Example: Practice 44 and 45, p. 731

PRACTICE 44 A machine M is given by the state graph of Figure 9.4. Give the state table for M.

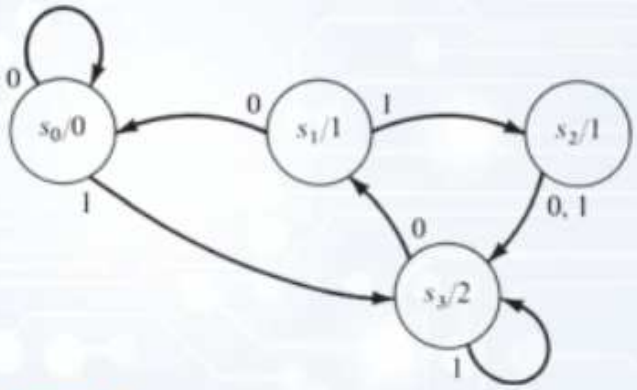


Figure 9.4

PRACTICE 45 A machine M is described by the state table shown in Table 9.2.

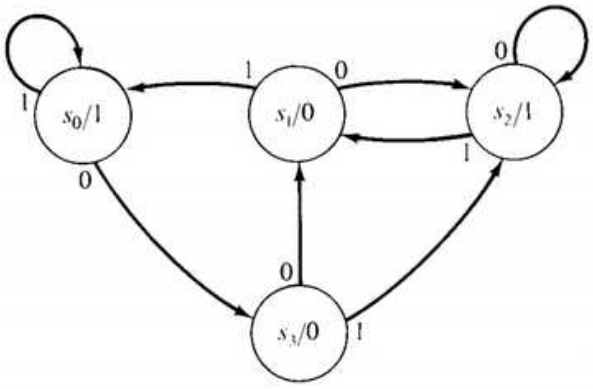
a. Draw the state graph for M.
b. What output corresponds to an input sequence of 2110?

TABLE 9.2

Present state	Next state			Output
	Present input			
	0	1	2	
s_0	s_0	s_1	s_1	0
s_1	s_1	s_0	s_0	1

Example: Exercise 4, p. 751 : Write the state table for the machine, and compute the output sequence for the given input sequence:

4. 1101100



Present state	*next state, given input* 0	1	*Output*
s_0			1
s_1			0
s_2			1
s_3			0

Example: Practice 49, p. 735

PRACTICE 49 Describe the sets recognized by the machines in Figure 9.8.

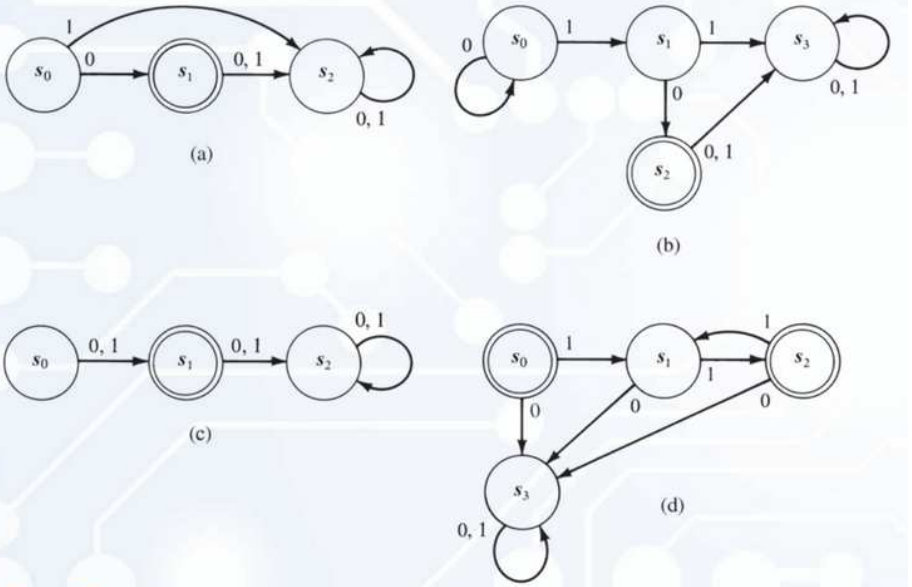
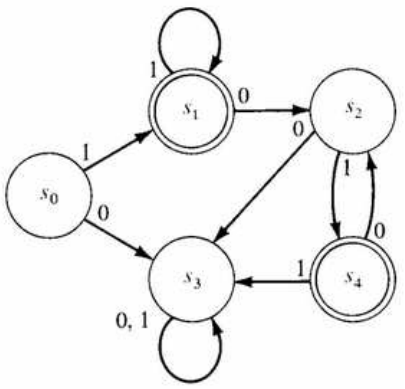


Figure 9.8

Example: Exercise #36, p. 755 : give a regular expression for the set recognized by the finite-state machine.

36.



Examples: Construct a finite-state machine that acts as recognizers for the input described:

a. Exercise 26(b), p. 754: The set of all strings where the number of 0s is a multiple of 3.

b. Exercise 25(b), p. 754: Construct a finite-state machine to recognize all strings consisting of two or more 1s followed by a single 0.