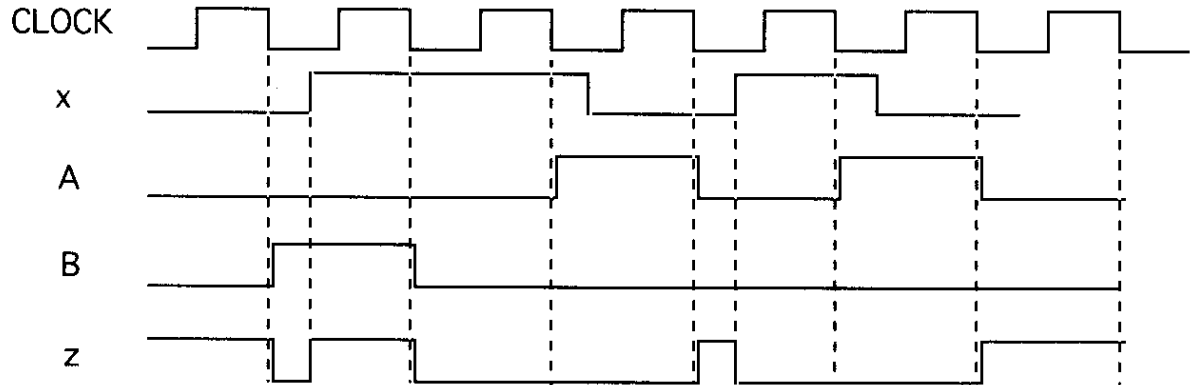


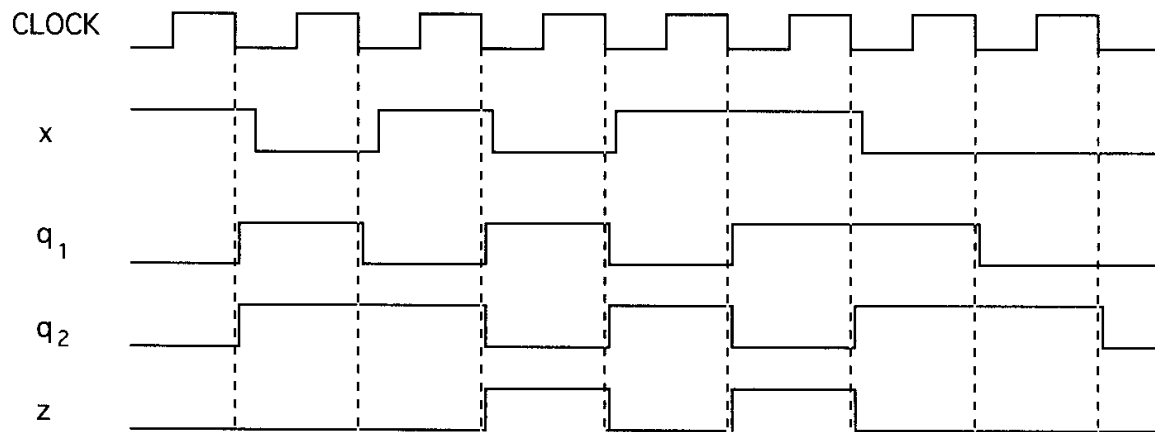
Homework 15 Solutions

7. a) $D_A = x B'$ $D_B = x' A'$ $z = x B + x' A' B'$



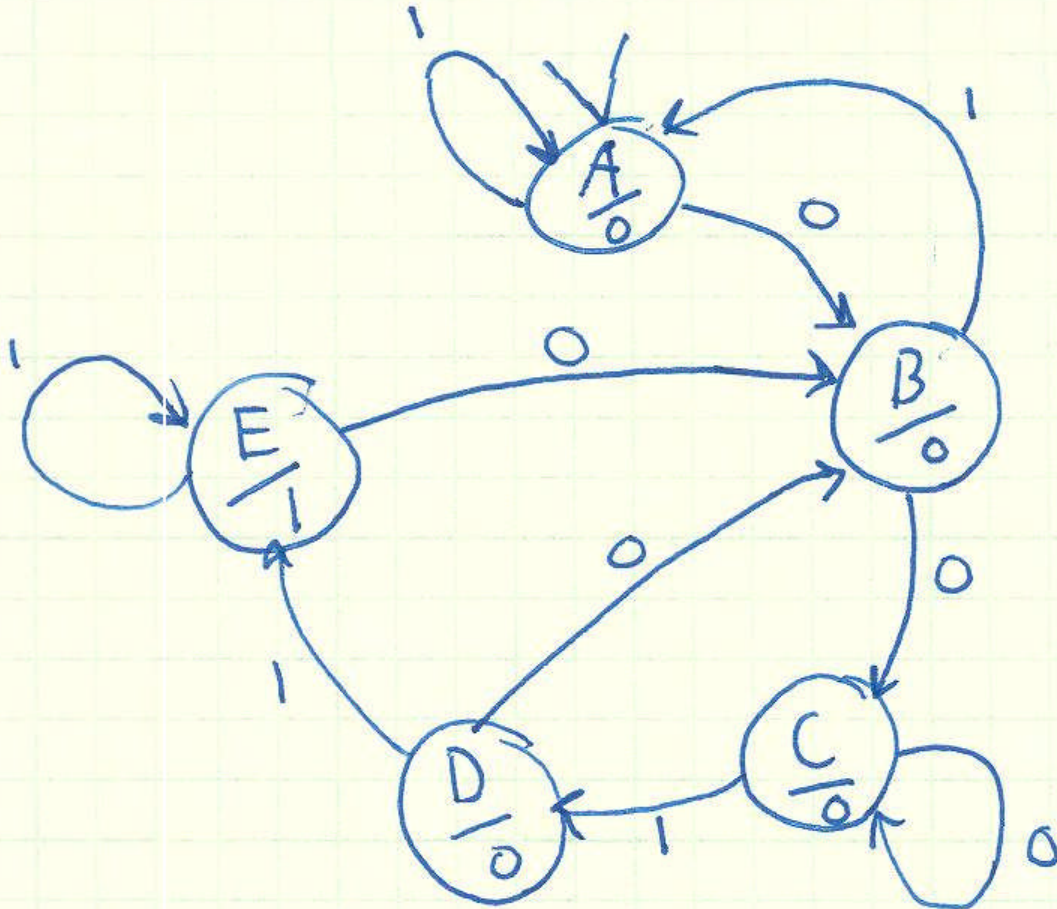
Note that there are two false outputs (glitches) because x changes after the clock edge.

