1. For each of the following Transition Graphs below, convert them to Regular Expressions using the Bypass Algorithm

   (a) $q_0 \xrightarrow{a,b} baa \xrightarrow{a,b} q_1$

   (b) $q_0 \xrightarrow{a} q_1 \xrightarrow{baa} q_2 \xrightarrow{abb} q_3 \xrightarrow{a,b} q_4$

2. Given $FA_1$ and $FA_2$ below, construct Finite Automaton for:
   (a) $FA_1 + FA_2$
   (b) $FA_1 FA_2$
   (c) $FA_2^*$
3. For each of the following NFAs below, convert them to Finite Automaton

(a) 

(b) 

4. For the language accepted by the following machine, find a different FA with four states. Find an NFA that accepts the same language and has only seven edges (where edges with two labels are counted twice).