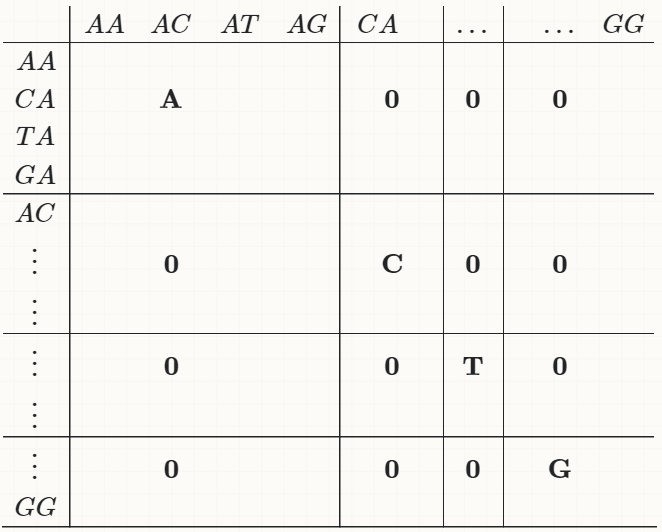


A1:If State={A,C,T,G,…} , we can redesign

To prove the

I show the (just {A,C,T,G})



Eg:

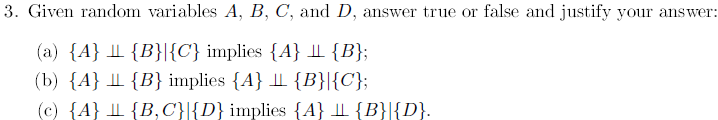


A2:At Bayesian Network , we can let P() be factorized into . And draw a factorization as a graph.

(if the node don’t have the s. We can use the notation )

I assume the graph of Bayesian Network is a Directed **cyclic** Graph , and then I got a contradiction because the factorization can’t be finished…(every node has a parent but I just have N node.)

So the graph of Bayesian Network is a Directed A**cyclic** Graph.



A3(a): false , because we just need to consider the situations

1.tail to tail -> P(A,B)=

2.head to tail -> P(A,B)=

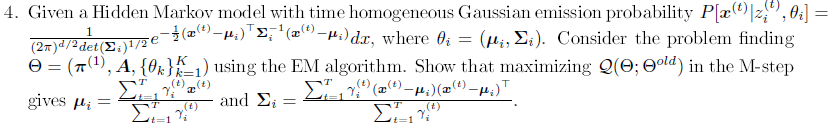
A3(b): false , because we just need to consider the situation

1. head to head -> P(A,B|C)=

A3(c): yes , because we just need to consider the situations

1. tail to tail -> P(A,B|D)=

2. head to tail ->P(A,B|D)=



A4: let , and

To Max =

=

= -