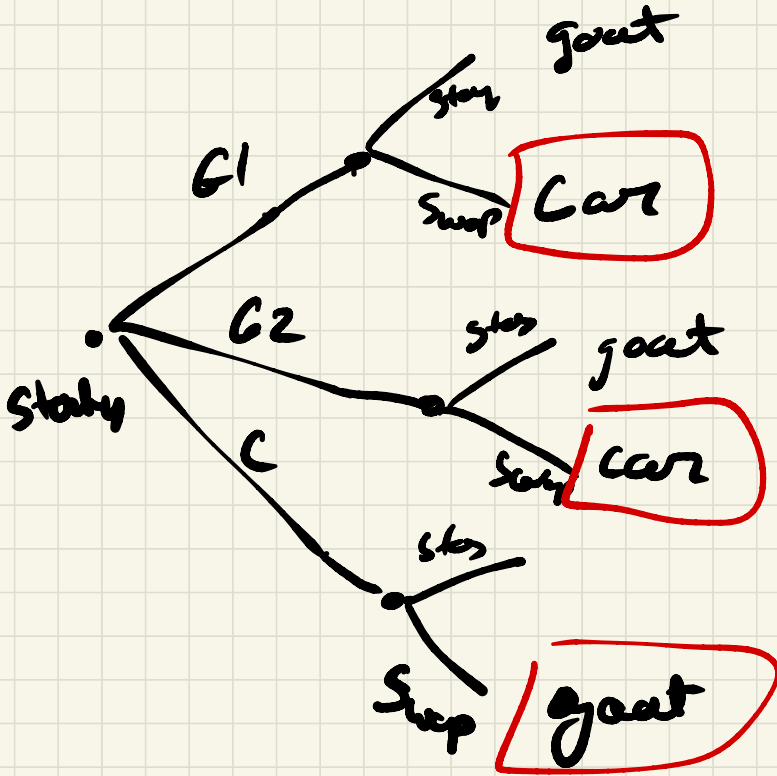


# Possibility Tree

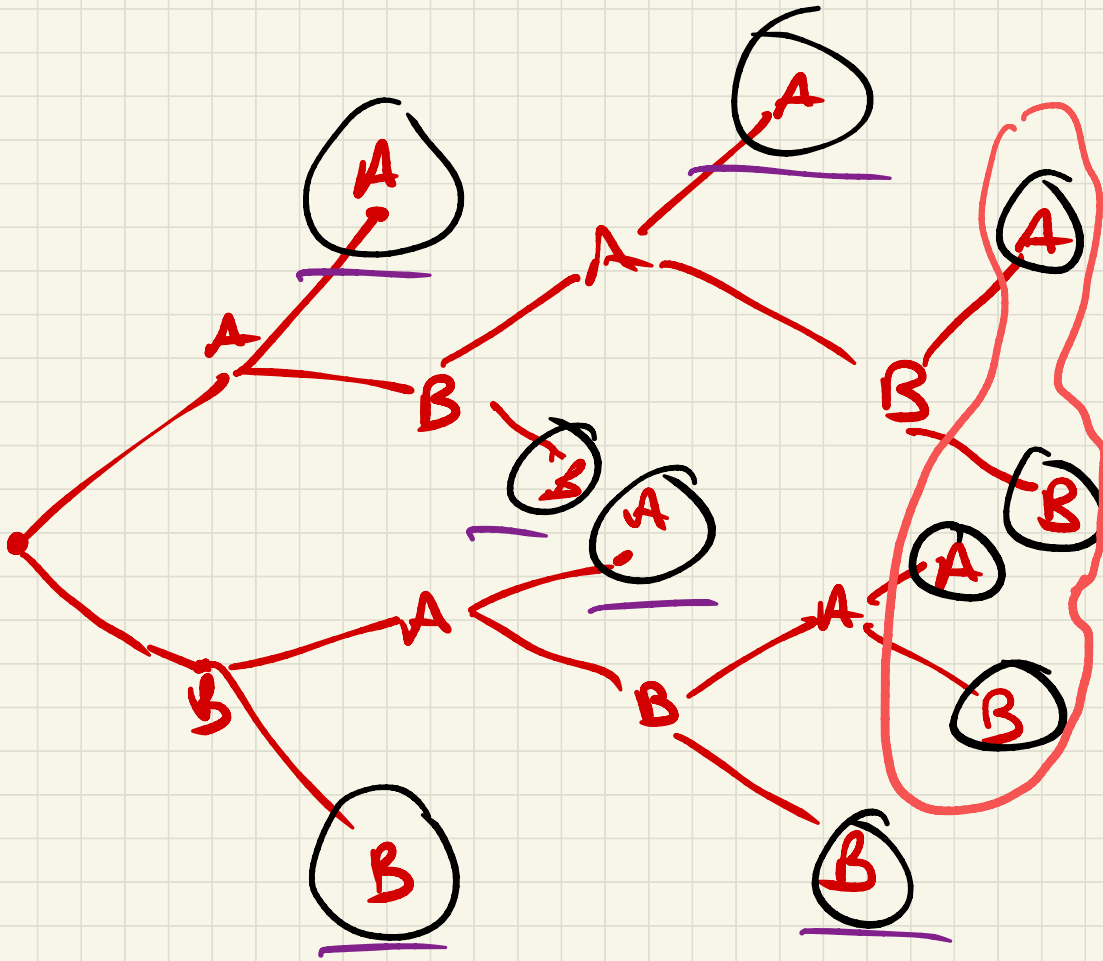


Swappy

Car

$\frac{2}{3}$

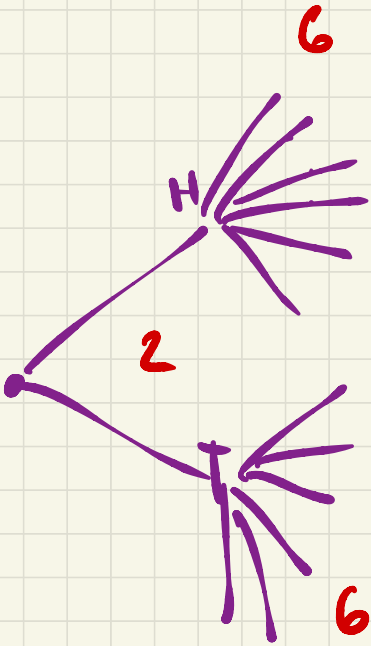
---



4 gene 5's

$$\frac{4}{10} = \frac{1}{5}$$

you need a  
gene 5



$$k=2$$

$$\begin{array}{r} n_1 \\ \hline 2 \end{array} \cdot \begin{array}{r} n_2 \\ \hline 6 \end{array} = 12$$

0, 1, 2, 3, 4, 5, 6, 7, 8, 9  
└──────────────────┘  
10

$$10 \cdot 10 \cdot 10 \cdot 10 = 10^4 = 10000$$

$$10 \cdot 10 \cdot 10 \dots 10 = 10^6 = 1,000,000$$

---

Cannot Repeat digits

$$10 \cdot 9 \cdot 8 \cdot 7 = 5040$$

---

L · L · D · D · D · D · L · L

$$26 \cdot 26 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 26 \cdot 26$$

