

		input memory	
		X	•
		X	•
000	001,∅	001,∅	
001	010,∅	010,∅	
010	011,∅	011,∅	
011	000,N	000,∅	
100	101,∅	101,∅	
101	110,∅	110,∅	
110	111,∅	111,∅	
111	000,∅	000,∅	

(a) Position 1

		input memory	
		•	X
		•	X
000	001,E	001,N	001,E
001	010,∅	010,∅	010,∅
010	011,∅	011,∅	011,∅
011	000,∅	000,∅	000,∅
100	001,E	001,∅	001,E
101	010,∅	110,∅	010,∅
110	111,∅	111,∅	111,∅
111	100,∅	100,∅	100,∅

(b) Position 2

		input memory	
		X	•
		X	•
000	001,∅	001,∅	
001	010,∅	010,∅	
010	111,∅	111,∅	
011	000,∅	000,∅	
100	101,∅	101,∅	
101	110,∅	110,∅	
110	111,S	111,∅	
111	100,∅	100,∅	

(c) Position 4

Figure 1: State machine(s) (a) at position 1, (b) at position 2, (c) at position 4.

000	101,E	101,E	001, $\emptyset$	001, $\emptyset$
001	110,E	110,E	110, $\emptyset$	110, $\emptyset$
010	011, $\emptyset$	011, $\emptyset$	011, $\emptyset$	011, $\emptyset$
011	000, $\emptyset$	000, $\emptyset$	000, $\emptyset$	000, $\emptyset$
100	101,E	101,E	101, $\emptyset$	101, $\emptyset$
101	110,E	110,E	110,S	110, $\emptyset$
110	111, $\emptyset$	111, $\emptyset$	111, $\emptyset$	111, $\emptyset$
111	100, $\emptyset$	100, $\emptyset$	100, $\emptyset$	100, $\emptyset$

(a) Position 3

000	001, $\emptyset$	001, $\emptyset$	001, $\emptyset$	001, $\emptyset$
001	010, $\emptyset$	010, $\emptyset$	010, $\emptyset$	010, $\emptyset$
010	011, $\emptyset$	011, $\emptyset$	111, $\emptyset$	111, $\emptyset$
011	000,N	000,N	000, $\emptyset$	000, $\emptyset$
100	101, $\emptyset$	101, $\emptyset$	101, $\emptyset$	101, $\emptyset$
101	110, $\emptyset$	110, $\emptyset$	110, $\emptyset$	110, $\emptyset$
110	111,S	111, $\emptyset$	111,S	111, $\emptyset$
111	100, $\emptyset$	000, $\emptyset$	100, $\emptyset$	000, $\emptyset$

(b) Position 8

Figure 2: State machine(s) (a) at position 3, (b) at position 8.

	Memory	Input	1	2	3	4	5	6	7	8
000	101,E	101,E	001,N	001,N	101,E	101,E	001, $\emptyset$	001, $\emptyset$		
001	010,E	010,E	010, $\emptyset$	010, $\emptyset$	010,E	010,E	110, $\emptyset$	110, $\emptyset$		
010	011, $\emptyset$									
011	000, $\emptyset$									
100	101,E	101,E	101, $\emptyset$	001, $\emptyset$	101,E	101,E	101, $\emptyset$	001, $\emptyset$		
101	010,E	010,E	110,S	110, $\emptyset$	010,E	010,E	110,S	110, $\emptyset$		
110	111, $\emptyset$									
111	100, $\emptyset$									

(a) Position 6

Figure 3: State machine(s) (a) at position 6.