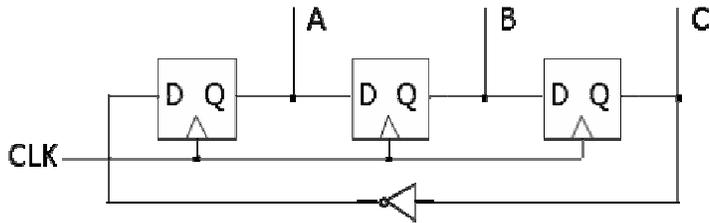


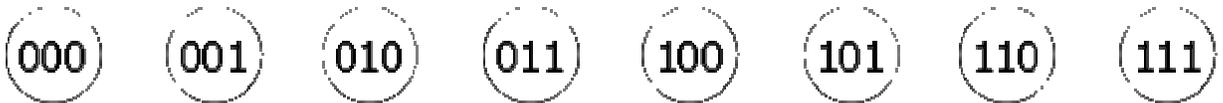
# CSE370 Quiz 3 (18 February)

Name \_\_\_\_\_

Below is a simple counter that sequences through 6 different bit patterns.



Extract the state diagram for this counter. Assume, for now, it starts in state 000. Make sure the state diagram is complete.



Is this a self-starting counter?

Circle one of:

YES

NO

If it is not self-starting then change the equations (  $\{A.d, B.d, C.d\} = \{\sim C.q, A.q, B.q\}$  ) to make the counter self-starting. Start by filling in the K-maps below from the state diagram and clearly show how to make different state transitions for the states not in the 6 state counter sequence so that the new equations will be as simple as possible.

