

Problem Set #0

Instructor: Anna Karlin

Due on **October 3, 2006** in class.

Reminder: If you haven't done so already, subscribe to CSE 521 email group ASAP by following the link from the course webpage <http://www.cs.washington.edu/521>.

Readings: Kleinberg and Tardos: Chapter 1. Quickly review chapters 2–3.

1. For each of the following topics, indicate your level of comfort on a scale of 1-5, where 1 means “I’ve never been exposed to this” and 5 means “I’m completely comfortable and knowledgeable about this material”.
 - basic graph traversal and algorithms, such as depth-first search and breadth-first search, connected components, finding an articulation point in an undirected graph, etc.

 - Dijkstra’s shortest path algorithm

 - Minimum spanning tree algorithms (Prim’s and Kruskal’s)

 - the technique of divide and conquer

 - dynamic programming

 - basics of maximum flow, such as max-flow=min-cut and augmenting path algorithms

 - linear programming (definition, simplex algorithm, duality theory)

 - NP-completeness

2. What book did you use in your undergraduate algorithms course?

3. What do you hope to get out of this class (other than fulfilling a quals requirement)? Are there any particular topics you'd like to see covered?