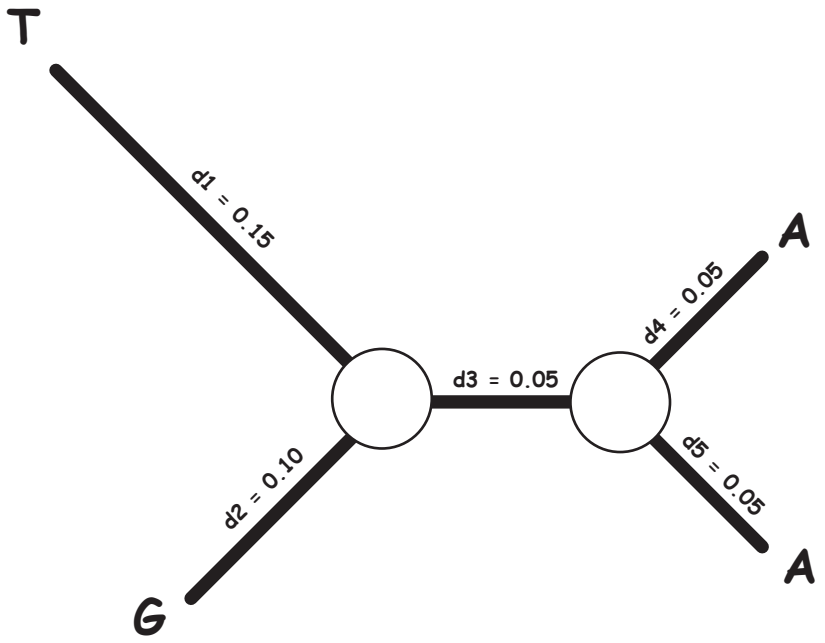

step 1: fill in circles with base combination assigned to you

step 2: for each of the 5 branches, determine whether the transition
□ □ is a "transition", a "transversion", or a "no change"

step 3: compute the transition probability for each of the 5 branches
□ □ using the appropriate formula (the formula used depends
□ □ on kappa, branch length, and the type of transition

step 4: compute the likelihood of this site conditional on your particular
□ □ combination of ancestral states (compute the product of the
□ □ 6 numbers below)

□ freq of base at root□ □ = 0.25
□ Pr(change on branch 1)□ □ =
□ Pr(change on branch 2)□ □ =
□ Pr(change on branch 3)□ □ =
□ Pr(change on branch 4)□ □ =
□ Pr(change on branch 5)□ □ =

□ product of above 6 values□ =
□ ln(product)□ □ □ □ =

step 5: show me the natural logarithm of your conditional likelihood and
□ □ I will check to see if it is correct