

COMP 572 Bioinformatics: Network Analysis
 Homework Assignment #1
 Fall 2009
 Due Date: September 22, 2009 (in class).

1. Given in Figure 1 are the wiring diagram of a gene regulatory network and complete state transition table defining the network. Show, step by step, the result of running the REVEAL algorithm to learn the Boolean network.

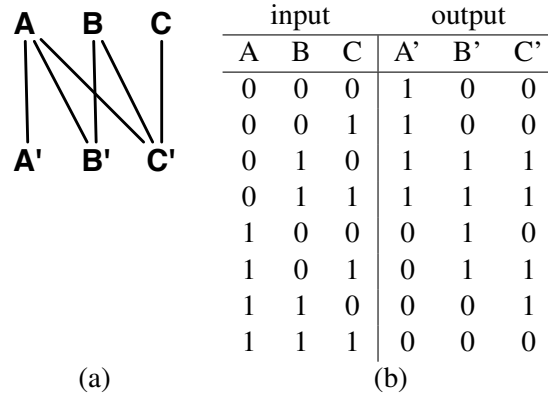


Figure 1: (a) The wiring diagram of a simple gene regulatory network. (b) The complete state transition table defining the network.

2. Describe a (qualitative) Petri net for the following system of reactions, and give an initial marking that makes the system live. Further, determine and interpret the minimal P- and T-invariants.

