

Kyle
Verdeyen

Computational Genomics Data Analysis

Problem Set 4, Exercise 1

1. Only 2 and 3 are unambiguous.

2. Ind. 2: 00010, 00011

Ind. 3: 01000

3. Ind. 1: 10110 (novel) 11110 (novel)

Ind. 4: 01010 (novel) 11110 (known from ind1)

Ind. 5: 00010 (known) 01010 (known)

Work shown below:

The image shows a handwritten table on a spiral notebook. The table has 6 columns. The first column contains binary strings (00, 01, 10, 11). The next five columns contain binary strings (11, 10, 11, 11, 10). To the right of the table, there are handwritten notes and calculations. The notes include '1, 1: 2, 3', '1, 2: 2: 0, 0, 1, 1', '3: 0, 1, 0, 0, 0', and 'Known: 00010, 00011, 01000'. The table is labeled 'Ex 1' in the top left corner. The bottom of the table has a row of binary strings: 00, 01, 10, 11. The right side of the table has a column of binary strings: 11, 10, 11, 11, 10. The bottom of the table has a row of binary strings: 00, 01, 10, 11. The right side of the table has a column of binary strings: 11, 10, 11, 11, 10.

	1	11	10	11	11	10
1	11	10	11	11	10	
2	00	00	00	11	10	
3	00	11	00	00	00	
4	10	11	10	11	00	
5	00	01	00	01	00	
00	1, 3: 1, 1	1, 1, 1, 1	1, 1, 1, 1	1, 1, 1, 1	1, 1, 1, 1	1, 1, 1, 1
01	4, 1, 1, 1, 1	1, 1, 1, 1, 1	1, 1, 1, 1, 1	1, 1, 1, 1, 1	1, 1, 1, 1, 1	1, 1, 1, 1, 1
10	5, 0, 1, 0, 1, 0	0, 0, 0, 0, 0, 0	0, 0, 0, 0, 0, 0	0, 0, 0, 0, 0, 0	0, 0, 0, 0, 0, 0	0, 0, 0, 0, 0, 0
11						

Handwritten notes and calculations:

- 1, 1: 2, 3
- 1, 2: 2: 0, 0, 1, 1
- 3: 0, 1, 0, 0, 0
- Known: 00010, 00011, 01000
- Nov: 10110, 11110, 11111
- Nov: 01010, 01110, 11010, 11110
- Known: 00000, 00010, 01000, 01010