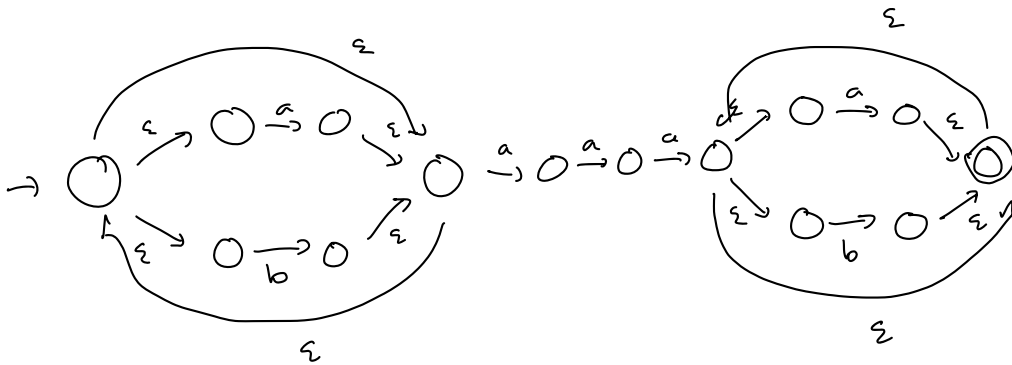


Math 3342 Homework #5

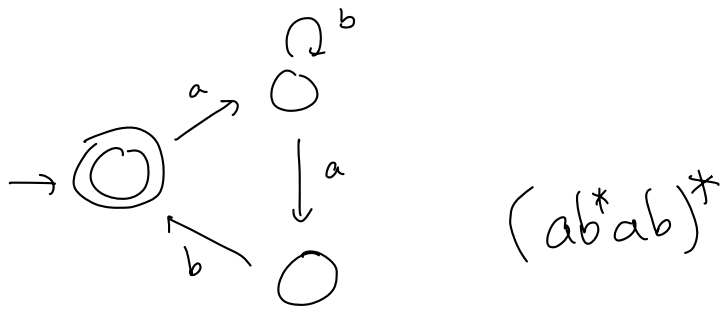
Chapter 7 #1g, #5

Extra problems #4, #7

7 #1g $\{x \in \{a,b\}^* \mid x \text{ contains } aaa\}$
 $(a+ b)^* aaa (a+ b)^*$



7 #5



Extra #4

$\{x \in \{a,b\}^* \mid x \text{ contains } aba\}$

$= \{x \text{ contains } aba\} \cup \{x \text{ starts with } ba\}$

Extra #7

$$\frac{d}{db^2} \{ x x^R \}$$

assume $x = bby$,

$$\text{then } x x^R = bby y^R b b$$

$$\hookrightarrow = \{ y y^R b b \mid y \in \{ -1, b \}^+ \}$$