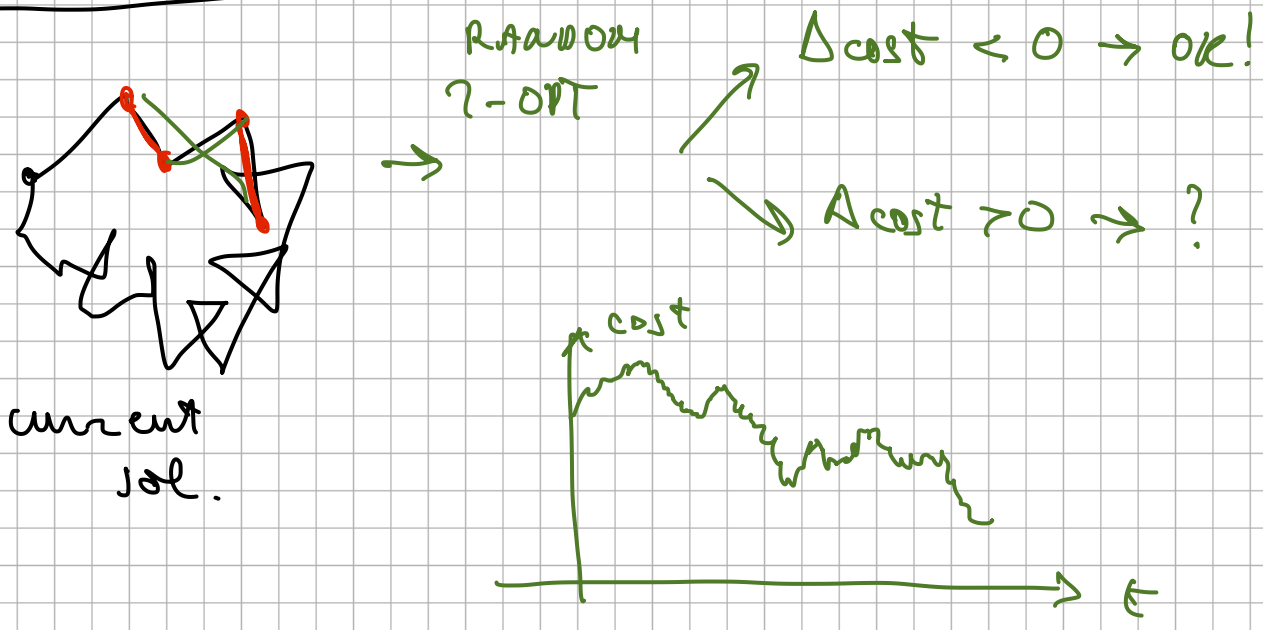


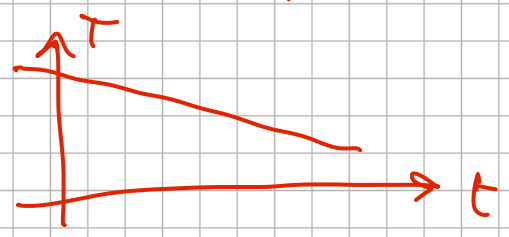
OR 2 01-APR-2022

SIMULATED ANNEALING



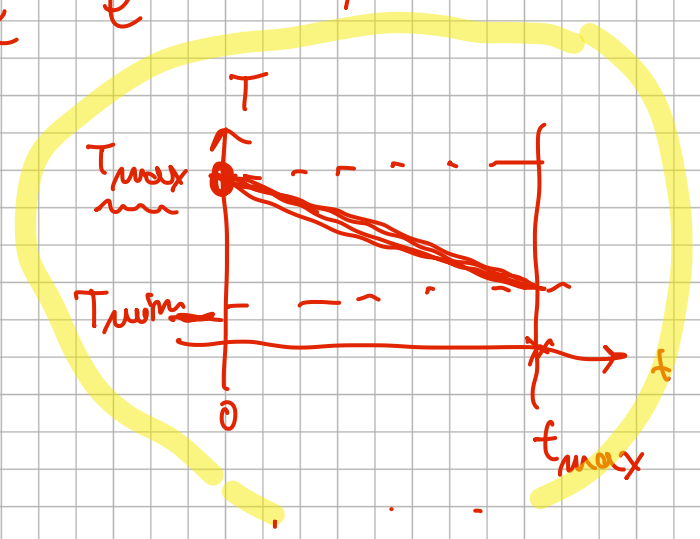
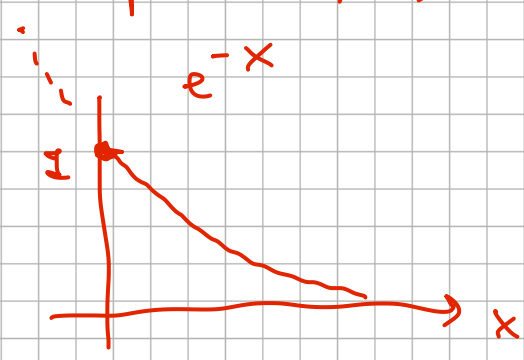
probability of acceptance = $p(\Delta cost, T) = ?$

