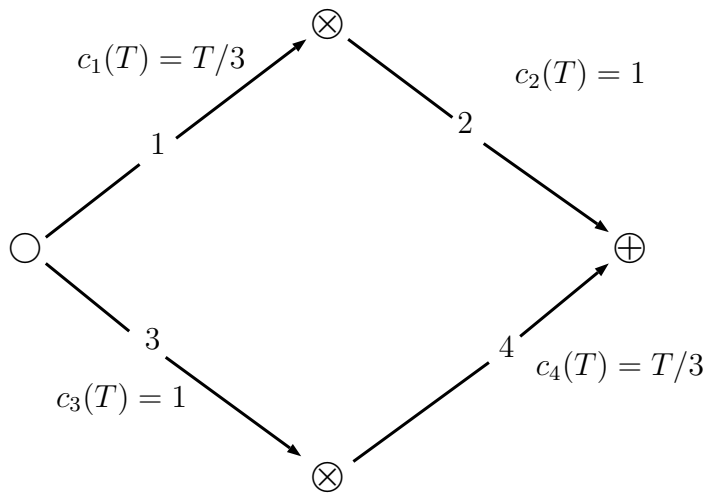


Game Theory

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Exercise set 4

Exercise 1 Consider the following traffic network with two commuters.



- Identify for each commuter the strategies.
- Represent this game as a bimatrix game.
- Determine the Nash equilibria.

Short solutions.

Solution 1 a. Strategy 1 is route choice $\{1, 2\}$. strategy 2 is route choice $\{3, 4\}$

b. $\begin{pmatrix} 5/3; 5/3 & 4/3; 4/3 \\ 4/3; 4/3 & 5/3; 5/3 \end{pmatrix}$.

c. This game has two Nash equilibria: $(1, 2)$ and $(2, 1)$. In each Nash equilibrium each player has costs $4/3$.