

1) (a) L1

accepted strings

0111

01011

Not accepted strings

1000

0100

L2

accepted strings

$\epsilon$

1010

Not accepted strings

L3

accepted strings

10

1110

(b)

$$1^* 0 1^* 0 1^*$$

$\epsilon, 0, 00, 10, 1010, 101010$

(c)

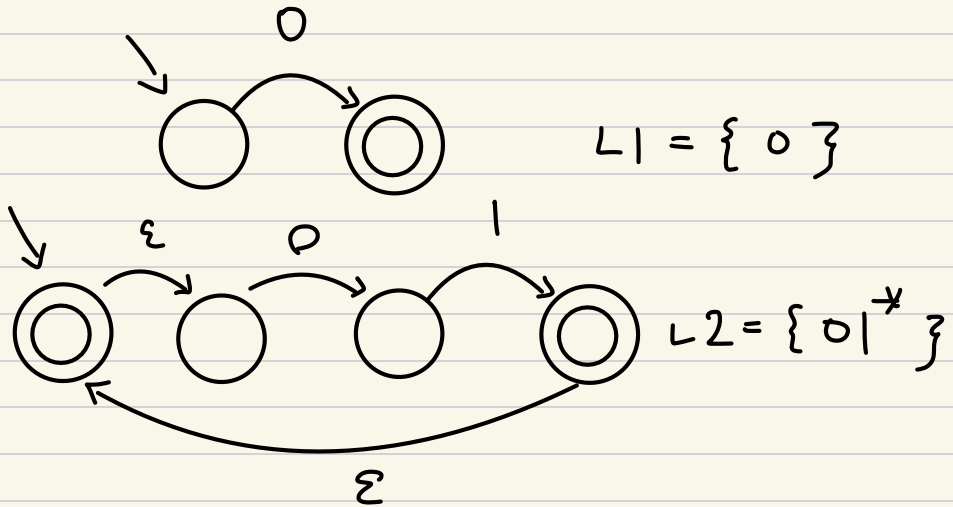
(1)

$$L = \{w \mid w \text{ contains even 1's}\}$$

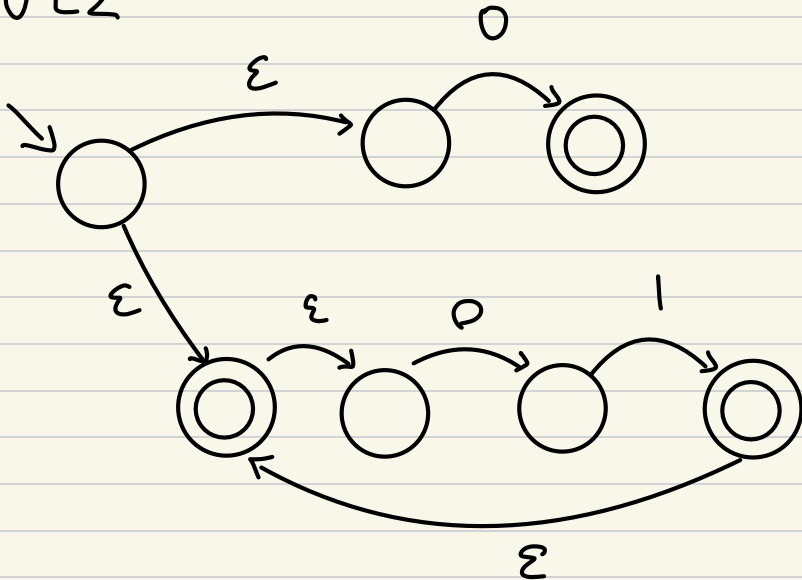
(2)

