->	Lambarison of Gunctions
	Gomparison of Functions
	Comparison of n2 and n3 by simple method
1,50	$n$ $n^2$ $\leq$ $n^3$
	$\frac{7}{3}$ $(2)^2 = 4$ $(2)^3 = 8$
(a. 13)	3 (3)0 = 2+
	$y$ $(4)^2 = 16$ $(4)^3 = 64$
	Log Method
	n <sup>2</sup> n <sup>3</sup>
	Apply log on Both sides
	169n 2 69n3
	Apply log on Both sides log n 2 log n 3 2 log n 4 3 log n
	0
_	
	Log formulas:
	logab = loga + logb
	log a = log a - log b
	dog ab = blog a
	0
	a loge = b loge
	ab = n then b=loga

. Compare f(n) = n2 log n and g (n) = n (log n) 10 Apply log log [n(log n)'o] log [n²log n] dog n² + dog log n tog n + log [dog n] 0 Ilogn + dog logn > logn + 10 log log n Compare f(n) = 3n m and g(n) = 2 m log n an roll 3 n 5n applying property & log on right side (my) of a logan 3nm (n Jn) log2? [:10 loge = hloge > Value wish this is greates Asymptotically they are equal.

· Compare f(n) = nlogn g(n) = a sn Apply log on both sides dog and dognlogn In log a log n begn Sn log2n Again, log on Both sides 2 dog logn / j dogn g(n) = nun · Compare fln) = a logn
Apply log
logn x loga In log n Sn logn logn · Compare f(n) = 2n g(n)=3n both are equal, Asymptotically

use to some	and g(n)=22n
7 8 Eog u	27 63 2
Its we have applie	As we have applied by they commot be equal.
(emparo	m2 100
92(m) = 5 n2	
g,(m)>92 100 m	91=92 10,000 80 ×91
The of false	·* * * *
ep. (n+ 3)2 = 0 (n2)	
2n+1 = O(2m)	
220 = O(24)	
false false	

4 2	Jlogn = O(loglogn) Trogn > loglogn false
5	$n^{\log n} = o(2^n)$ $\log n \log n = n \log 2$ $2 \log n$ $2 \log n$
7	F * * *