

Problem Set #2

All problems are of equal value.

1. Unique Min-Cost Alignment. Kleinberg-Tardos Chapter 6, Problem #18.

The *gap cost* is the cost of an insertion or deletion. The *mismatch cost* is the cost $\alpha_{i,j}$ of substituting z_i for z_j . Note that $\alpha_{i,j} \neq \alpha_{j,i}$ in general.

2. Maintaining paths. Kleinberg-Tardos Chapter 6, Problem #14.

3. Counting shortest paths. Kleinberg-Tardos Chapter 6, Problem #22.

For full credit, your solution must also analyze the space complexity of the algorithm.