T = temperature



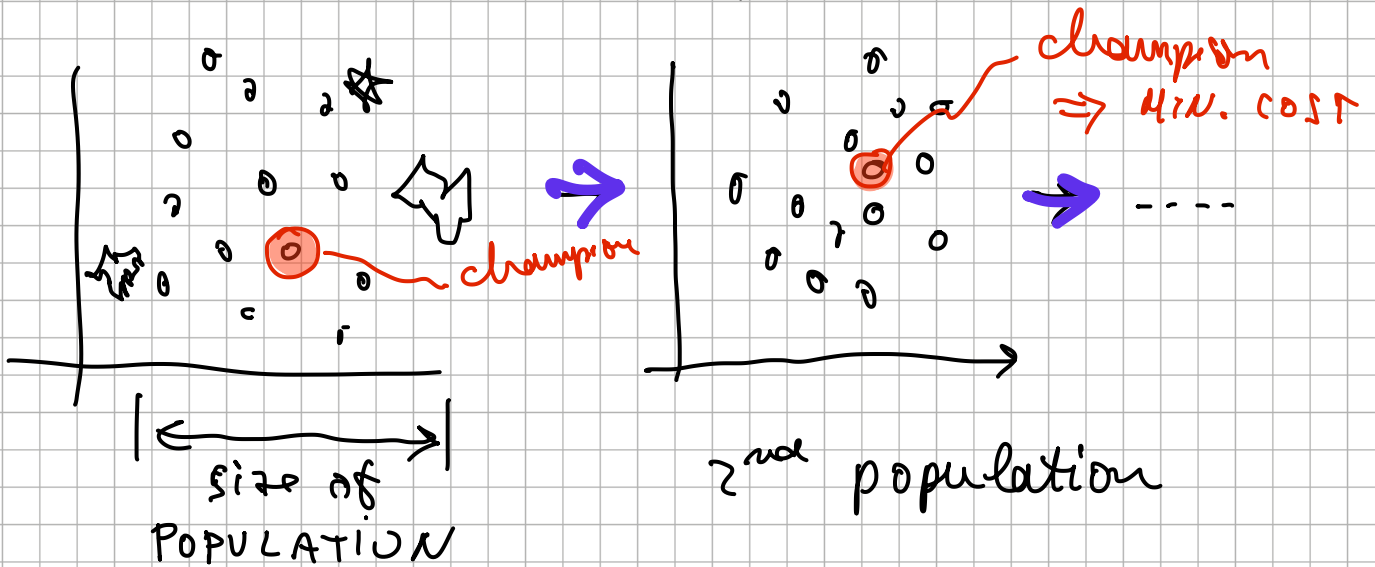
METROPOLIS formula:

$$p(\Delta cost, T) \approx e^{-\frac{\Delta cost / \text{SCALER}}{T}}$$

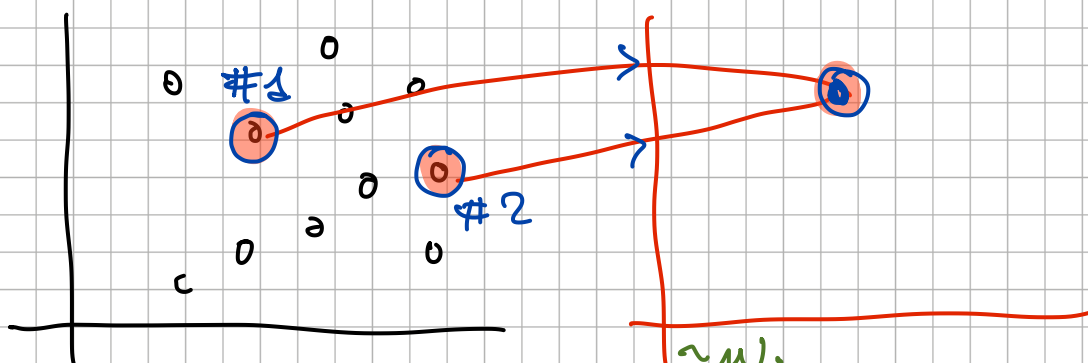
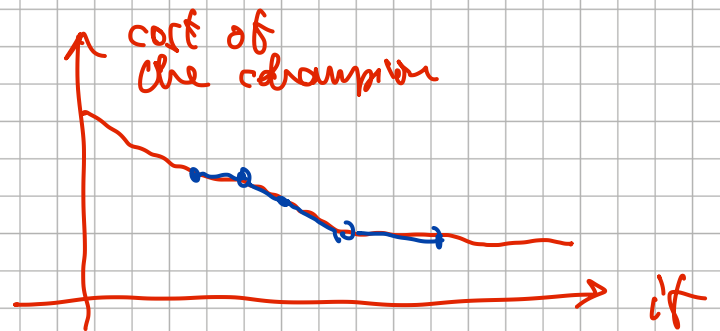


$$SCALER = (\text{cost of a "given" sol.}) / n$$

GENETIC ALG.



