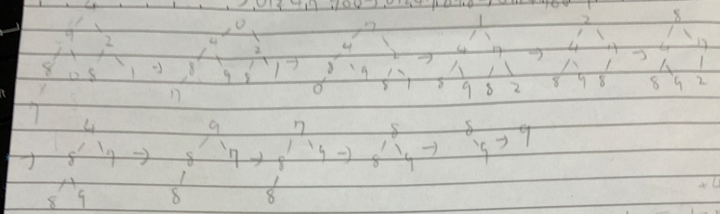
C: " → 0118 98247 → 01 898742 → 01298784 → 01248987
→ 0124,7 988 → 01247,89,8 → 0124788 9.



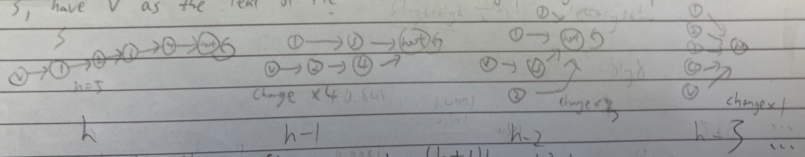
2. have T(n) as nlgn: $\frac{1}{2}\left[\frac{3}{4}n\lg\frac{3n}{4}+\frac{n}{4}\lg\frac{n}{4}\right]+\frac{(n-1)}{2}\lg(n-1)+bn$; have $k=\frac{n}{4}$, $\frac{T}{4k}=\frac{\lg 3k^{3k}\times k^{k}\times(4k-1)^{4k-1}}{2}+4bk$

$=\lg 3k^{\frac{3k}{2}}\times k^{\frac{k}{2}}\times(4k-1)^{\frac{4k-1}{2}}+4bk = f(k)$; $f(1)\approx 1.4+4b$; $f(2)=5.6+8b$; $f(3)\approx 10.7+12b$

$4k\lg 4k = g(k)$; $g(1)=2.4$; $g(2)=9.2$; $g(3)=13.0$

⇒ g(k) might increase faster than f(k), so $cn\lg n \geq T(n)$, T(n) is $O(n\lg n)$

3, have V as the leaf of the tree; have to go through h paths



operation = $h+(h-1)+(h-2)+\dots+1=\frac{(h+1)h}{2}=\frac{h^2+h}{2}$

$\rightarrow O(h^2)$

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02468r 9