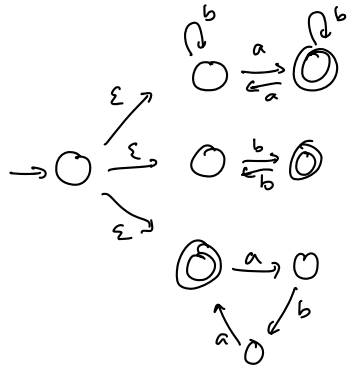
Math 3342 Homework #4

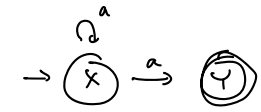
Chapter 5 #5d, 8d, 10

Chapter 6 #4

5 #5d $\{x \mid \#\text{ of } a\text{'s is odd}\} \cup \{b^n \mid n \text{ is odd}\} \cup \{(aba)^n\}$



#8d



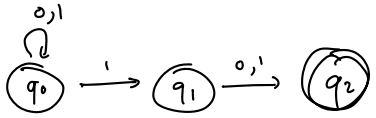
$M = (\{X, Y\}, \{a, b\}, \delta, X, \{Y\})$

where

$\delta(X, a) = \{X, Y\}$ $\quad \delta(X, b) = \emptyset$ $\quad \delta(X, \varepsilon) = \emptyset$

$\delta(Y, a) = \emptyset$ $\quad \delta(Y, b) = \emptyset$ $\quad \delta(Y, \varepsilon) = \emptyset$

#10



$\delta^*(q_0, 010) = \{q_0, q_2\}$

$\delta(q_2, 0) = \emptyset$

$\delta^*(q_2, \varepsilon) = \{q_2\}$

$\delta^*(q_0, 1101) = \{q_0, q_1\}$

$\delta^*(q_0, 1011) = \{q_0, q_1, q_2\}$

#4