$\approx 1,000$ or so

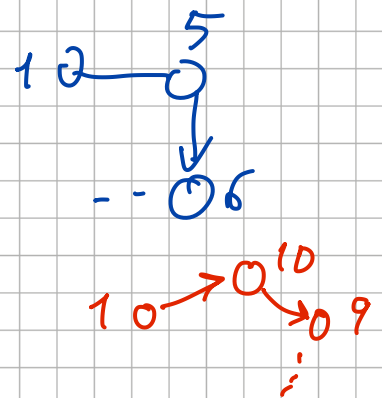
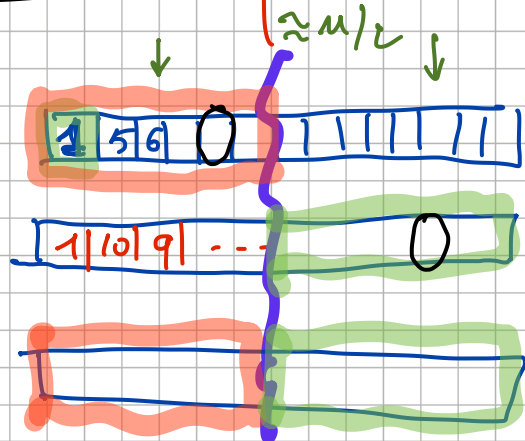


