Analysis

Comparing the performance of these 3 algorithms in 50 puzzles, we came to the following conclusions. UCS and algorithm A have the lowest-cost solution. The length of the solutions are the same regardless of the heuristics used by GBFS. Algorithm A sometimes have different length of the solution depending on the heuristics. Because GBFS with all 4 heuristics have the same length of solutions, all the 4 heuristics in GBFS are not admissible. H1 and h2 in algorithm A are admissible, h3 and h4 are not admissible. Both GBFS and A are faster than UCS, so informed search are always faster. In most cases informed algorithms are faster than uninformed, but sometimes A algorithm with h1 or h2 are slower than UCS. We find a interesting point is although the length of the search path and the length of solution are same, some heuristic have different execution time.