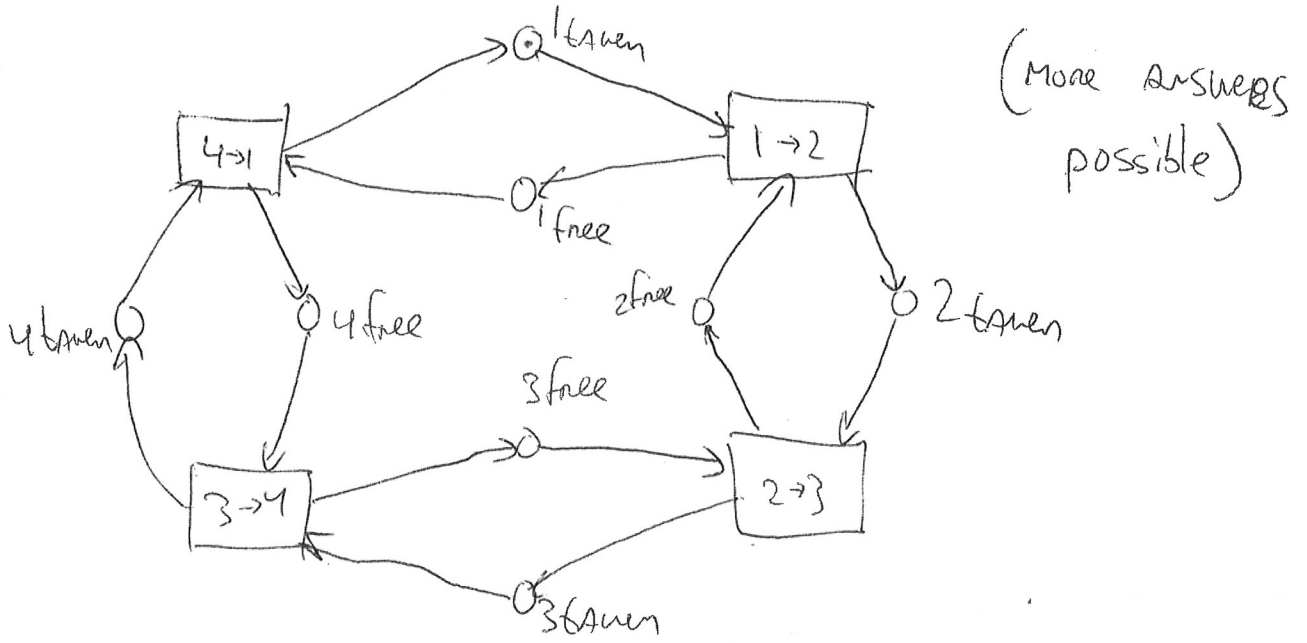


1.



