BIOLOGY 4DD3 Tutorial 4 Exercises

1. Consider the selection regime that may be represented by the algebraic scheme

A_1A_1	A_1A_2	A_2A_2
1	1 + s	1 + t

Suppose that s = 0.05 and t = 0.025.
Please predict how the allele frequency for allele A_2 will change over time.

2. Please align the sequences ATCCGC and ATGCG using dynamic programming.

3. Consider the tree for inferring nucleotide substitution patterns in pseudogene sequences. Please infer whether a substitution transpired in the lineage leading to sequence s_3 for Species A.