

Problem of the Week – 2

Minimizing number of states and stack alphabet size

Consider the collection of all context-free languages over the alphabet $\{0, 1\}$.

- Determine the smallest integer s , if it exists, such that for every context-free language L there exists a PDA that accepts L and has alphabet size at most s ?
- Determine the smallest integer s , if it exists, such that for every context-free language L there exists a PDA that accepts L and has at most s states?

Justify your answers.