tg 1632 - hw 3. pdf Restion 1: Sum - 1st 1 (1st) 16+[0] 5cm_16+1(16+[1:]) 6(1) / O(r Sum_15/1[2:]) 15+[0] 50m-151 1 [n;] Asymptotic Running Time: Each receisive all an element in the list is accessed which is O(1). You to this n times, hence O(n). Also you call the recusive function with a spliced version of the original list, Splizing is (In) and this is lane in times hence it is O(n2). Final Running Time: (O(n2) Sum_ 1st 2 (1st, low, high) UM-15+2 0(1)/ 1st Llow] Sun-15+2 (15+, lau+1, high) 15+ [10w] Som-1s+2 (1s+, low+1, high Sem-15+ 2 (115+, law, high) IS+[10w] Asymptotic lunning Analysis: Each recusive call returns an element in the list which is O(1). This is one in times (in being the len of hence making it O(n). The recursive all is O(1) , junes hence (O(n). is asymptotically taster

Ricstan 2: for 1 (n)

o(1) fun(n-1) fun(n-1)

fun(n-1) fun(n-1)

fun(n-1) fun(n-1) fun(n-2)

fun(u) fun(u) fun(u) fun(u) fun(u) fun(o)

fun(u) 10(1) 10(1) fun(u) fun(u) fun(u) fun(o)

1 o(1) 10(1) 10(1) 10(1) 10(1) 10(1)

The second seco All recursic calls (a) (i) 04) $(ii) 0(2^n)$ fu 2 (n) ou) (b) (i) All recursive calls fin 2 (n//2) (x1)
fin 2 (n//4)
fin 2 (1)
fin 2 (0)
fin 2 (0) (ii) O(logn) fun3(n)

for: mrange (n)

for i mrange (n)

for i mrange (n/2)

for i mrange (n/2)

for i mrange (n/2)

i oci) (4) ii) O(1) log in times and O(n) in times = 10(n2logn)