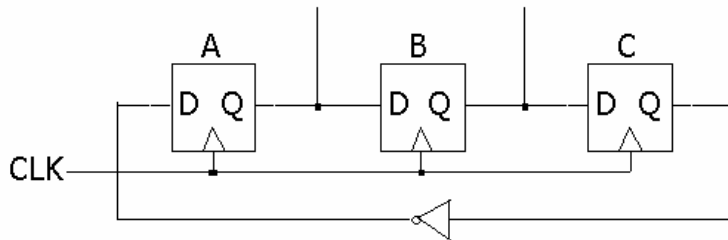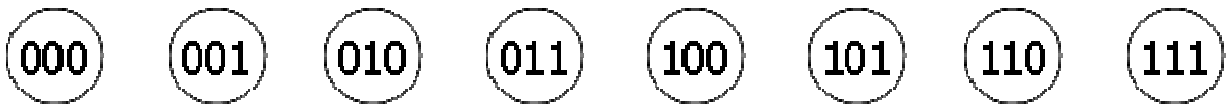# CSE370 Quiz 4 (17 November)   **Name** _____

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} = {~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.