	Assignment
	Assignment—  Revivouence evolution using Substitution Methal.
D	Survey survey survey survey survey survey
7	T(n) = { T(n-i) + 1/n 4 n>1
	Cillian Film of 1121
The second secon	TCN=TCn-D+Yn
	TCn-D= TCn-D+ 1/n-1
	$T(n-2) = T(n-3) + y_{n-2}$
	I(n) = T(n-1) + I/n
	= T(n-2)+1/n-1+1/n
	= T(n-3) + 1/n-2 + 1/n-1 + 1/n
	= T(n-K) t /n-(K-1) + /n-(K-2) + - + /n
	neplacing K=n-1
Tu)=1	=T(n-(n-1)+1/n-(n-2)+1/n-(n-3)++1/n
N-K=1	=T(1) + /n-1042 + 1/3+ - + 1/n
n4;k	=T(1) + 1/2 + 1/3 + + 1/n
	= 0 (log n) by Hormanicoberies
	Č.
2)	$T(n) = \begin{cases} 1 & n = 0 \\ T(n-1) + n^2 & n > 0 \end{cases}$
	$T(n) = \overline{I(n-2)} + n^2$
	$T(n-2) = T(n-1) + (n-2)^2$
	$T(n-i) = T(n-i) + (n-i)^2$
	$T(n) = T(n-2) + n^2$
	$= \frac{\Gamma(n-h) + (n-2)^2 + n^2}{4n^2 + n^2 + n^2}$
110-1	= T(n-6) + (n-1)2+(n-2)2+n2 = T(n-k)+(h-(k-2))2+(n-(K-4))2++n2
T(6)=)	=[10,100,100,100,000] 1 (11-(K-4)) + FI)
η-K=0 η=K	$= \frac{((n-(n)+(n-(n-1))^2+(n-(n+1))^2+\dots n^2}{(n+(n)^2+(n)^2+\dots n^2)}$
	$= T(0) + (2)^{2} + (4)^{2} + \cdots + n^{2}$ $= O(n^{3})$
	- V [1] /

	ton- \$10, 4n=0.
3)	$I(h) = \int I(h, h) I(h)$
	$t(n) = \begin{cases} 10, & if n=0. \\ T(n-2) + log(n) & if n>0. \end{cases}$
	T(n)=T(n-2)+10g(n)
	T(n+1) = T(n-4) + log(n-2)
	T(n-4) = T(n-6) + log(n-4)
	- (11-6) 1 tug (11-6)
-	En 7/221/12
	I(n) = I(n-2) + log(n)
-	= T(n+1) + lay (n-2)+lag(n)
-	= T(n-6) + log(n-4) + log(n-2) + log(n)
	= [(n-k)+log (n-(K-2))+log (n-(N-4)) log(n)
Tro)= fr	Sten - [(n-n) + low (n-(n-2)) + low (n-(n-4)) (mala)
1(nk)=0	= T(2) + (pro + (pro )
nek	= T(0) + log 2 + log 4 + + log n
	$= o(n \log n)$
	Exercise'2 (14x10n)
	Let fin) = n and gin)=n whove n'is a positive integer.
which.	if the following Statements in love correct?
	4 the following Statements in lace correct?  4(n)=n, g(n)=n (1+ Sinn)
	4(n) = 0 g(n)
	(n) = 2 g(n)
	6 -
	for Big-o for anaga
	$f(n) \leq Q \cdot g(n) \qquad f(n) \geq Q \cdot g(n)$ $Q \leq Q \cdot n  (Holin)$
	$f(n) \leq Q \cdot g(n) \qquad f(n) \geq Q \cdot g(n) $ $Q \leq Q \cdot Q(n) \qquad Q \leq Q \cdot Q(n)$
	None of the Statement is connect.
Cami	be!3
· · · · · · · · · · · · · · · · · · ·	muse were in the inviewery order of asympto He win desity
of feun	Make them in the inviewing onder of asymptotic lamplexity.
711	$\frac{(n)}{(n)} = 2^{n}$ $49 \angle 42 \angle 44 \angle 41$ $(n) = n^{3/2}$ $5 complexity-classes.$
10	5 complexity-slugg
10	no and n
43	$(n) > n \log_2 n$ $(n) > n \log_2 n$
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