$$L = \{w \mid w \text{ doesn't end with } 00\}$$

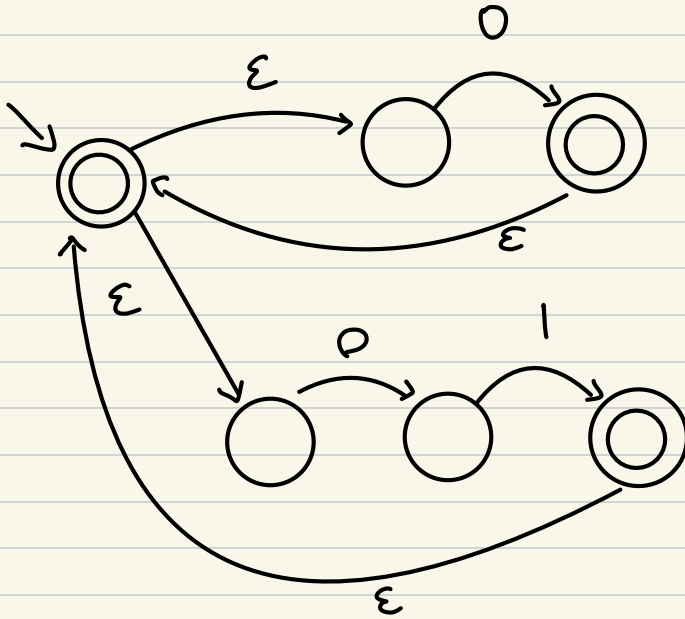
2)



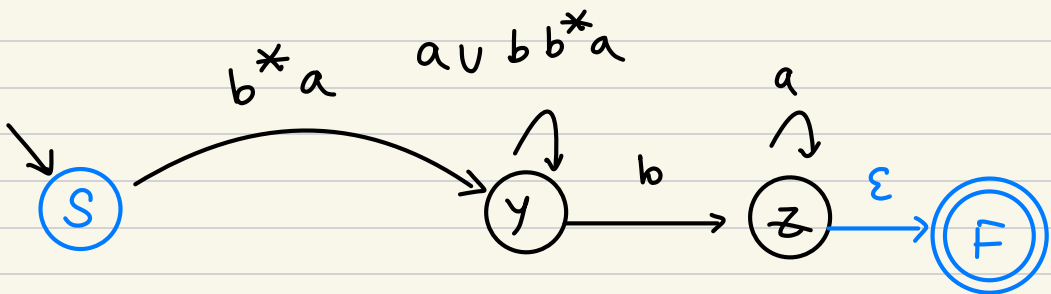
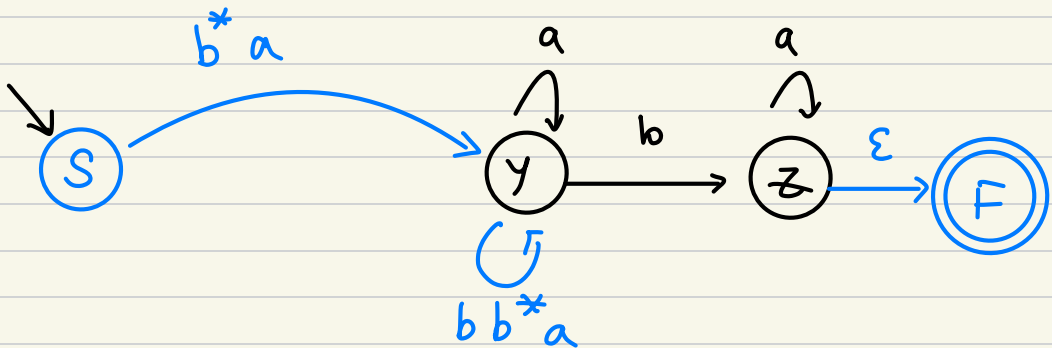
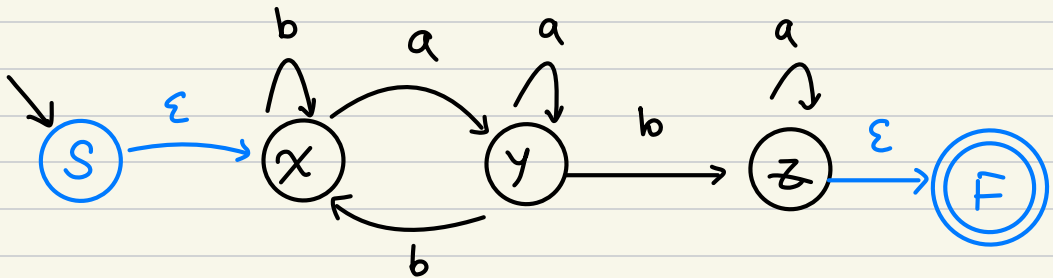
$L1 \cup L2$



$(L_1 \cup L_2)^*$



3) The automaton have to contain One Start state and one accepted state



$b^*a \cdot (a \vee b b^*a)^* \cdot b^*a$



$b^*a \cdot (a \vee b b^*a)^* \cdot b^*a^*$

