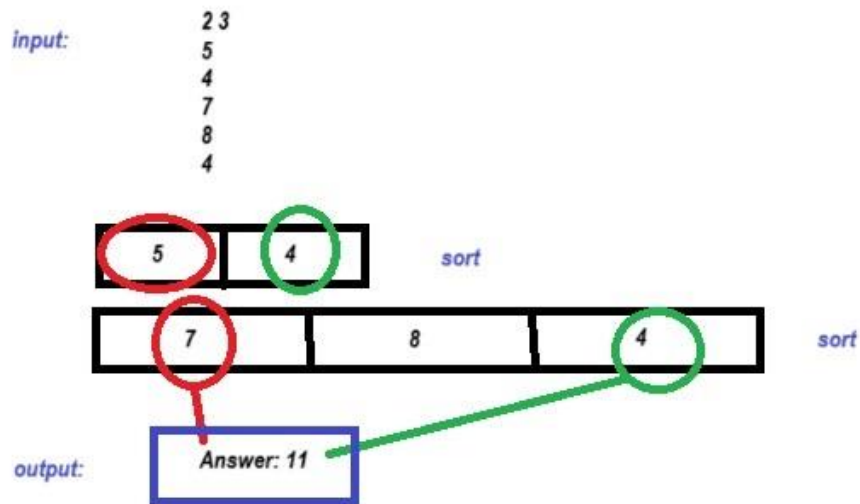a. Identify the greedy choice:

The greedy choice in this problem is to always select the knight with the minimum height that is tall enough to chop off the current dragon head.

b. Identify the optimal substructure:

At each step, we choose the knight who can chop off the current dragon head with the minimum cost. This decision is independent of previous choices and contributes to the overall optimal solution.

c. Proof of the greedy algorithm:

The greedy algorithm works by always selecting the knight who can chop off the current dragon head with the minimum cost. This ensures that we minimize the total cost of hiring knights while still being able to defeat the dragon. Since the algorithm always makes the optimal local choice at each step, it leads to the optimal global solution.

d. Time complexity of the solution:

N log N