CROSSOVER

PARENT #1

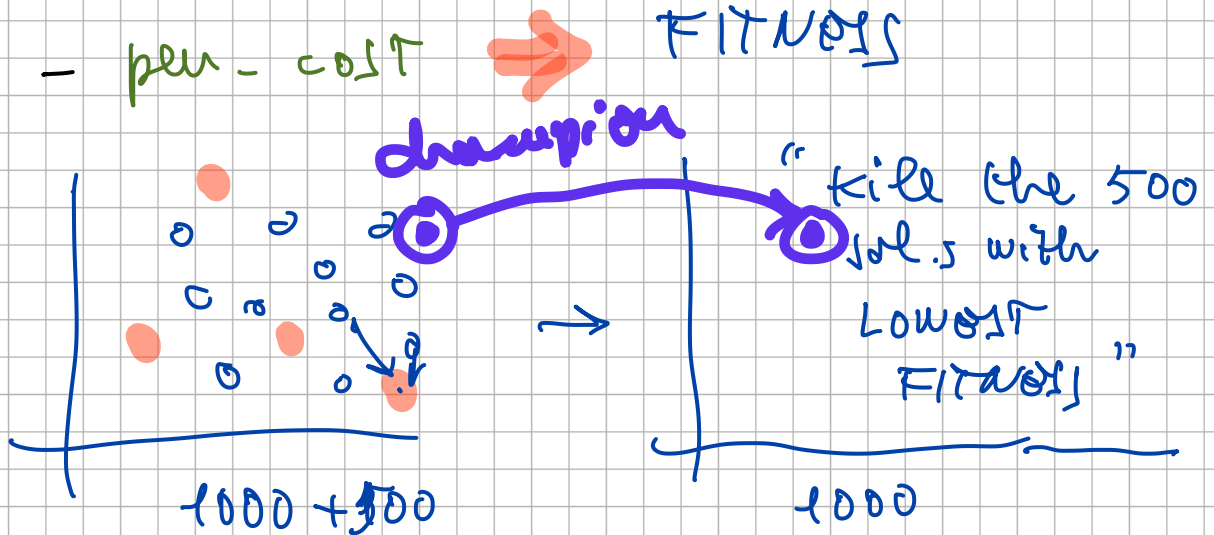
PARENT #2

CHILD

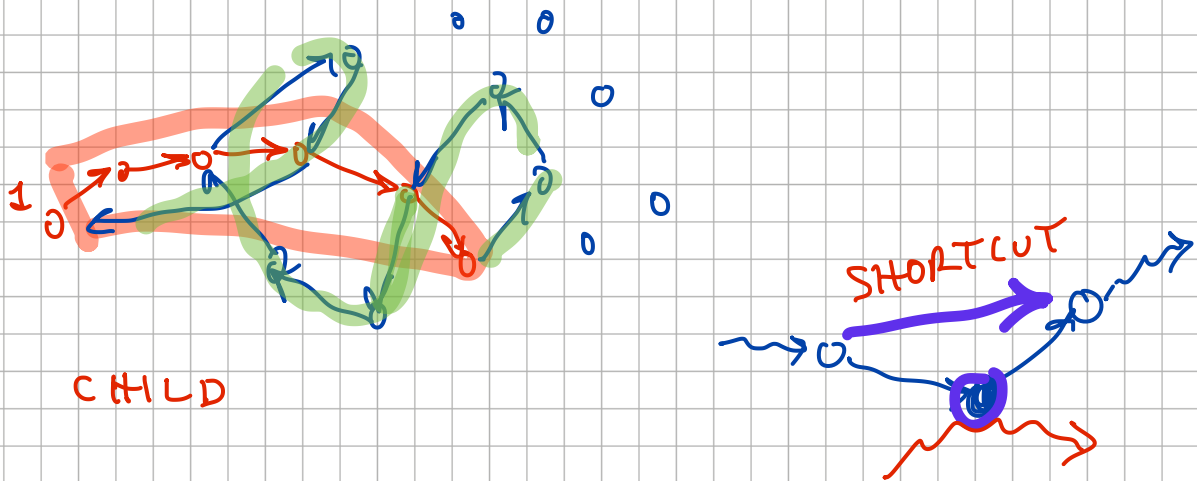


+ REPAIR

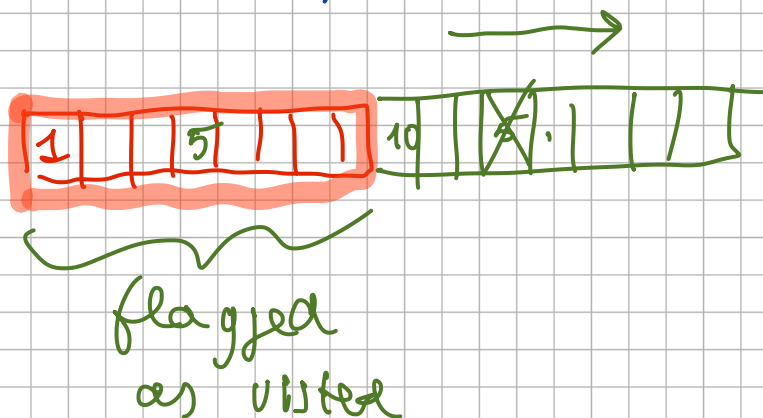
$$\text{pen_cost (child)} = \text{cost_sol.} + \text{Bl0 penalty for infeasibility}$$

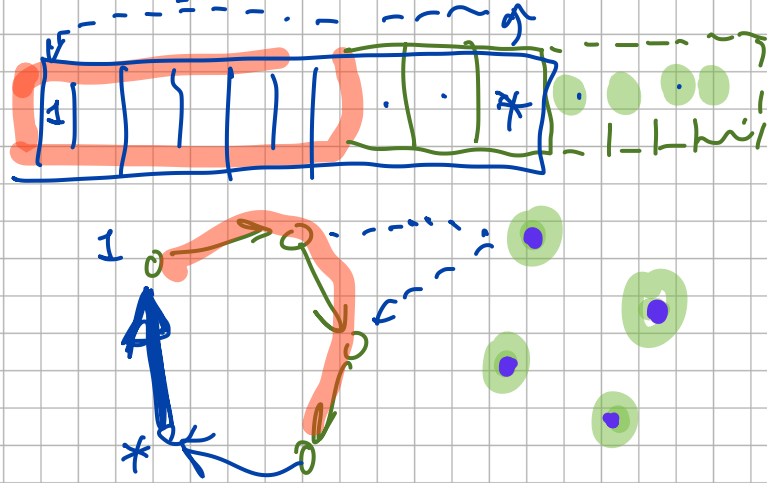


REPAIR



2. eliminate 2nd visits
(SHORTCUT)

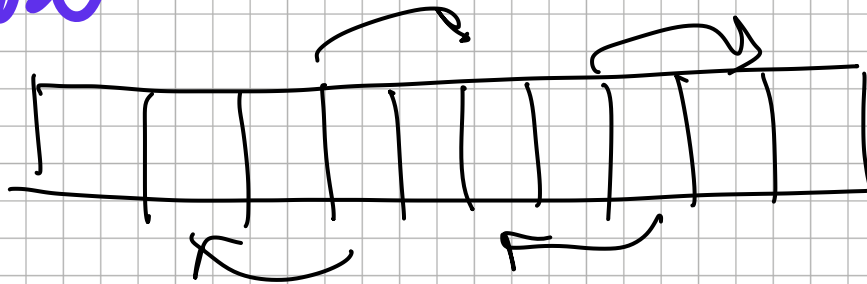




b. insert the missing nodes
("extra-mileage")

c. full 2-OPT

MUTATION



CHILD = RANDOM CHANGES
in the sequence of
a STABLE parent

ANT SYSTEM