Quiz 3

T n leaves $n = 11 + 2$

a) $n = 13$

internal nodes

1 node

b) $\log_{11} n$ 11^i nodes

$\sum_{i=0}^{\infty} \frac{n}{11^i} \leq 11n = V$ $E = V - 1 \rightarrow 14n - 1 = E$

$DFS = O(V + E) = O(n)$

$n = 13$

$\sum \frac{13}{11^i} = O(11)$

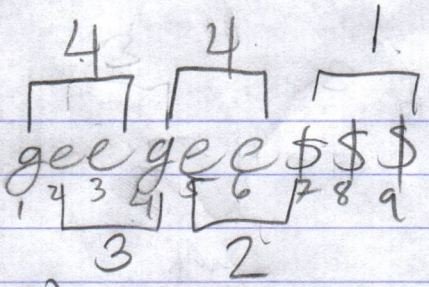
c) $\frac{n^2}{7} = \text{len}$

$\frac{n}{7} = s + 1$

$n \log n \cdot O(\text{comparison})$

$\frac{n}{11} \log \frac{n}{11} \cdot O\left(\frac{n^2}{11}\right) = \frac{n^3}{11} \log \frac{n}{11}$

Q3 Str = gee gee $$$



SA = (1,2)
1) gee
2) eeg
4) gee
5) ee$
7) $$$

Radix Sort

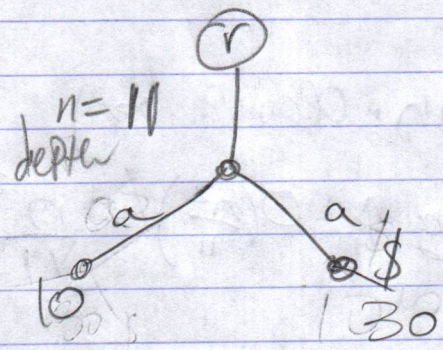
Bucket	1	2	3	Rank
	8, 7	7	7	1
	2	1, 4	5, 2	2, 3
	1, 4	5, 2	1, 4	4, 5

S' = 4 4 1 3 2 $ 1
1 2 3 4 5 6

SA = 6, 3, 5, 4, 1, 2

Q4 LCP $Suff_{10}$, $Suff_{30}$ = 11 S[10+11] ≠ a

S[30+11]



S[4] = a$ iff $|Suff_{30}| < |Suff_{10}|$ by lexi order