

Use the Bayesian network above as an example:

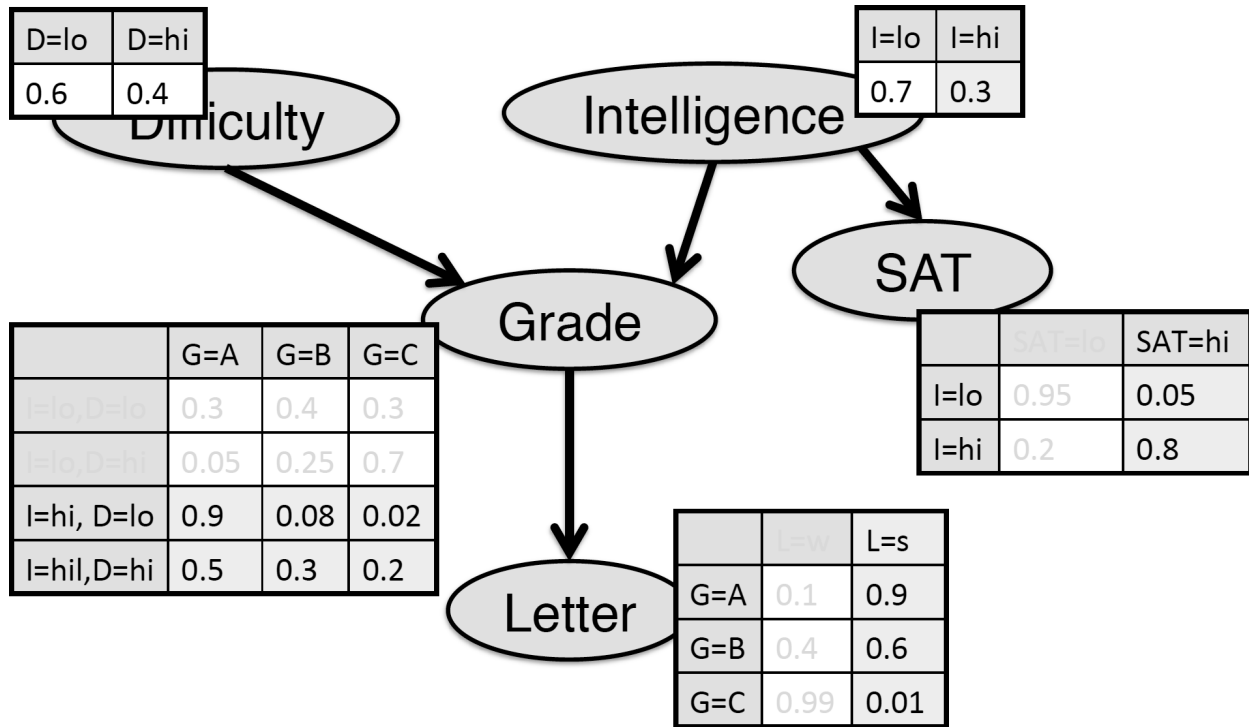
What is the probability that:

- the student is intelligent if he got a good letter and a high SAT test?
- the student got a bad letter if his grade was C?
- the student gets a letter with the test being highly difficult?
- the student gets a grade of B given that he had a low score on SAT?

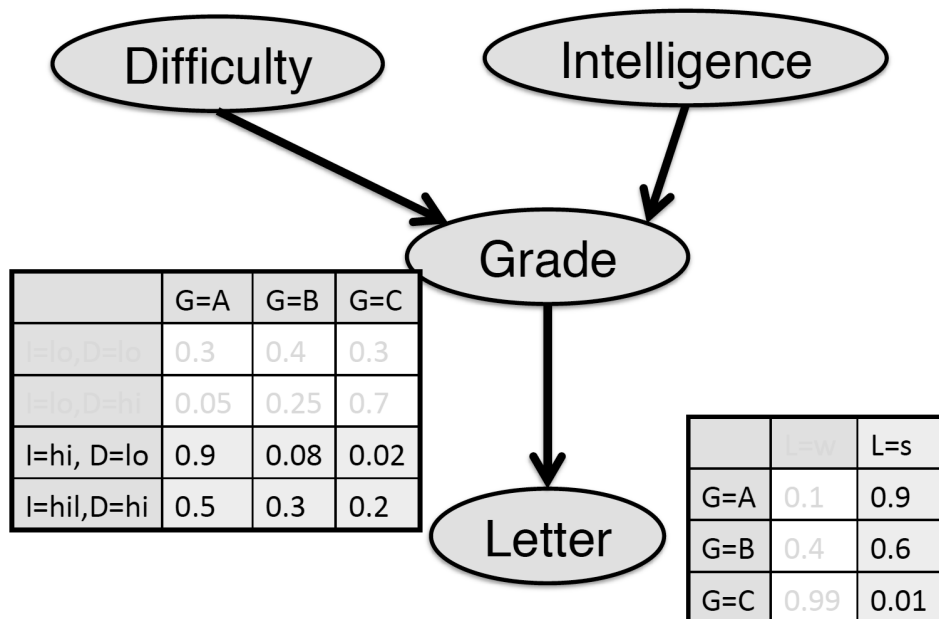
Let's work through a) as an example, with b-d left as exercised.

