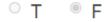In local search, if the optimization function has a constant value in a neighborhood, there will be a problem.

T

Greedy method is a special case of local search.

○ T   ● F

Since finding a locally optimal solution is presumably easier than finding an optimal solution, we can claim that for any local search algorithm, one step of searching in neighborhoods can always be done in polynomial time.

F

Random restarts can help a local search algorithm to better find global maxima that are surrounded by local maxima.

T

In Metropolis Algorithm, the probability of jumping up depends on T, the temperature. When the temperature is high, it'll be close to the original gradiant descent method.

F