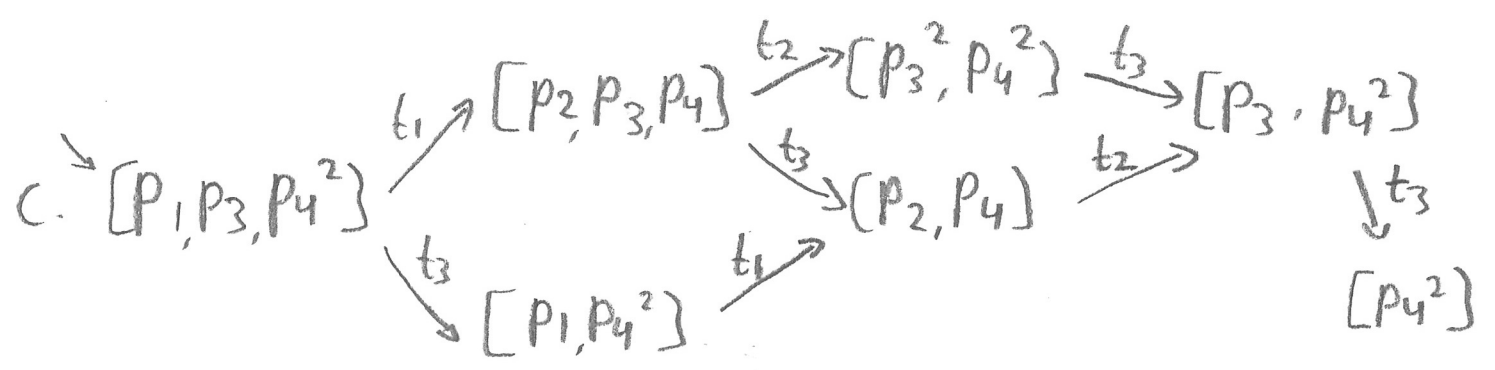
2 A $N = (P, T, F)$

$P = \{P_1, P_2, P_3, P_4\}$

$T = \{t_1, t_2, t_3\}$

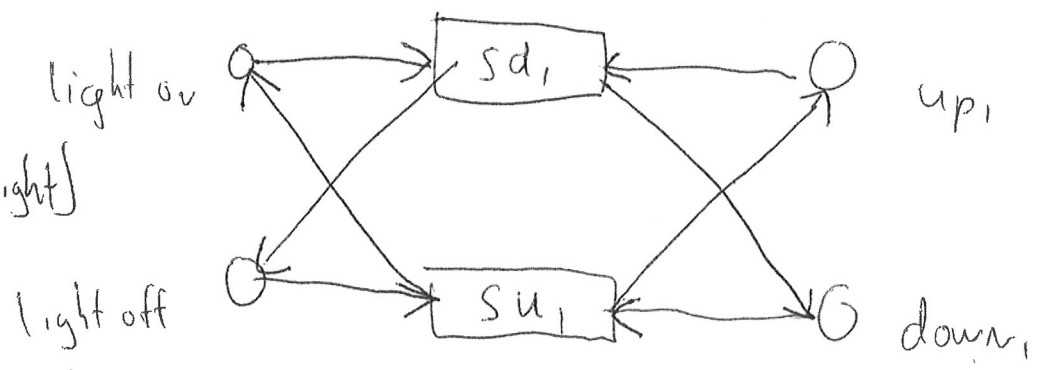
$F = \{(P_1, t_1), (t_1, P_2), (P_2, t_2), (t_2, P_3), (t_2, P_4), (P_3, t_3), (t_3, P_4), (P_4, t_3), (P_4, t_1)\}$

B $[P_1, P_3, P_4^2]$

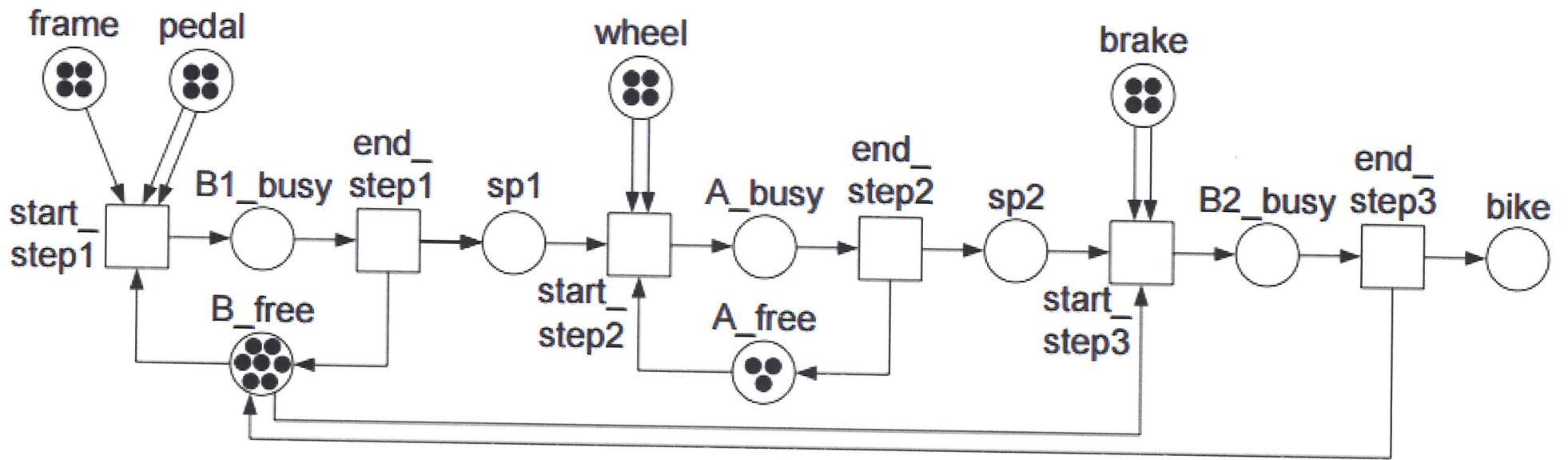


3.