$$26^4 \cdot 10^4$$

---

$$(52+10)^4 = \boxed{62^4}$$

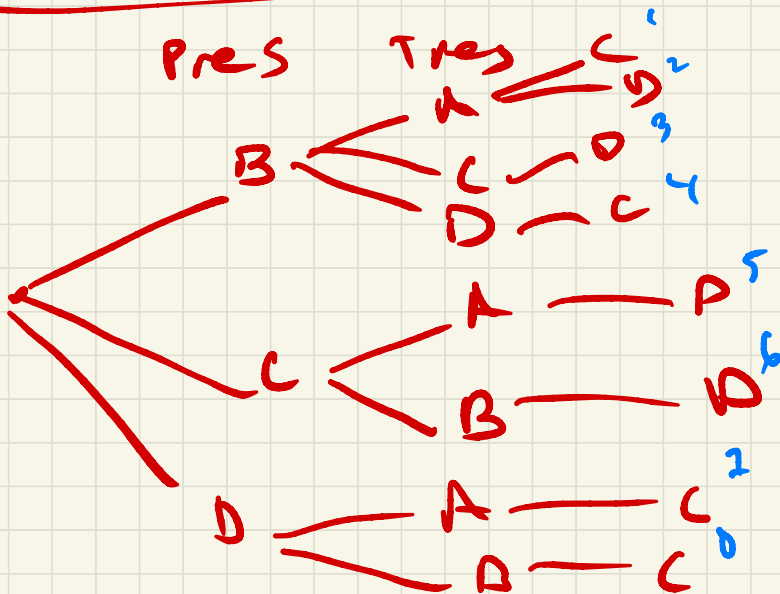
A - cannot be president

B - can be anything

C } must be the secretary  
D }

$$\frac{\text{Pres}}{3} \cdot \frac{\text{Treas}}{3} \cdot \frac{\text{Sec}}{2} = 18$$

---



8

$$\frac{\text{Sec} \cdot \text{Pres} \cdot \text{Treas}}{2 \cdot 3 \cdot 3} = 8$$

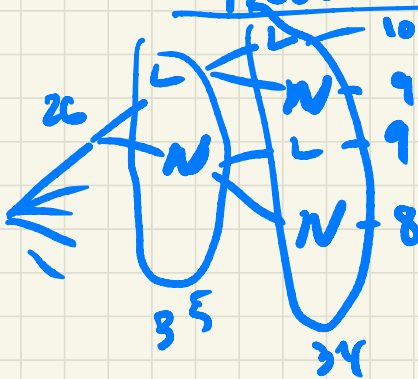
$$26 \cdot 10 \cdot 36 \cdot 36 = \underline{\underline{26 \cdot 10 \cdot 36^2}}$$


---

$$26 \cdot 35 \cdot 34 \cdot$$

Letters  
or

Numbers



$$\begin{aligned}
 &= 26 \cdot 35 \cdot 34 \cdot 10 \\
 &= 26 \cdot 35 \cdot 34 \cdot 9 \\
 &= 26 \cdot 35 \cdot 34 \cdot 9 \\
 &= 26 \cdot 35 \cdot 34 \cdot 8
 \end{aligned}$$

X

25 24

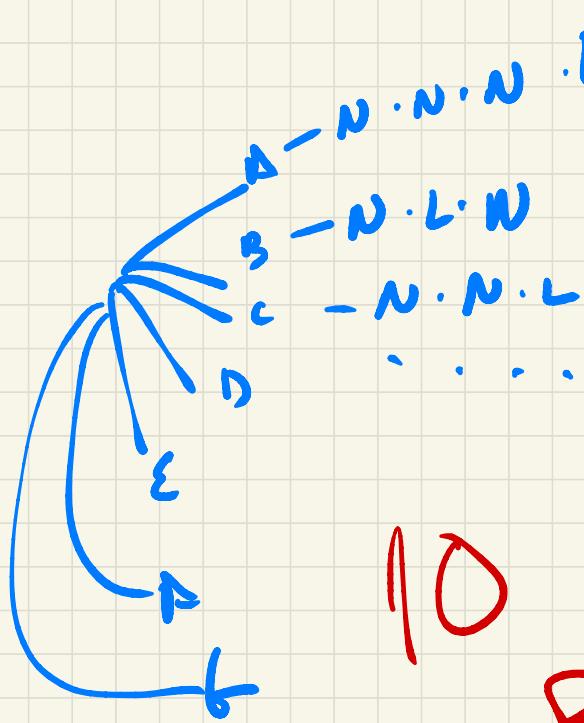
L  
L·N  
N·L  
N·N  
+

$$\left( \begin{array}{l}
 26 \cdot 25 \cdot 24 \cdot 10 \\
 26 \cdot 25 \cdot 10 \cdot 9 \\
 26 \cdot 10 \cdot 25 \cdot 9 \\
 26 \cdot 10 \cdot 9 \cdot 8
 \end{array} \right) +$$

L·L  
 L·N  
 N·L  
 N·N

Begin w/letter [A-b]<sup>37</sup>

an end with a num [0-2]  
3



10 point  
Bonus  
on PST

