

Last Name = \_\_\_\_\_, First Name = \_\_\_\_\_

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1. (1 pt) Construct an NFA for bitstrings that either contain 1011 or end with 001.

2. (1 pt) Given  $\Sigma = \{a\}$ , construct an DFA for each of the following:

$L_1$  = strings whose length is **not** a multiple of 3     $L_2$  = strings of **odd** length

For each of the next 3 problems, you can do either DFA or NFA, whichever is easier for you.

3. (1 pt)  $L_1 \cap L_2$

4. (1 pt)  $L_1 \cup L_2$

5. (1 pt)  $L_1 \circ L_2$