Problem 5.2 d) (Bonus) T(n)=3T(N/2)+0(n) 0 (n) = cn. 0(n 10g23) = en((3) (09, 1) +0(0)(9) =20 (3 1092 1) +0 (n 10923) To prove Th)=O(nlogs3), are proveor show that 3 loggn = 0 (nloggs) = 3 (nloggs) = 0 (nloggs) · c let x = c 1/10933 and then take enof logan en (3) < loga 3 en (Xin) the inequal => log3n < log3xn for largex 50 T(n)= O(n 10923).