

### Exercise 3

question '3'

$$(a + ba^*)^* + b(a + (b + aba^*)^*)^* \text{ is equivalent to } \mathbb{E}$$

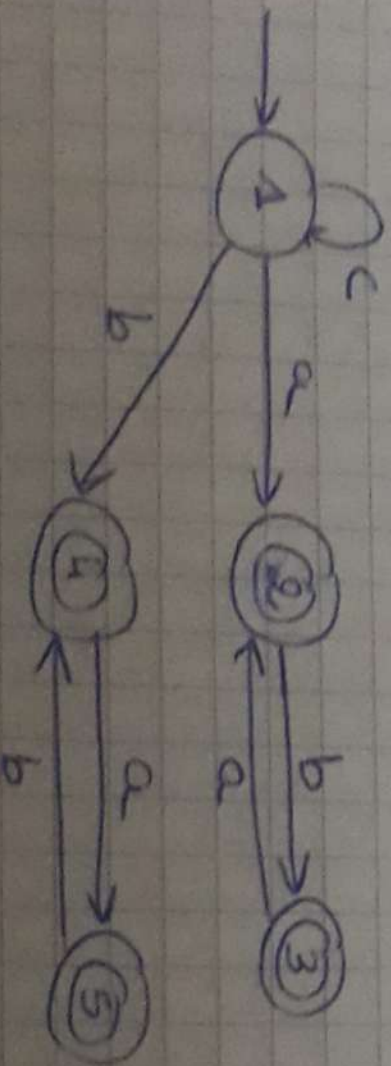
$$(1 + b)(aa^* + bb^*a)^* \text{ is equivalent to } \mathbb{E}$$

$$(1 + a)(1 + b)(1 + c)(1 + d)(e + f) \text{ is not equivalent to } \mathbb{E}$$

$$(a + (b + (c + d)^*)^*)^* \text{ is equivalent to } \mathbb{E}$$

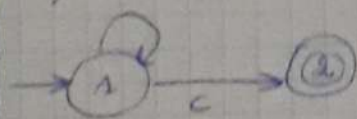
question '2'

