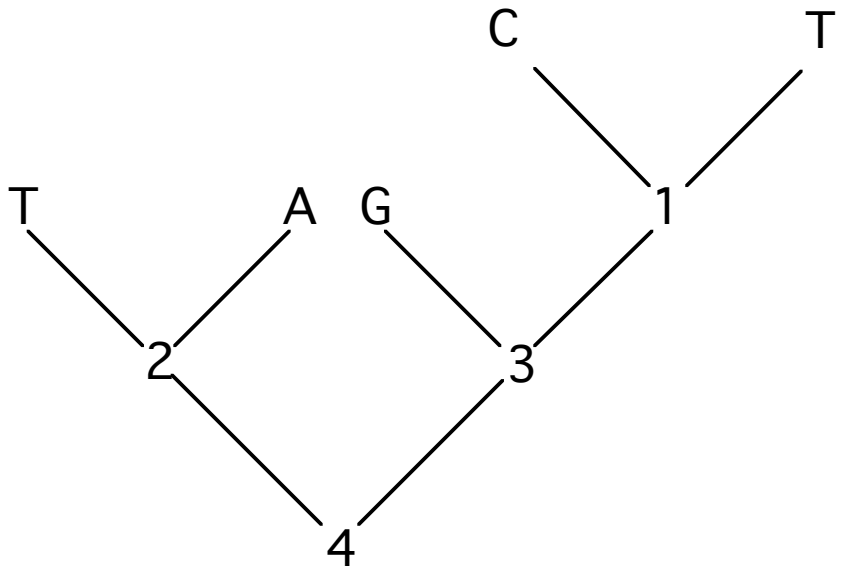
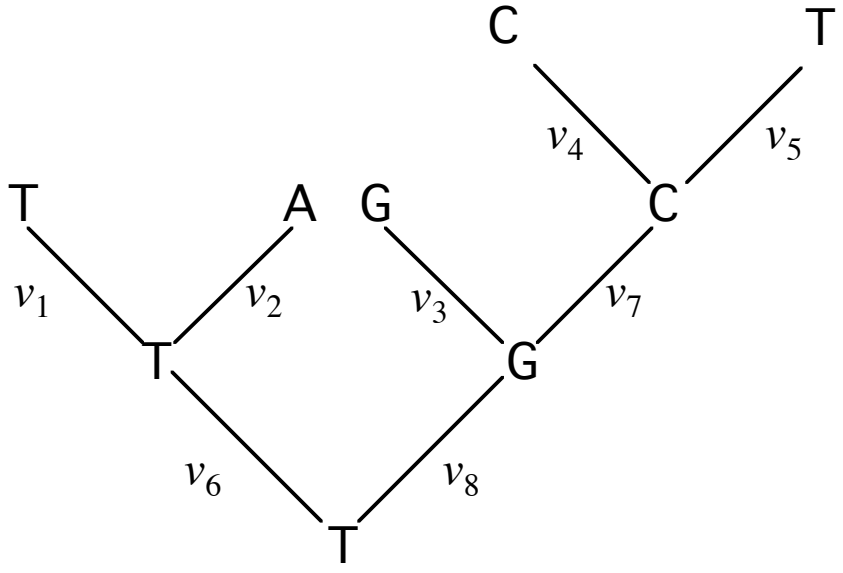
Optimality Criteria Problem Set

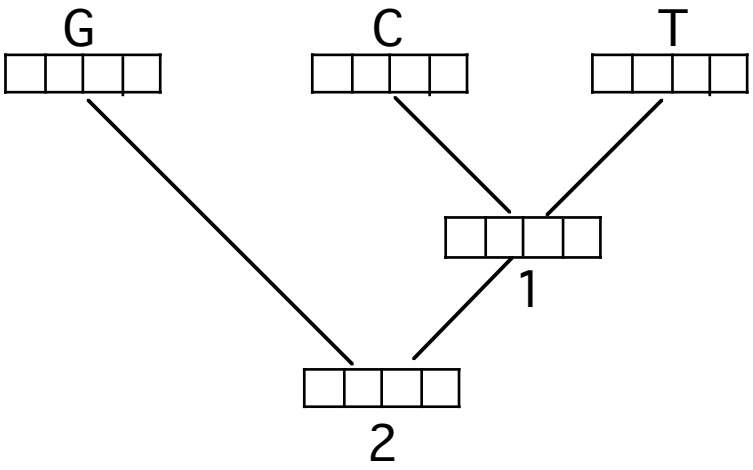
1) Use the Fitch algorithm to find the minimum cost of the tree shown below:



2) Write the likelihood function for the tree and character reconstruction shown below.



3) Suppose you were interested in optimizing the tree below using a 2:1 weighting of transversions over transitions.

a) Construct the step matrix.

b) Show the optimization on the tree.