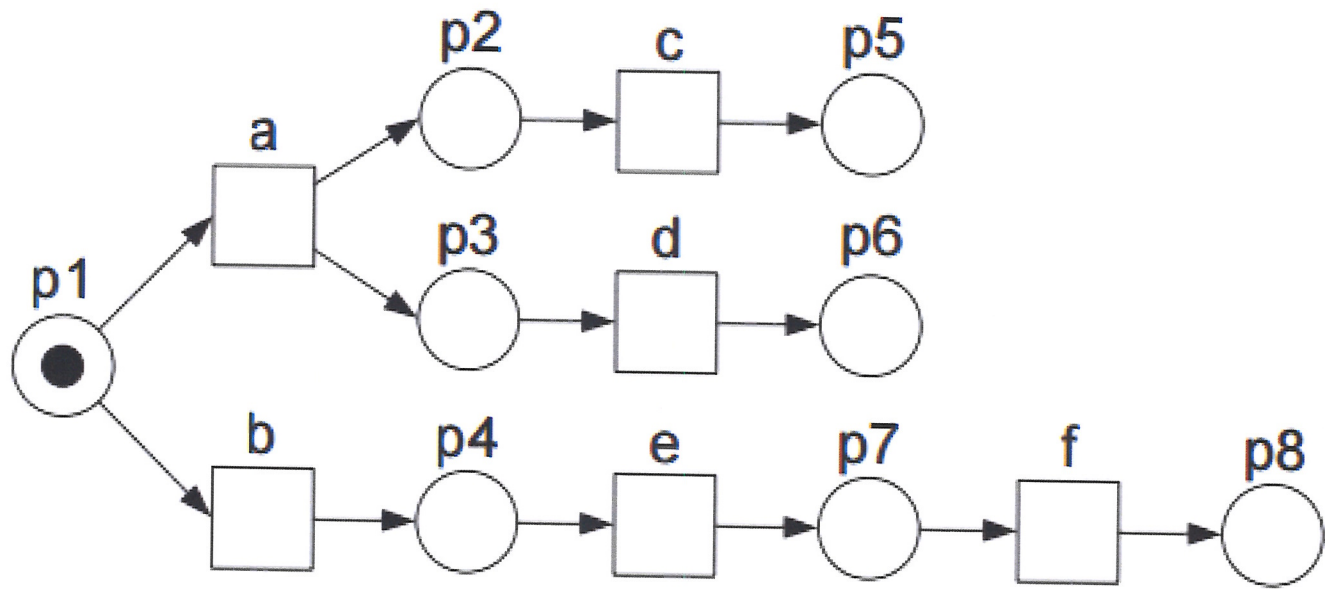
(For one light)



4. (more answers possible)



5. (More answers possible)



6 A $F: (P \times T) \cup (T \times P) \rightarrow \mathbb{N}^+$

OR

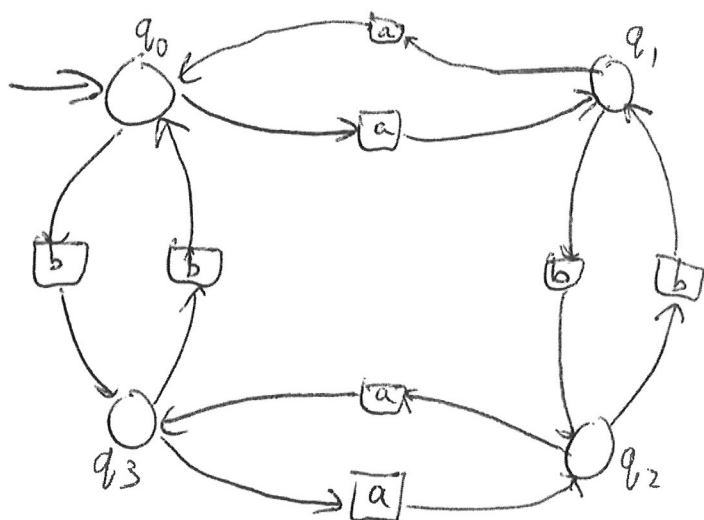
$F \subseteq (P \times T) \cup (T \times P)$ where F is a multiset

B Many answers are ok.

At least multiple arcs for the cross bars should be used. Don't forget the correct initial marking with sufficient tokens.

7 A Even number of a's and b's

B



C

FA	N
Q	P
$S + \Sigma$	T
q_0	$[q_0]$
A	(final marking)

$$FA = (Q, \Sigma, q_0, A, S)$$