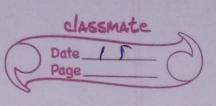
TUTORIAL: 4

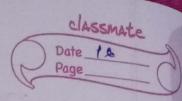


1.
$$+(n) = 3T(n/2) + n^2$$
 $a = 3, b = 2, f(n) = n^2$
 $\Rightarrow n (2gb^q = n (2g^2 = n) \cdot f$
 $n \cdot f = 0 (f(n))$
 $f(n) = 0 (f(n))$
 $f(n) = 0 (n^2)$

2. $f(n) = 4f(n/2) + n^2$
 $a = 4, b = 2, f(n) = n^2$
 $f(n) = 4f(n/2) + n^2$
 $f(n) = 0 (n^2 (2gk n))$
 $f(n) = 0 (n^2 (2gk n))$
 $f(n) = 0 (n^2 (2gn))$

3. $f(n) = f(n/2) + 2n$
 $f(n) > 1$
 $f(n) = 0 (f(n)) = 0 (2^n)$
 $f(n) = 2n f(n/2) + n^n$
 $f(n) = 2n f(n/2) + n^n$
 $f(n) = 2n f(n/2) + n^n$
 $f(n) = 2n f(n/2) + n^n$

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5,	7(n)=16+(n/4)+n	
	a=8, b=4, (E(n)=n)	
		•
	n1948 - 109.23 = 1098 = 1092 1094 1092	
	1099 1092	2
	(m) 3/2 = 1.5	
	$\omega_{1.2}$, $t(\omega) < \omega_{1.2} = \omega < \nu_{1.2}$	
	T(n) = 0 (nc) = 0 (n1.5)	
		9
6,	T(n) = 2T(n/2) + nlogn	
	- Tre - Peppine - Palipine	
	a=2, b=2, F(n)= nlogn	
	2 10925 = 2	
	P(m)>n	
	T(n) = O(P(n)) = O(nlogn)	3
	ME = (M) S = d L = p	
7,	T(n) = 2T(n/2) + n/1997	
	Invalid,	
	(ms) 0 = ((m) 1) 0 = (m) +	
8.	T(m) = 0.5 + (m/2)+1	
	CALLANDE OF THE STATE OF THE ST	1
	Invalid,	1
9;	T(n) = 16T(n/4) + (n	
	a=16, b=4, fenzen	1
	· n 109,16 - n 109,42 - n2	1
	$F(n) > n^2 \tau(n) = 0$	(n)

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T(n) = 3+ (n/2)+n a=3, b=2, fin)=n, ndog23 = n/15 > F(n)

T(n) = 0 (n1.5).

+(n) = 3T(n/3)+5n 14

9=3, b=3, F(n)=In

n/10933 - n

 $T(n) = \Theta(n)$

15

9(n) = 47(n/2)+cn

a=4, b=2, f(n)=cn

n/24 - n2

n2>F(n)

T(n) = O(n2)

16.

T(n) = 3T (n/4) + n logn

a = 3, b=4, . F(n)=0/6gn.

n 12943 = n 0.2

F(n) > ntg 43

T(n) = O(n logn).

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	The section of the se
17.	T(n) = 3T(n/3) + n/2
	$q=3$, $b=3$, $F(n)=\eta$
	n 109,3 = n
	$n \log_3 = n$ $F(n) = n$
	T(n)=O(nlogkn)=O(nlogn)
	The state of the s
18.	T(n) - 06T(12/3) + n2 begn
	$a=6, b=3, F(n)=n^{2}\log n$
	n 10/3 6
	Fin) > n 1936
	$T(n) = \Theta(n^2 \log n)$
	Massimia in Ced 19515
19.	T(n) = 64T(n/8) - n2 logn
	invalid -
	THE STATE OF THE S
20	T(n) = 7T(n/3)+n2
	$9=7. b=3, F(n)=n^2$
	$n og_3 \rangle \rightarrow n^2 > n og_3 \rangle$
	1(n) = O(n2)
22	T(n) - T (n/2) + n (2-ligh)
-	
	invalid
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