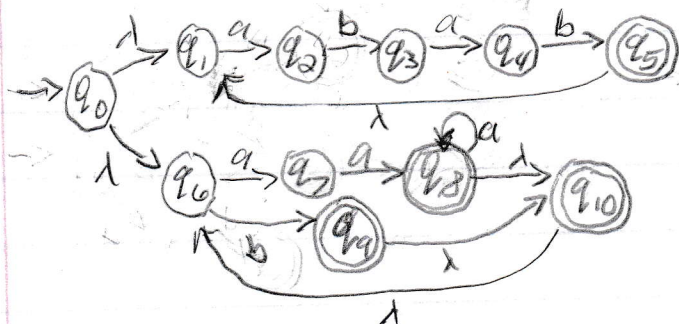


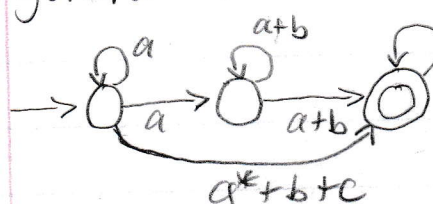
6. Find NFA's that accept the following languages:

c) $L((abab)^* + (aaa^* + b)^*)$

* NFA
NOT
DFA



11. What language is accepted by the following generalized transition graph?



$$L((r_1 + r_2) + r_3) = (L(r_1) + L(r_2)) + L(r_3)$$

$$r = \underbrace{[a^*a(a+b)^*(a+b)]}_{r_1} + \underbrace{[a^*a(a+b)^*(a+b)(a+b^*)^*]}_{r_2} + \underbrace{(a^*+b+c)}_{r_3}$$

12. Find regular expressions for the languages accepted by the following automata.



15. Find a regular expression for the following languages on $\{a, b\}$:

a) $L = \{w : n_a(w) \text{ and } n_b(w) \text{ are both odd}\}$

$$r = (aa)^*(a+b) + (bb)^*(a+b)$$

* w can be either a or b . n_a = any # of a 's same with n_b but with b 's instead
ex) $\{a \text{ or } aab \text{ or } aaaaab \text{ or } bbbba \text{ or } b \dots\}$ * any # of $\{a, b\}$ and ends in a or b and odd