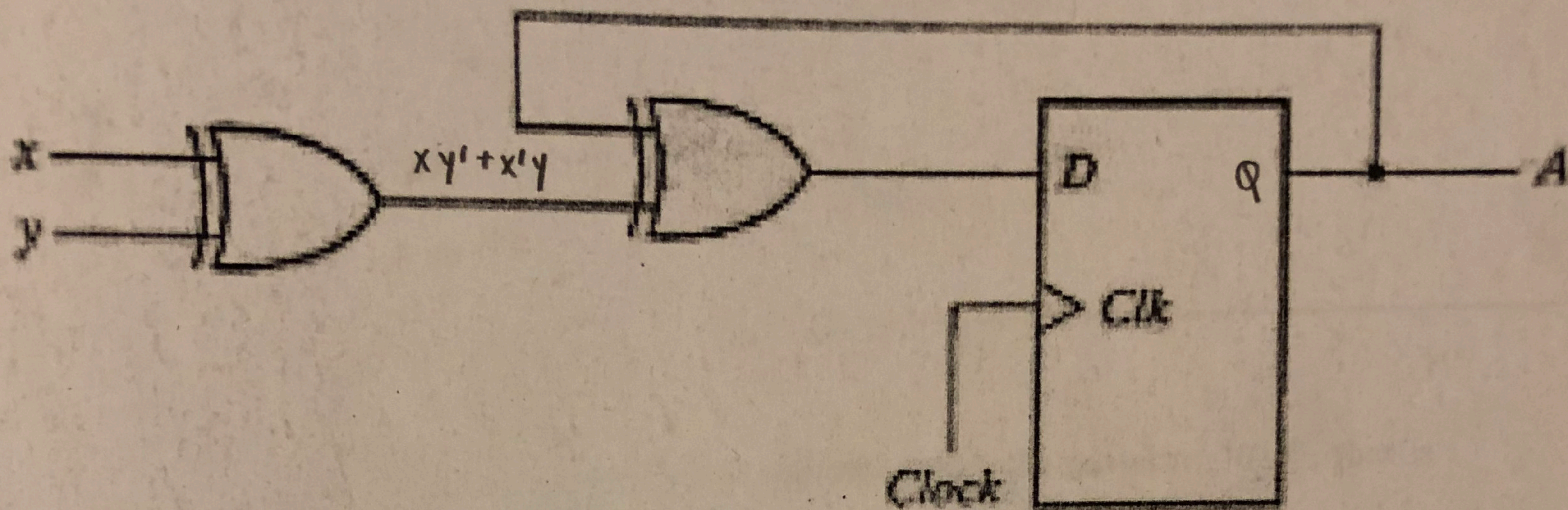


Problem 3 (15 points) We have a D flip flop circuit below. Provide the state transition table and state transition diagram.



Circuit diagram

PS	NS	
	0	1
0	0	1
1	0	1

$$D(t) = (x \oplus y) \oplus Q(t)$$

XOR

	0	1
0	0	1
1	1	0

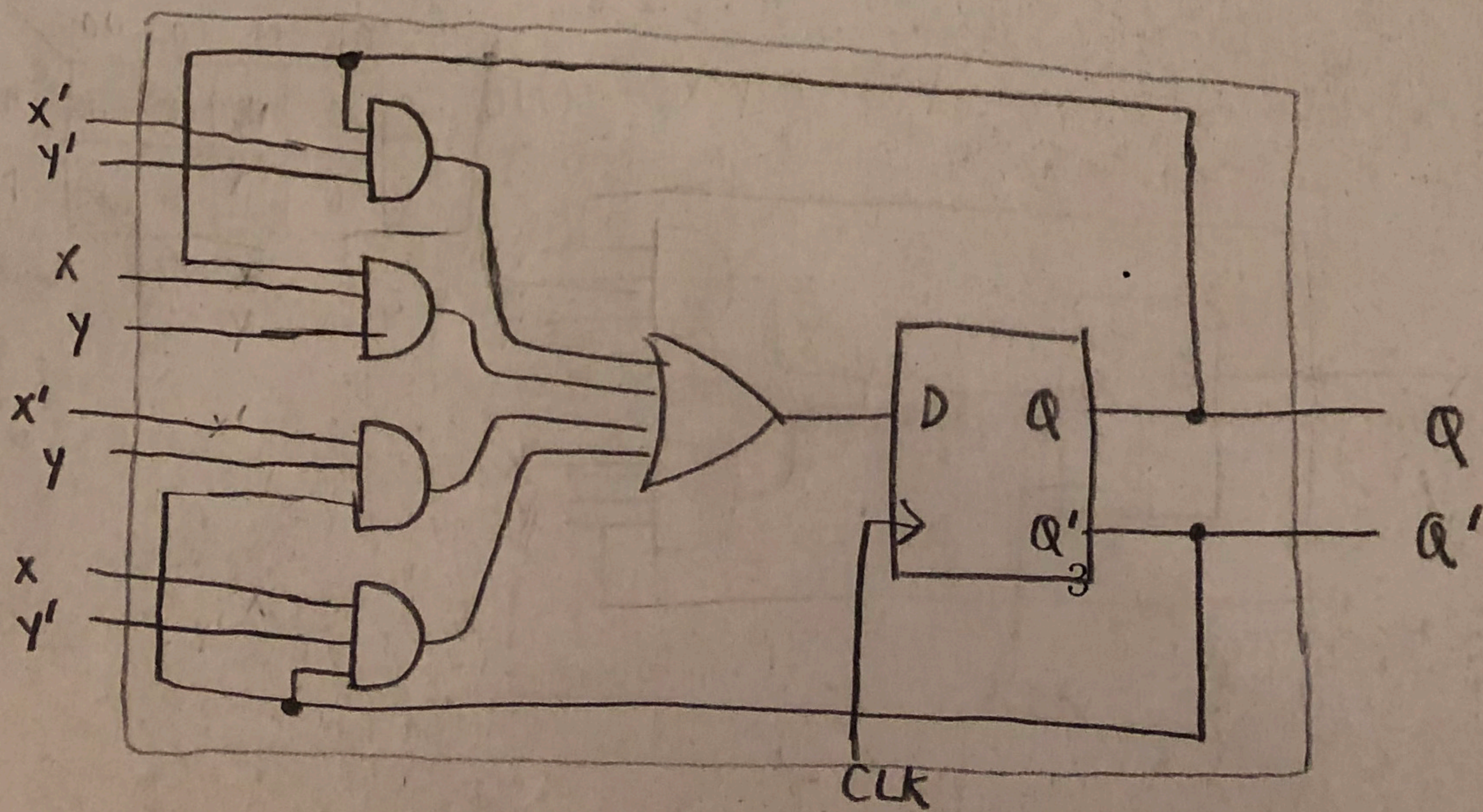
PS = Q(t)	Input (xy)				Input (xy)			
	00	01	10	11	00	01	10	11
0	0	1	1	0	0	1	1	0
1	1	0	0	1	1	0	0	1
	NS; Z				D(t)			

$Q_0 Q_1$

$$D(t) = Q(t+1)$$

xy	00	01	11	10
Q	0	1	0	1
1	1	0	1	0

$$D(t) = Qx'y' + Q'x'y + Qxy + Q'x$$



State diagram
missing

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