Exercise 25

Given CEN $N$ as shown above.

a) Specify $N$ formally as 4-tupel $N = (C, I, E, G)$ including all of its components.

b) How many different markings are possible in $N$ theoretically?

c) For each possible marking $m$ of $N$, determine the set of all events which can fire in $m$.

d) Given marking $\{r,s\}$, what is the marking obtained when event $b$ fires?

e) Given marking $\{t\}$, what is the marking obtained when event $c$ fires?

Exercise 26

Let $L$ be the LTS corresponding to the CEN $N$ from Exercise 24. Draw $L$. Can a deadlock be reached on $N$? Justify your answer!
Exercise 27

Given PTN $N$ as shown on the right. Justify your answers to the following questions.

a) Specify $N$ formally as 5-tuple $N = (P, I, T, G, C)$ including all of its components.

b) How many different markings are possible in $N$ theoretically?

c) Is there a marking $M$ for $N$ such that all transitions are enabled?

Exercise 28

Let $N = (P, I, T, G, C)$ be a PTN specified by the following sets:

$P = \{r, s\}$, $I = \{(r, 1), (s, 2)\}$, $T = \{a, b, c\}$,

$G = \{(r, a), (r, b), (a, s), (b, s), (s, c), (c, r)\}$,

$C = \{(r, 3), (s, 2)\} \cup \{(r, a, 1), (r, b, 1), (a, s, 2), (b, s, 1), (s, c, 2), (c, r, 1)\}$

- Draw $N$. How many different markings are possible on $N$ theoretically?

- Draw the LTS corresponding to $N$. 