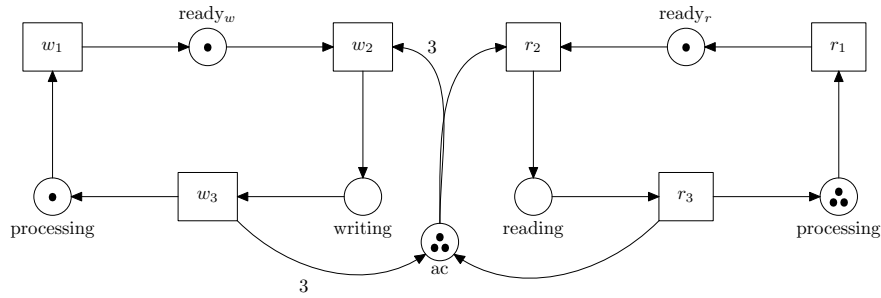
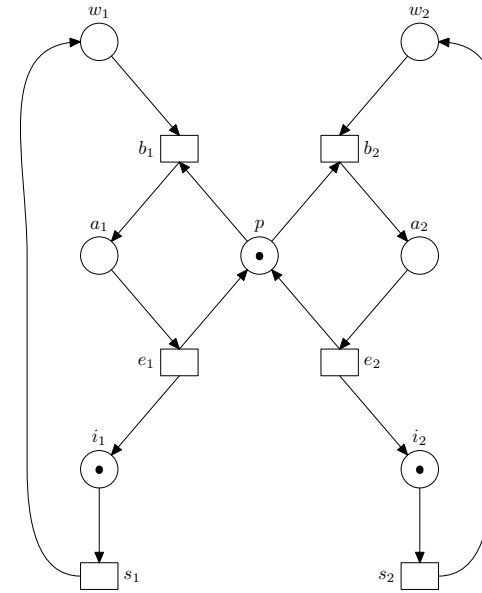
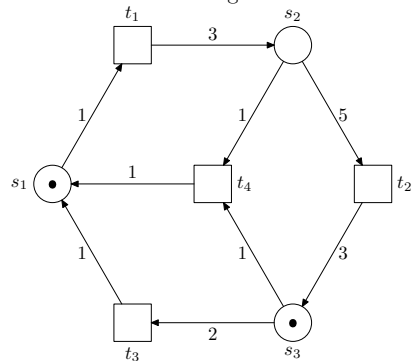


- 6.1 a) Compute some S-invariants of the net below:
 b) Is this net covered by S-invariants?



- 6.2 Show that the following net is not covered by S-invariants.



- 3 Show that the net shown in book's exercise 6.3 has two linearly independent positive T-invariants which are not realizable.

- 4 A P/T net is presented in the following page. The net consists two entities, 1 and 2, using a shared resource. The place p controls the use of the resource. The system could, for example, model a situation where two processes need access to a shared file. Places a_i model the situation where one of the processes is accessing the file. Places i_i model the situation where the processes are doing something that does not need access to the file. Places w_i model the situation where a process is waiting for the access to the file.

Show with invariants that there is mutual exclusion between processes, that is, the places a_1 and a_2 never have a token at the same time. Calculate also all invariants of the system.