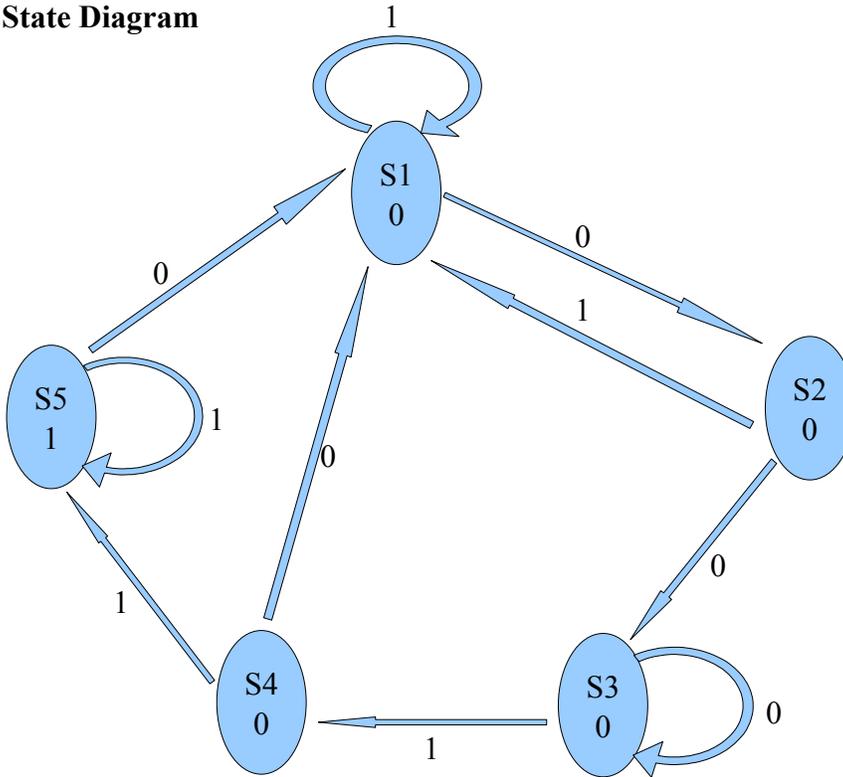


Homework 15 Solutions

16 a.

If you prefer using ABCDE, then S1 = A, S2 = B, etc...

State Diagram



State Table

q	x = 0	q*	x = 1	Z
S1	S2		S1	0
S2	S3		S1	0
S3	S3		S4	0
S4	S1		S5	0
S5	S1		S5	1

How we might continue to define our circuit – would have to use “don't cares”

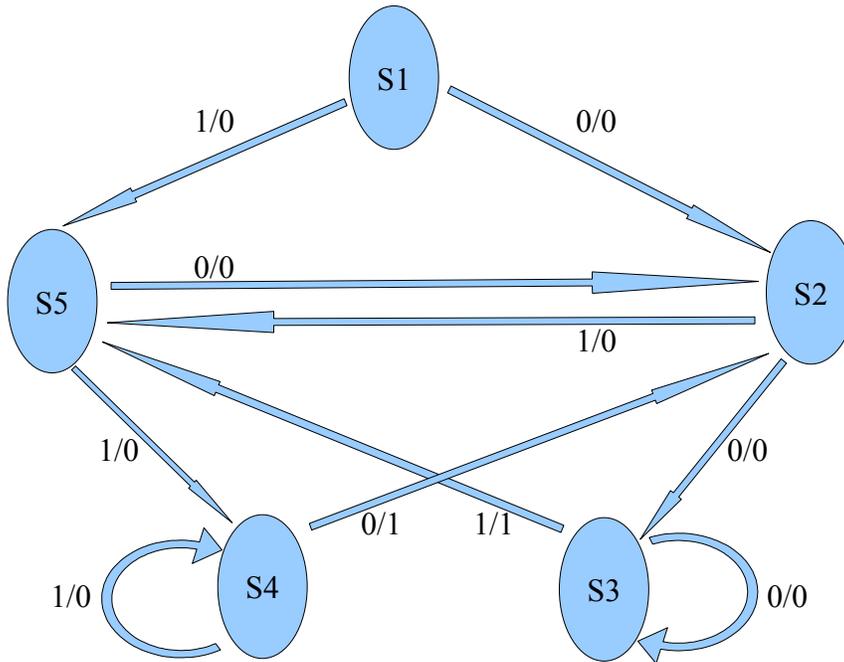
	q ₁ q ₂ q ₃	x = 0	q*	x = 1	Z
S1	000	001		000	0
S2	001	010		000	0
S3	010	010		011	0
S4	011	000		100	0
S5	100	000		100	1
---	101				
---	110				
---	111				

Homework 15 Solutions

16 e.

If you prefer using ABCDE, then S1 = A, S2 = B, etc...

State Diagram



State Table

q	Z	
	x = 0	x = 1
S1	S2	S5
S2	S3	S5
S3	S3	S5
S4	S2	S4
S5	S2	S4

How we might continue to define our circuit – would have to use “don't cares”

q	Z	
	x = 0	x = 1
S1	001	100
S2	010	100
S3	010	000
S4	000	011
S5	001	011
---	101	
---	110	
---	111	