$$\text{ER: } C^* (a(ba)^* + b(ab)^*)$$

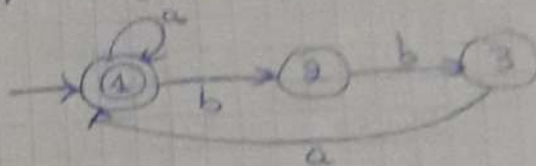


# Exercise "6"

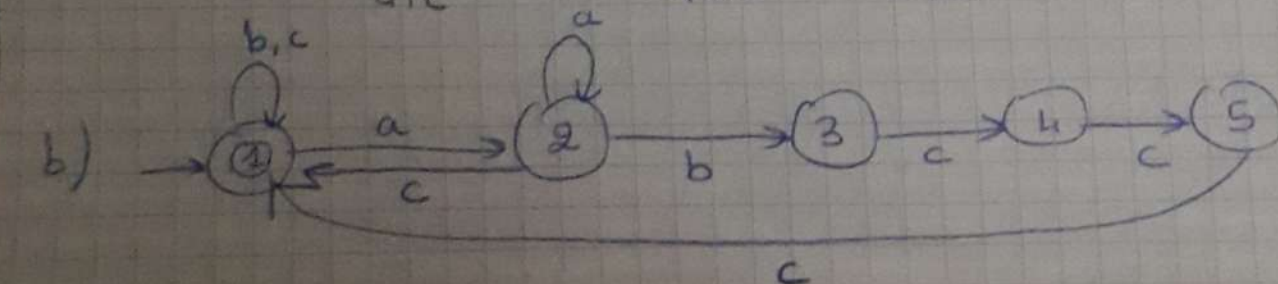
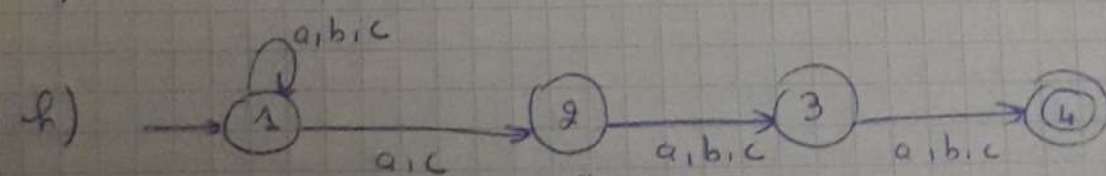
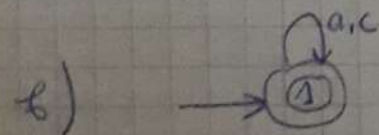
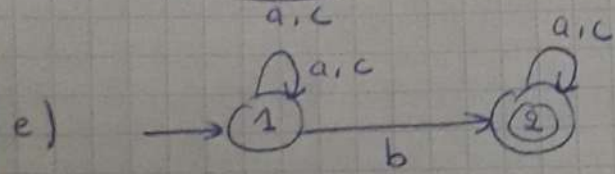
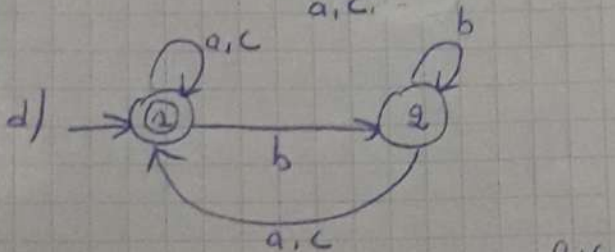
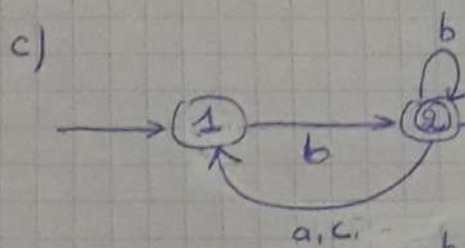
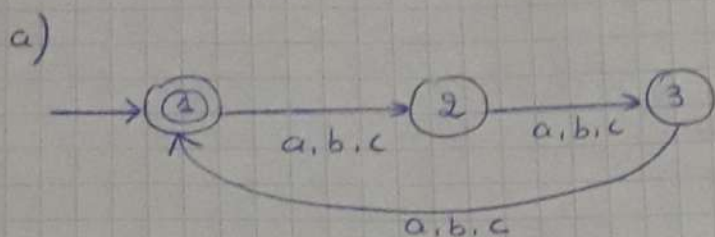
a)  $(a+b)^* c$



b)  $a^* (b + bb) c + \epsilon$



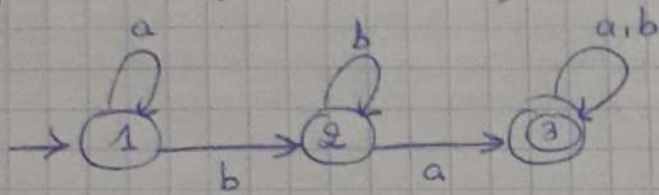
# Exercise "4"



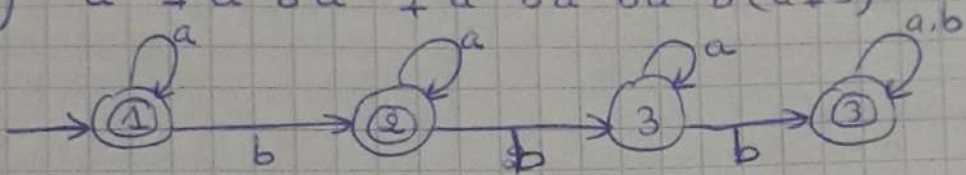


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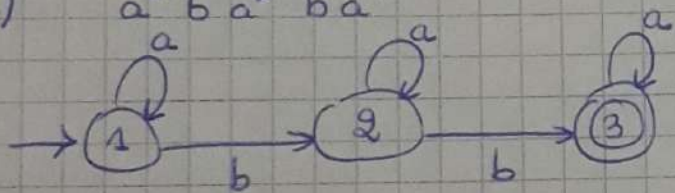
a)  $(a+b)^* ba(a+b)^*$



c)  $a^* + a^*ba^* + a^*ba^*ba^*b(a+b)^*$



d)  $a^*ba^*ba^*$



b)  $a(a+b+c)^*bc$

