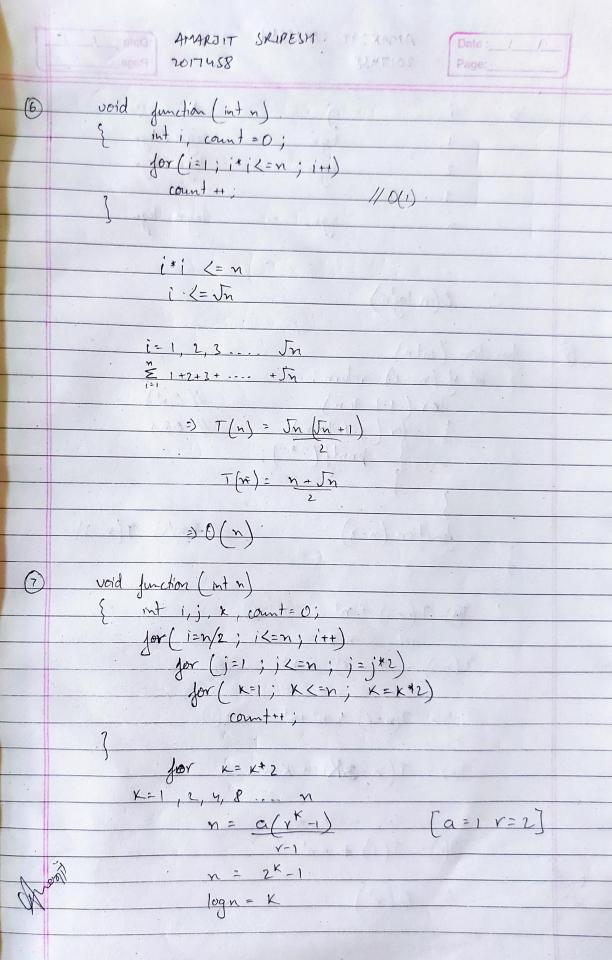
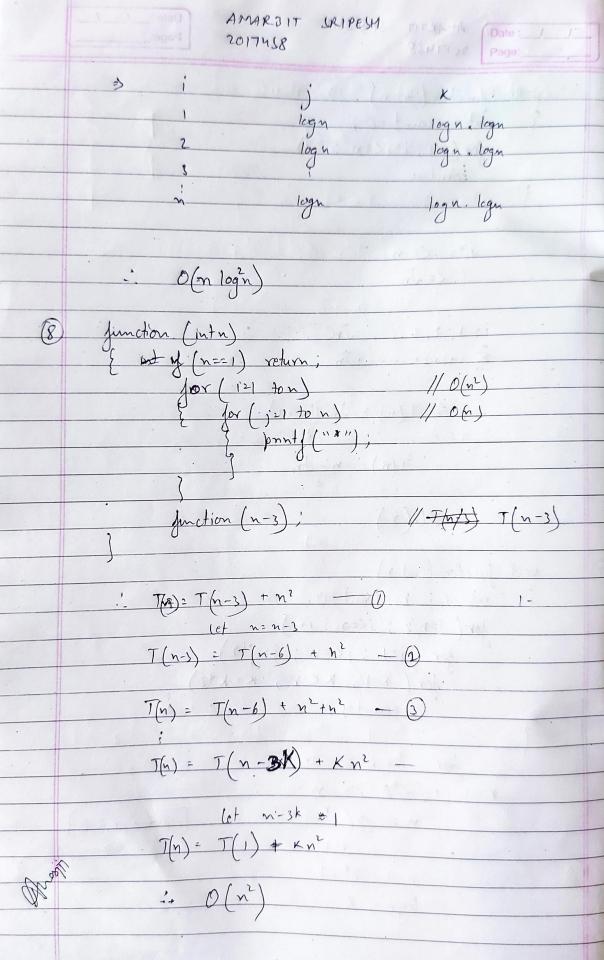
AMARAIT SRIPESH W 010 AMA Date: /_/_ 2011458 (3) T(n)= { = 3T(n-1) if n>0, otherwise 1} 7(1)= 3 T(n) = 3T(n-1) — (D) Let = 1 = n-1 T(n-1) = 3T(n-2) = 3 $T(n) = 3\left(3T(n-2)\right) = 3^{2}\left(7(n-2)\right)$ $T(n) = 3^n (T(n-n)) = 3^n T(0)$... 0(3") (4) T(n) = { 2T(n-1)-1 if n>0, otherwise 1} T(n) = 2T(n-1) - 1let n = n-1 ... > 1 ... T(n-1) = 2T(n-2) - 1 - 0From (D & C) $T(n) = 2\left(2T(n-2)+1\right)+1$ $T(n) = 2^2 T(n-2) - 2 - 1 - 3$ T(n)= 2k T(n-x) - (2x-1) let K= n-x=1 let x=n $T(n) = 2^{n} T(n) - 2^{n} + 1$ $= 2^{n} C - 2^{n} + 1$ => 0(1) (Mac)

AMARDIT BRIPESH : pisci 2017458 RAME OF Page: (5) Time complexity mandaged. mt i=1, s=1;
while (s<=n) {
 i++, \$6 s=s+i;
 printf ("#"); illend 18 5 (18 0) 18 8. 1 (11) C 2 1+2 = 3 1 1 1 0 3 / 1 3 1+2+3 =6 T(K) = 1+2+3+ , ... K K 1+2+3+... K <=n 1 m m. 101 $\frac{1}{2} \times \frac{(k+1)}{2} = \frac{(k+1)}{2} \times \frac{(k$ =) K^L+k <=n =) O(k)2 <= n $K = O(J_n)$ 2) D(Jn)





Do	60		1
wa			
Day	100		
	90.	-	

For the function, n'k and c'n, what is the asymptotic velationship b/s these functions?

Assume that k>=1 and c>1 are constaints. Find out the value of c and no for which relation holds.

as given nk and ch.

velation bet. nk & ch.

 $n^{\kappa} = o(c^{n})$ as $n^{\kappa} \leq a(c^{n})$

for no=1

C=2

=) 1 × ≤ a 2'

 $n_0 = 1$ c = 2

Moil