

# 02-711: Computational Molecular Biology and Genomics

## Quiz # 4

February 10, 2009

**Name:**

You have 15 minutes to complete the quiz. The quiz is closed book. You may use a calculator to do numerical computations. If there are any questions, clarifications, or errors, feel free to talk to the instructor or TA. Please make sure you write your name on the quiz.

### 1 Partial Digest Problem

You are given a partial digest (in a sorted order) of an unknown size fragment as shown below. Assume that the partial digest was impeccable where all possible combinations of fragments were obtained including the full length fragment, draw the number of restriction sites and the length between each site on the line provided below.

Fragment Length: {2, 4, 5, 7, 8, 12, 13, 15, 17, 19}

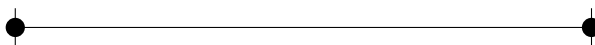


Figure 1: Draw the restriction sites and label the length between the site on the line

### 2 C1P

Is the following matrix C1P? If so, what is a permutation that satisfy C1P?

	$c_1$	$c_2$	$c_3$	$c_4$	$c_5$
$l_1$	0	1	0	1	1
$l_2$	1	1	0	0	1
$l_3$	0	0	1	1	0