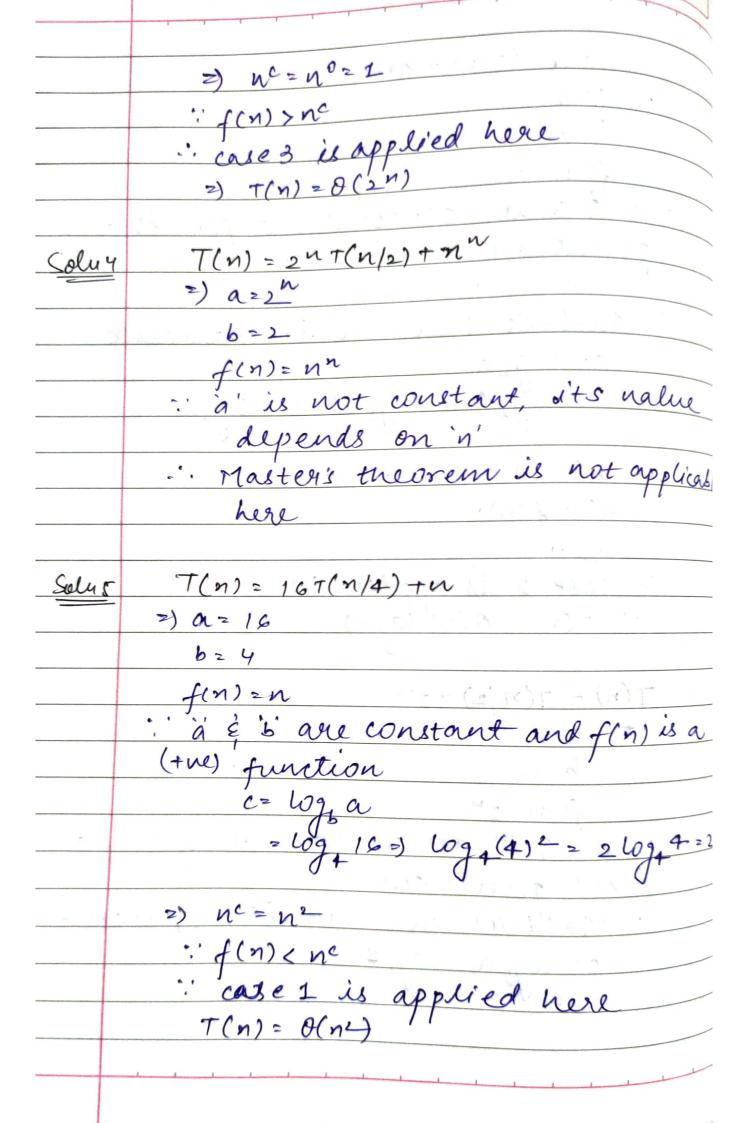
T(n)=4T(n/2)+n2 =) a=4 f(n)=n2 : à É b'are constant and f(n) is (+ve) · Master's theorem is applicable = log 4 = log 22 = 2 log 2 = 2 =) T(n) = O(n2 logn) Solus T(n) = T(n/2) +2n :i à è is are constant and f(n) is a (+ne) junction

: Master's theorem is applicable

c= log, a = log, 1



ColyG	$T(n) = 2T(n 2) + n \log n$
	=) a 2 2
	b=2
	$f(n) = n \log n$
	g'and t' and countered
	f(n) = n logn a' and b' are constant and f(n) is a (tun) fruition
	the function
	c= log, a
	= log_2 2-1
	$n^{c} = n' = n$
	$f(n) > n^{c}$
	f(n) > n° case 3 is applied
	=) T(n)=0(nlogn)
Soly7	T(n) = 2 T(n/2) + n/logn
	2) a 22 Jed 1 (e) per (m)
	b = 2_
	$f(n) = \frac{n}{\log n}$
	· · · à and · b' are constant à f(n) is
Last	· · · · à and · b are constant à f(n) is a (+ ve) junction
	Jacobson
	u= log a) = log 2 = 1
	u= log a = log 2 = 1
	MC - M - M
	$n^c = n^l = n$
	: non-polynomial difference between f(n) é ne
-	f(n) & n
	Master's theorem is not applicable

