Dynamic Programming

1_ Intuition

- Overlapping Subproblems
- Optimal substracture
- Induction

2_ "Structure"

1. We solve smallest (trivial) subproblem optimally "k=0" (basis step)
2. Then, by going through (all) the $(i \in [0, k])$ previous solutions and analyzing them, find how we can guarantee building the optimal solution for step k+1 "$k \xrightarrow{?} k+1$" (Induction Hypothesis)
3. With that relation, implement finding the optimal solution for any step k+1, by recursively resolving and storing the answer to subprob $[0 \ldots k]$ into a matrix. (Inductive step)

"$\forall k \geq 0: s(k) \rightarrow s(k+1)$"
"$\forall k \geq 0: s(k)$"