Quiz 08 - Closure of Regular Operations

Instructions:

- **Your submissions must be submitted in the Quiz08 directory of your Quizzes directory in your GitHub repository.**
- **Cheating of any kind is prohibited and will not be tolerated.**
- **Violating and/or failing to follow any of the rules will result in an automatic zero (0) for the lab.**

TO ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTOOD THE INSTRUCTIONS ABOVE, AT THE BEGINNING OF YOUR SUBMISSION(S), ADD A COMMENT THAT CONSISTS OF YOUR NAME AND THE DATE

Grading

Question	Maximum Points	Points Earned
1	0.1	
1	0.1	
1	0.1	
1	0.1	
1	0.1	
Total	0.5	

Given that the languages L_1 and L_2 are recognized by the NFAs $M_1(Q_1, \Sigma_1, \delta_1, q_1, F_1)$ and $M_2(Q_2, \Sigma_2, \delta_2, q_2, F_2)$, respectively, answer the following questions

Question 1: In the construction of an NFA that recognizes $L_1 \cup L_2$, what is its set of states, Q?

Question 2: In the construction of an NFA that recognizes $L_1 \circ L_2$, what is its set of accept states, F?

Question 3: How does the construction of an NFA that recognizes L_1^* accept the empty string, ε?

Question 4: In the construction of an NFA that recognizes $L_1 \circ L_2$, from which state(s) and to which state does the transition function, δ, include the added ε-transition?

Question 5: Which regular operation requires the construction of an NFA with a new start state?