1.

DFA M = () where

Q=

= { 0 , 1 }

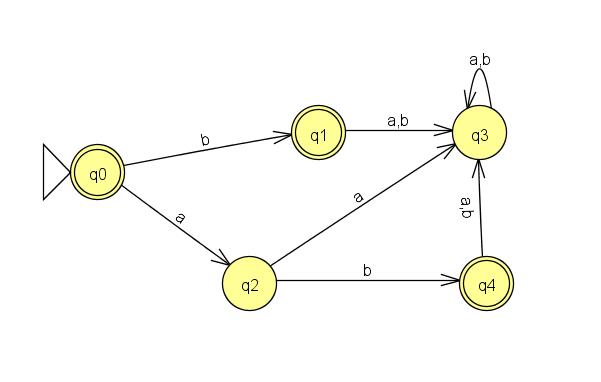
F= { q1 , q3 }

The function is given by

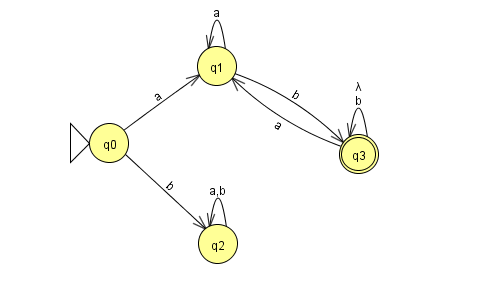
|  |  |  |
| --- | --- | --- |
|  | 0 | 1 |
| q0 | q1 | q3 |
| q1 | q1 | q2 |
| q2 | q2 | q2 |
| q3 | q1 | q3 |

2.

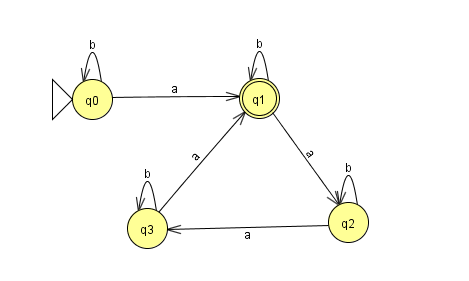
a).



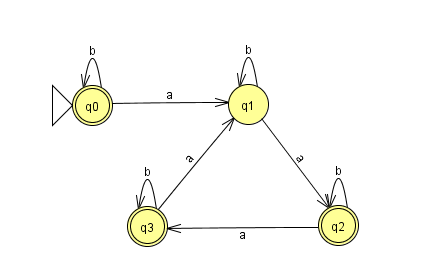
b)



c)



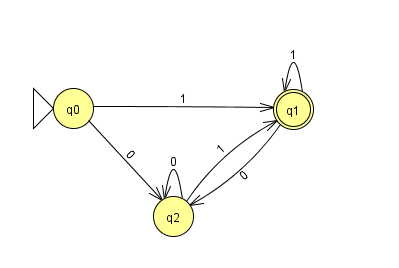
d)



3.

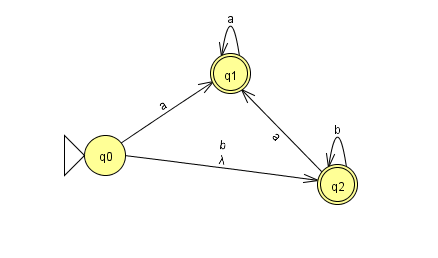
Because show L is regular language by DFA,

W is binary representation of an odd integer, so the end must be 1.



4.

a)



b)

