

HW 9 Due 3 nov 2017 (BONUS)

1. We know that NPDA can sum: $L = \{a^i b^j c^{i+j} : i, j \in \mathbb{N}\}$ is a CFL. Petri nets can perform the same operation: show a T-type Petri net for the same language. 100 (easy)
2. We know that NPDA cannot multiply: $\{a^r b^s c^t : r \cdot s = t\}$ is not a CFL. Indeed they cannot even perform a *weak* type of multiplication: $L = \{a^r b^s c^t : t \leq r \cdot s\}$ is not a CFL either. However, Petri nets can perform a weak multiplication: show an unrestricted T-type Petri net for L . 100 (difficult!)