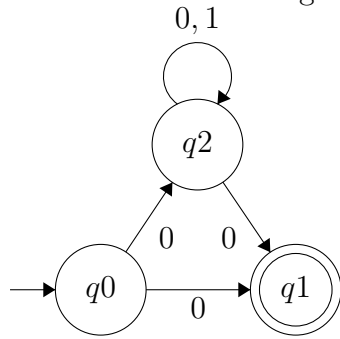On my honor, I have not given, nor received, nor witnessed any unauthorized assistance on this work.

Print name and sign: _____

Question:	1	2	Total
Points:	18	12	30
Score:			

1. Consider the following FSM:

(a) (1 point) What characteristics make this machine an NFA?

(b) (2 points) What is the maximum number of states that a DFA equivalent to the given NFA

could have? _____

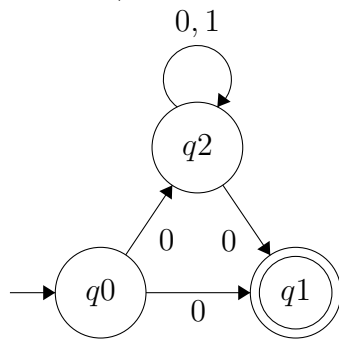(c) (3 points) State whether or not the NFA accepts the following strings.

   i. 00 _____

   ii. 1000 _____

   iii. 0001 _____

(d) (5 points) Give the formal definition for this NFA.

(e) (7 points) Convert this NFA to a DFA. Show your work (building the transition table) for partial credit. (*The NFA is reproduced here for easy reference.*)

2. (12 points) Construct an NFA for the following regular expression:

   $((ab)^*(ba)^*)|(aa)^*$