# Question 1

* Part (a) is a value, i.e., a real number. Part (b) is a path, i.e., sequence of vertices or squares in this problem.
* This is like the difference between the shortest distance from vertex to in a graph, and a path whose sum of edge-weights is that shortest distance.

1. **Least Total Cost Recurrence**
2. **Least Cost Path Recurrence**

# Question 2

1. **Optimal Substructure**
2. **Feasibility**
3. **Fewest Stops Recurrence**
4. **Pseudocode**

# Question 3

* To be clear, we do not need resources such as ways to measure time and distance.

1. **Lower and Upper Bounds on Alignment Length**
2. **Worst-Case Number of Possible Alignments**