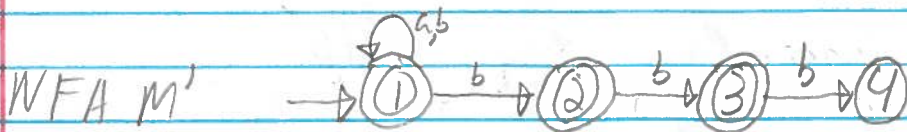
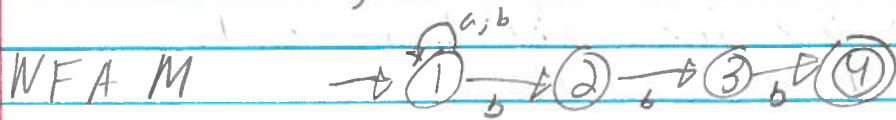


Question 1.14

b. Show by giving an example if M is an NFA that swapping accept states doesn't necessarily yield a new NFA that recognizes \bar{C} .

$$C = \{w \in \{a,b\}^* \mid w \text{ ends with } bbb\}$$



$$\bar{C} = \{w \in \{a,b\}^* \mid w \text{ doesn't end in } bbb\}$$

M' would still accept $w = abbb$, which is not a part of language \bar{C} .

Therefore, the class of languages recognized by NFA is NOT closed under complement.