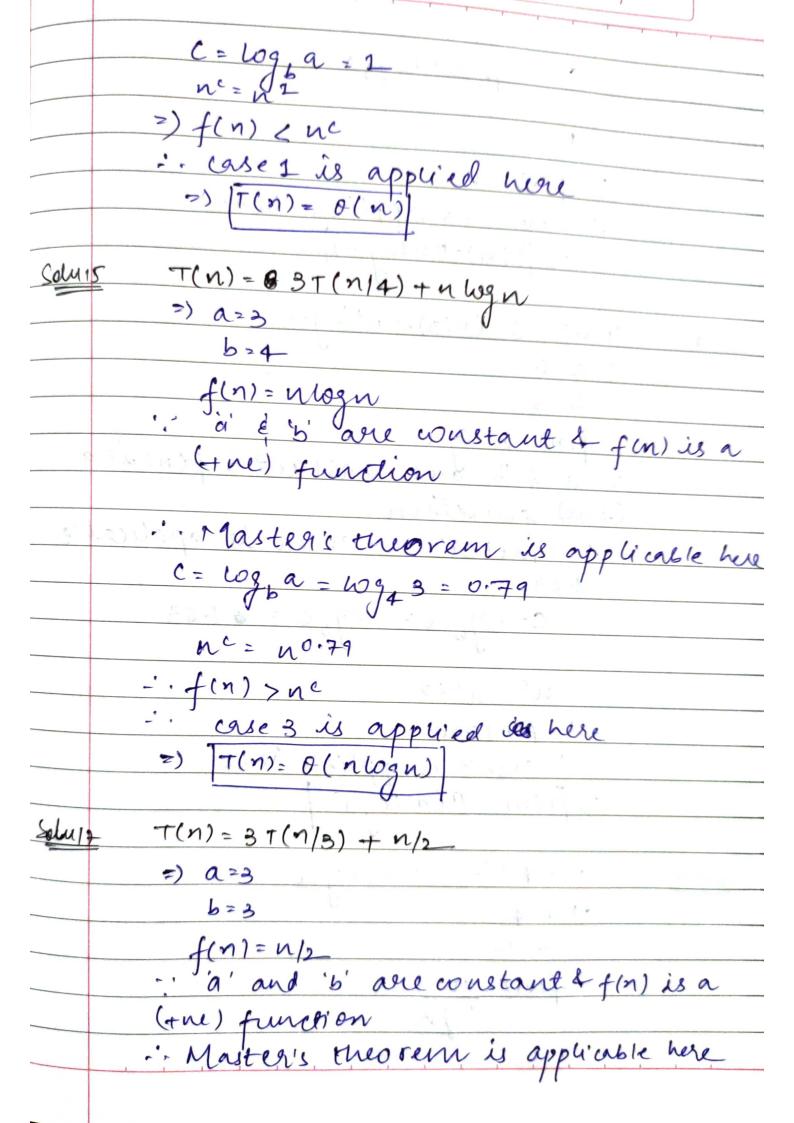
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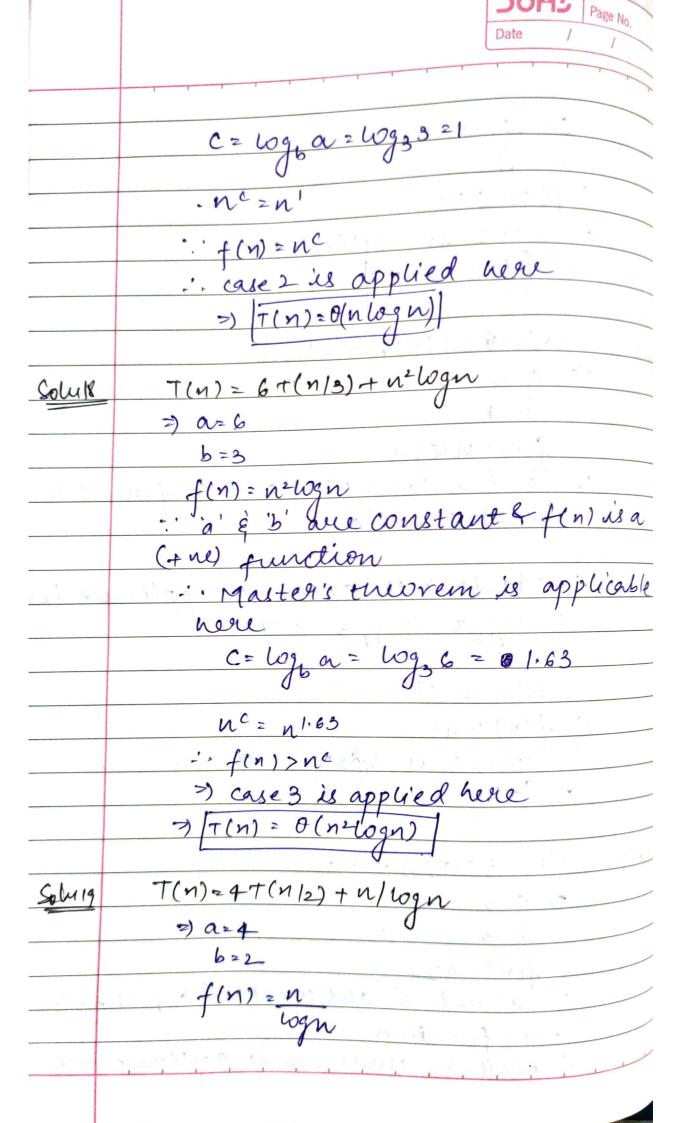
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3	
	051
Solu1	T(n)=2T(n/4)+ NO51
- Secre	=) a=2
-	b=4
_	0.51
	$f(n) = n^{0.51}$
	ia & b'are constant & f(n)
	a (+ue) Linksum
	Master's theorem is applicable
	a = log, a = log, 2 = 0.50
	76
	60. nc = no.50
	i. f(n) > ne
	si cara à in modicable
	T(n) = $O(n^{0.50})$
A.A. a	T/ · ·
Solug	T(n) = 0.5 + (n/2) + 1/n
	=) a=0.5
	b=2
	f(n) = 1/n
	: a < 7
	Masters theorem is not applicable
	as were appare
Soluio	T(n) = 16+(n/4)+ n?
	=) a=16
	b = 4
	f(n) = n!
ES	

· · · · à è b are constant + f(n) is a (+ ne) function
· · Master's theorem is applicable = Wg416 = 2 nc = n2 case 3 is applied here =) | T(n) = 0(n1) T(n) = 4T(n/2) + Logn =) a=4 f(n) = wogn

.: o' è b' are constant à f(n) is a ne) function .. Mast'er's theorem is applicable c = log a = log 4 = 2 ... case 1 is applied here T(n) = 0(n2)





i a and is are constant and fin is a (4ve) function .. Masteris theorem is applicable here C = Wga = wg 4 = 2 nc=n2 infin) cnc in case 1 is applied here =) T(n)= O(n2) Soluzo T(n) = 64 T(n/8) + n2 logn (000° =) a=64 -: 'à' and 'b' are constant but f(n) is a (ne) function .. Master's theorem is not applicable here Soluzi T(n) = 7 T(n/3) + 12 =) a=7 b=3 f(n) = n-·: a', b' are constant and f(n) is a (+ne) function ... Master's theorem is applied here = C = wg, a = wg, 7 = 1.77 nc = n'.77-: f(n) >nc => case 3 is applied here