

# Review 8

## Automata & Theory of Computation

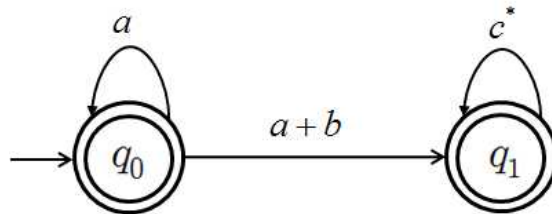
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Student ID:

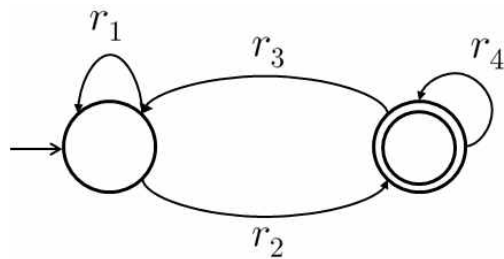
Name:

1. Find a regular expression for the following generalized transition graph.

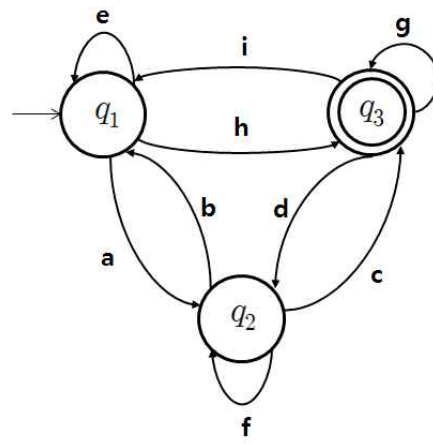
(1)



(2)



2. Remove  $q_2$  from the following complete generalized transition graph.



3. Find GTGs for the language

$$L = \{ w \in \{a, b\}^* : n_a(w) \text{ is even and } n_b(w) \text{ is odd} \}.$$

(1) 4-state GTG

(2) 3-state GTG

(3) 2-state GTG