

1. Consider the sequential circuit shown in the figure, where both flip-flops used are positive edge-triggered D flip-flops.

(GATE-CS2018)

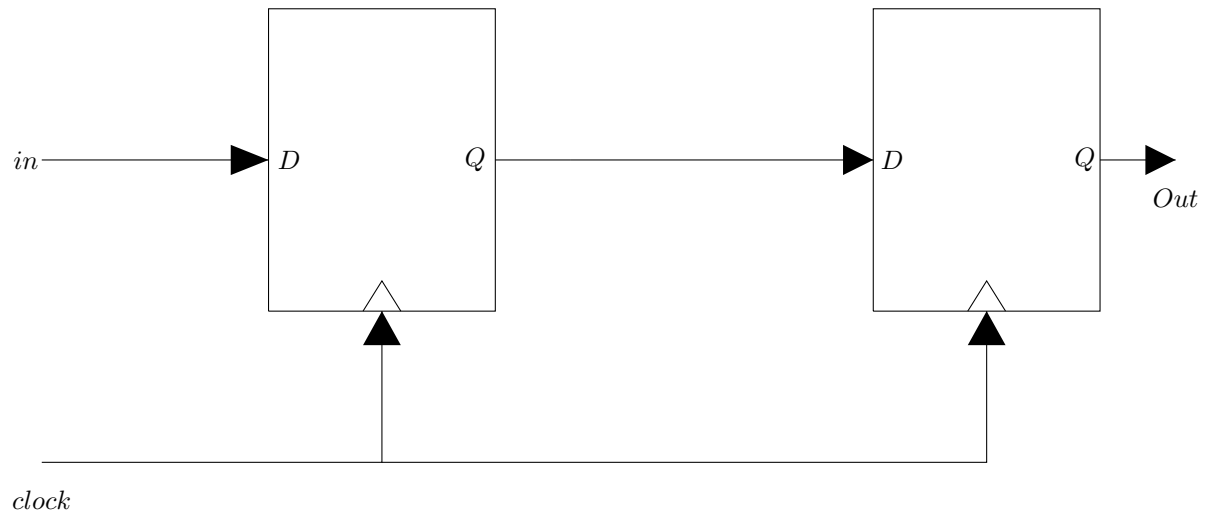


Figure 1: Sequential circuit

The number of states in the state transition diagram of this circuit that have a transition back to the same state on some value of "in" is.