b) $D_1 = x$ $J_2 = x + q_1$ $K_2 = q_1'$ $z = q_1 q_2'$



Note that at the last clock edge, J_2 is unknown, but $K_2 = 1$. Since q_2 was in state 1, it will go to 0 whether J_2 is 0 or 1.

16a



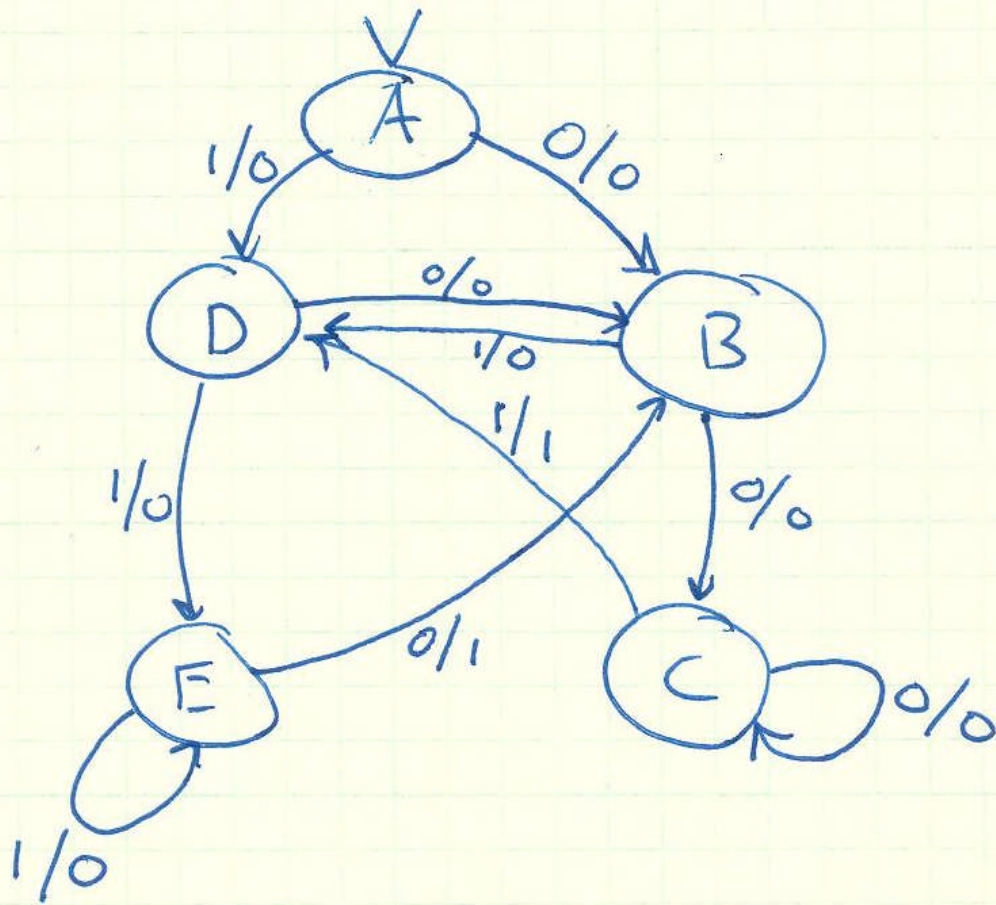
A \equiv START STATE

B \equiv ~~1~~ 1 CONS. 0s

C \equiv 2+ CONS. 0s

D \equiv 2+ CONS 0s FOLLOWED BY 1 CONS. 1

E \equiv 2+ CONS. 0s FOLLOWED BY 2+ CONS. 1s



A \equiv START STATE

B \equiv 1 cons. 0

C \equiv 2 cons. 0s

D \equiv 1 cons. 1

E \equiv 2 cons. 1s