

CS 305 Tutorial 6

1) Prove or disprove the following is regular or not.
 $L = \{ u w w^R v : u, v, w \in \{a, b\}^+ \}$.

2) Prove or disprove the following is regular or not.
 $L = \{ a^{i^2} \mid i \geq 1 \}$.

3) Show that $L = \{ a^n : n \text{ is a perfect square} \}$ is not regular.

4) Prove that $L = \{ ww : w \in \{a, b\}^* \}$ is not regular.

5) Prove that $L = \{ w : n_a(w) \neq n_b(w) \}$ is not regular.

6) Are regular languages closed under infinite intersection operation?

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