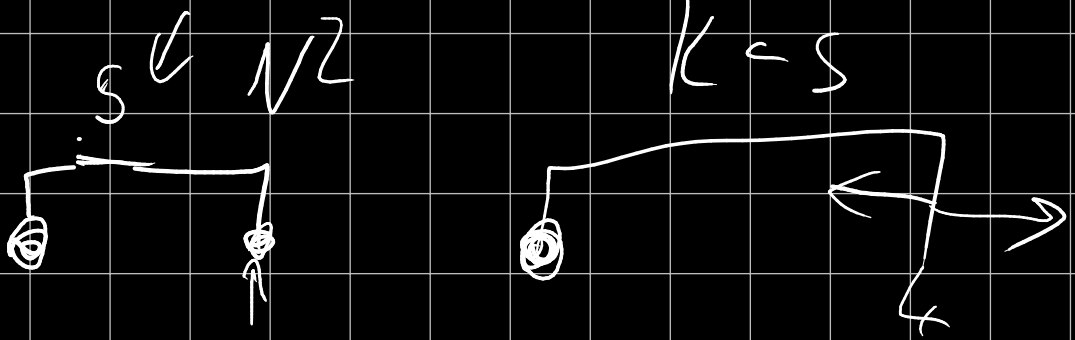
$$\binom{N}{4} \approx N^4$$

$$500^6 = 625 \cdot 10^8$$

$$500^4 = 625 \cdot 10^{12} \approx 10^{15}$$

1 2 3 1 2 3
1 3 6 7 9 12 $\leftarrow O(N)$



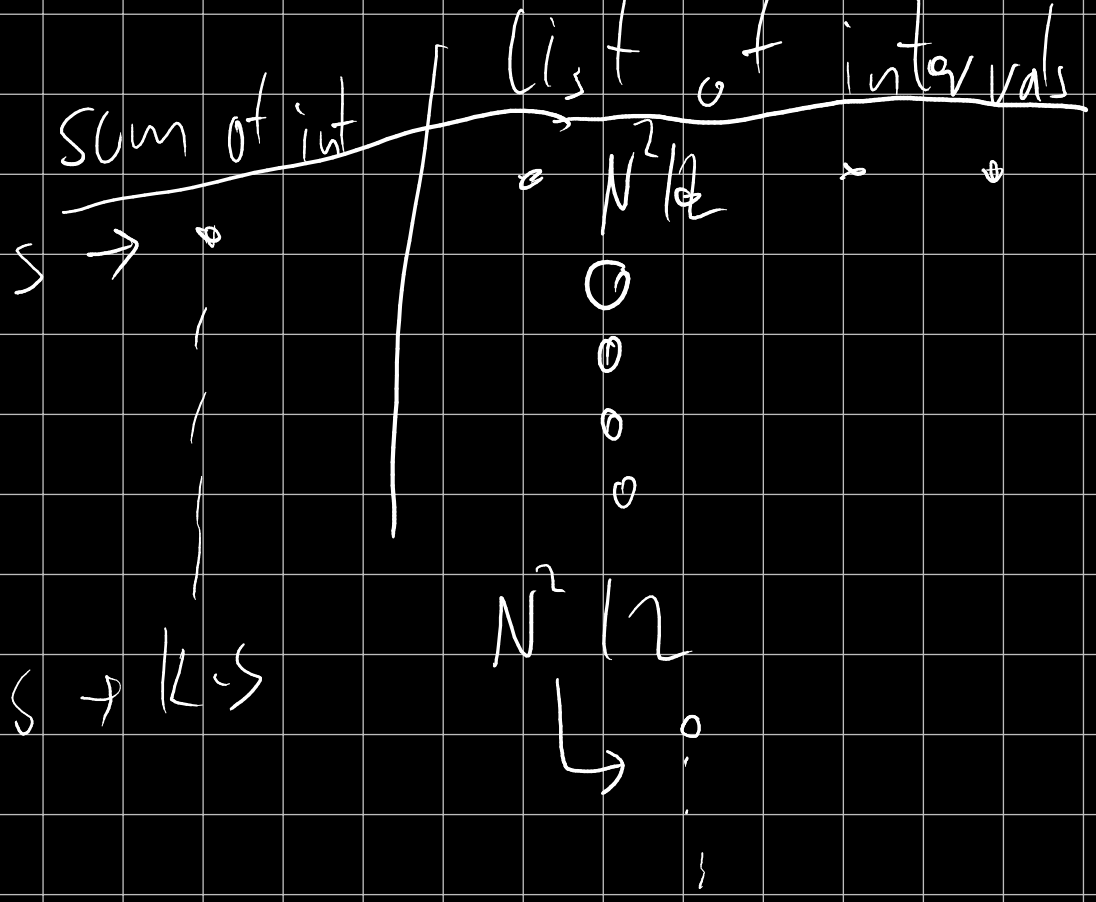
$$N^3 \cdot \log(N)$$

$$500^3 \cdot 12 = 125 \cdot 10^9 \cdot 12$$

$$\approx 10^{12}$$

$$500^3 \log(500) \approx 7.5 \cdot 10^6 \cdot 9/6$$

$$N^2 \cdot \log(N)$$



$$5000^2 \log 5000 \approx 25 \cdot 10^6 \cdot 12$$

$$\approx 3 \cdot 10^8$$

$$\times 25 \Rightarrow 7.5 \cdot 10^9$$