What is the probability that the student is intelligent if he got a good/strong letter and a high SAT test?

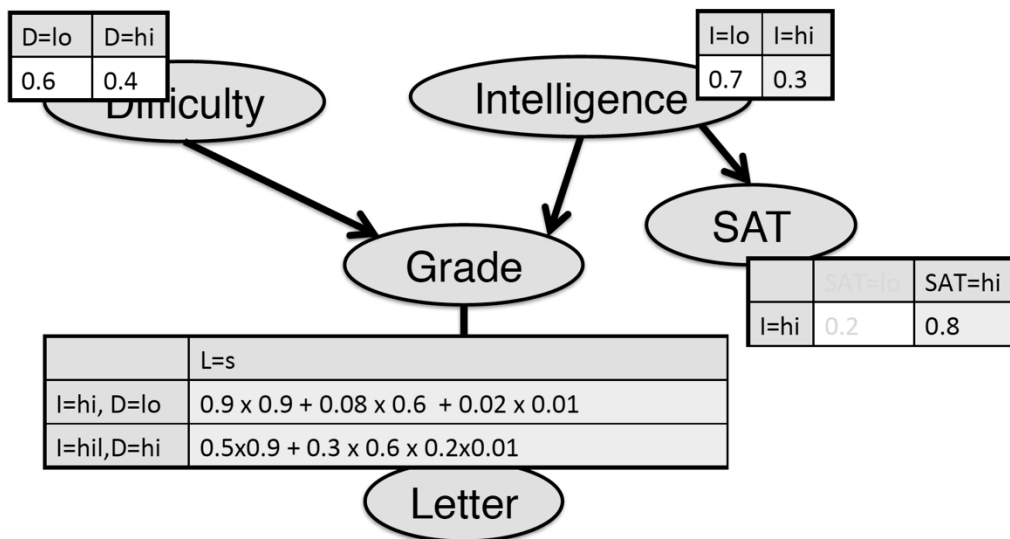
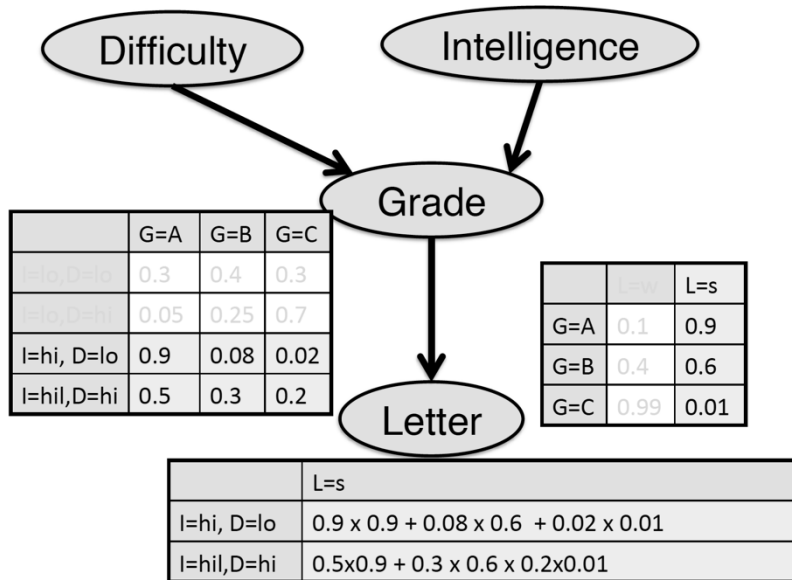
**Step 1:** figure out which 'variables' should be activated in the Bayesian network above



**Step 2:** Use the conditional independence assumption to get rid of part of the network



**Step 3:** now we are ready to compute



# STUDY GUIDE: BAYESIAN NETWORKS

