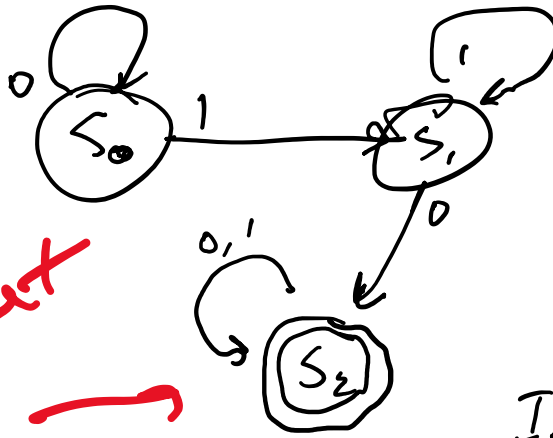


§ 9.3, part b

22, 27a, 66

23
Bonuses!
(extra!)

Wastebasket
of recognition!
😊

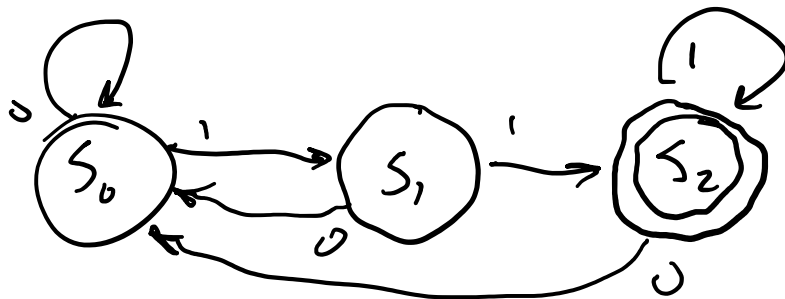


0101

is recognized

Input	0	1	0	1
State	S ₀	S ₀	S ₁	S ₂
Output	0	0	0	1

22

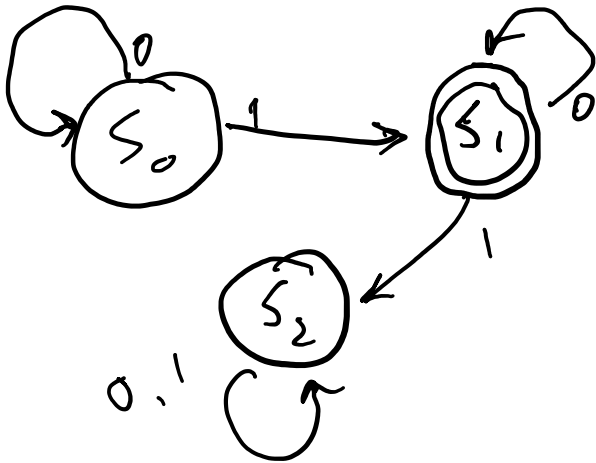


Recognizes strings that contain 11*,
+ possibly more separated by one or
more zeros (but ending on a 1):

$$0^* 11^* \left[(00^*(00^*1)^* 0^*) 11^* \right]^*$$

So 01110111 is recognized!

#27 a Build a FSM that recognizes all strings containing exactly one 1.
 (There will be a wastebasket state - if we ever get two ones.)



#66

Present	Next State		Out
	0	1	
0	5	3	1
1	5	2	0
2	1	3	0
3	2	4	1
4	2	0	1
5	1	4	0

0-equivalent: $\{0, 3, 4\}, \{1, 2, 5\}$

1-equivalent:

$\{0, 3, 4\}, \{1\}, \{2, 5\}$
r1 r5 r1

2-equivalent: $\{0, 3, 4\}, \{1\}, \{2, 5\}$
r1 r1 r1 r1

Done! A B C

Next

State	0	1	
A	C	A	1
B	C	C	0
C	B	A	0

