# Simulation Results (3 cases)

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|  | Test case 1  A close up of a map  Description automatically generated | Test case 2  A close up of a map  Description automatically generated | Test case 3  A picture containing text  Description automatically generated |
| Initial solution cost | 5.18 | 5.77 | 5.88 |
| Iterations to find an initial solution | 27 | 80 | 198 |
| New states | 6464 | 5803 | 6278 |
| Rewire options | 3161426 | 2793363 | 3057397 |
| Final solution cost | 4.631 | 5.161 | 4.979 |

# Analysis of RRT\*

RRT\* is an improved version of RRT. The key difference of it to RRT is the rewiring function. The rewiring function updates the new node’s father node if necessary. RRT\* is both probabilistically complete and probabilistically optimal. However, after finding an initial solution, it will still sample in the whole space. An enhanced version of it is informed RRT\*.