Problems of the Week – 7 & 8

NL-Completeness

Prove the following problem is NL-complete.

Given a regular expression $r$, is the language of $r$ empty?

PSPACE-Completeness

Prove that the following problem is PSPACE-complete.

Given a Turing Machine $M$ and input $w$, determine whether $M$ accepts $w$ without ever moving its head beyond the first $|w|$ symbols of the tape.