

Math 3342

Home work #2

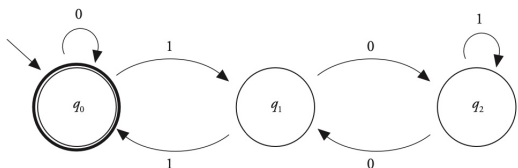
Chapter 2, #8

Chapter 3, #4a

Chapter 5, #3e, #4b

EXERCISE 8

Evaluate each of these expressions for the following DFA:



a. q_1

d. q_2

b. q_2

e. q_0

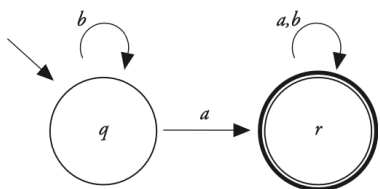
c. q_0

f. q_0

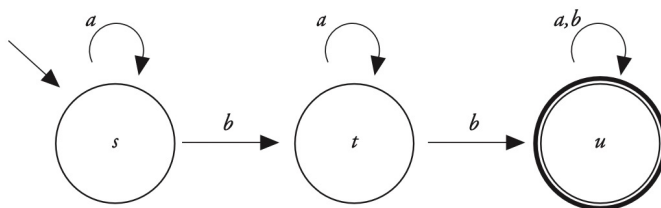
- a. $\delta(q_2, 0)$
- b. $\delta^*(q_0, 010)$
- c. $\delta(\delta^*(q_1, 010), 1)$
- d. $\delta^*(q_2, \epsilon)$
- e. $\delta^*(q_2, 1101)$
- f. $\delta^*(q_2, 110111)$

Chapter 3 #4a

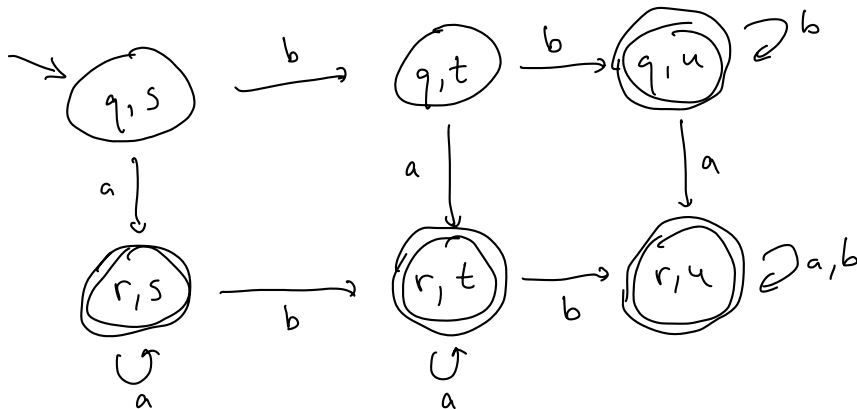
L_1 :



L_2



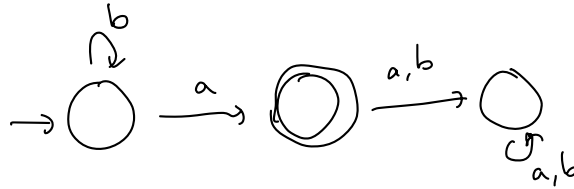
$L_1 \cup L_2$:



Chapter 5 #3c

the language is $\{b^n a\}$

DFA:



Chapter 5, #4b

x contains at least 3 consecutive a's

