Problem 1
Let \( C_n = \{ x \mid x \text{ is a binary number that is a multiple of } n \} \)
Show that \( C_n \) is regular for any \( n \).

Problem 2
The following language is the intersection of two simpler languages. Construct FSAs for the simpler languages and then use these FSAs to construct an FSA for their intersection.
\[
L = \{ w \mid w \text{ has an odd number of 0’s and at least two 1’s } \}
\]