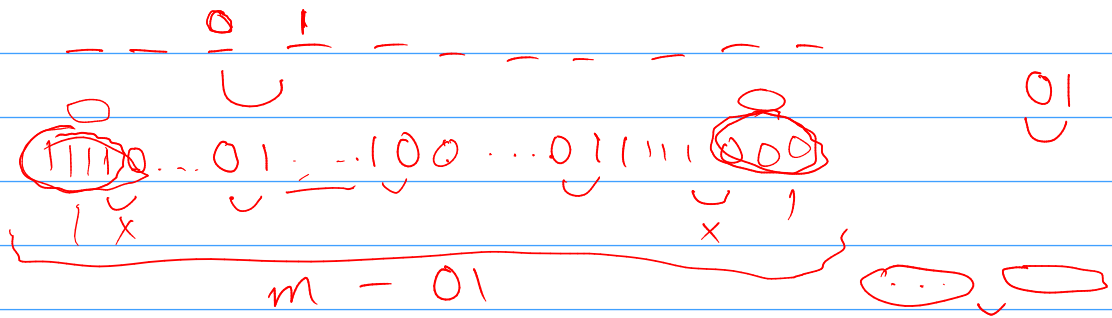
m 01  
m+1 10

2m+2 alternating  
blocks of  
01s  
starting w/ 1's

0110111...01...01

## Question 5

01 → ← 01 ...



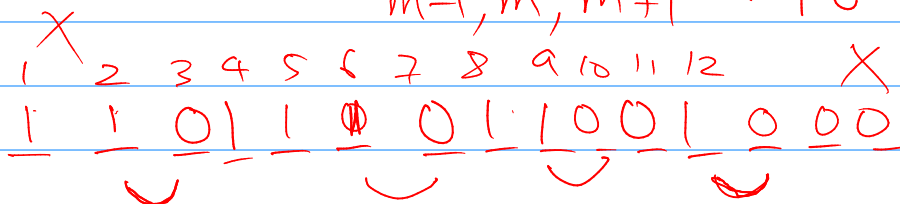
$$(n+1)C_{2m+1}$$

$$(n+2-1)C_{2m+1}$$

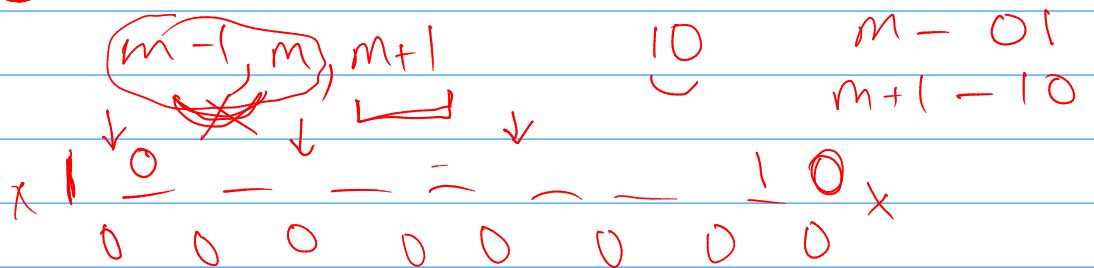
10

$m-01$

$m-1, m, m+1 - 10$



$n+2$   
 $n+2-1$   
 $n+1$



$$(n+1)C_{2m+1}$$