

You have to use the designated spaces for your answers. No extra pages will be provided.

Problem 1: Converting Regular Expressions to NFAs (6 points)

Convert the following regular expression over $\Sigma = \{a, b, c\}$ into an equivalent NFA.

$$aa^* \cup (a \cup b^* (a \cup c)^*)^*$$

Problem 2: Regular Expressions (4 points)

Give a regular expression for the following language over $\Sigma = \{0, 1\}$.

$$L = \{w : w \text{ contains an odd number of 1s and does not end with a 1}\}$$