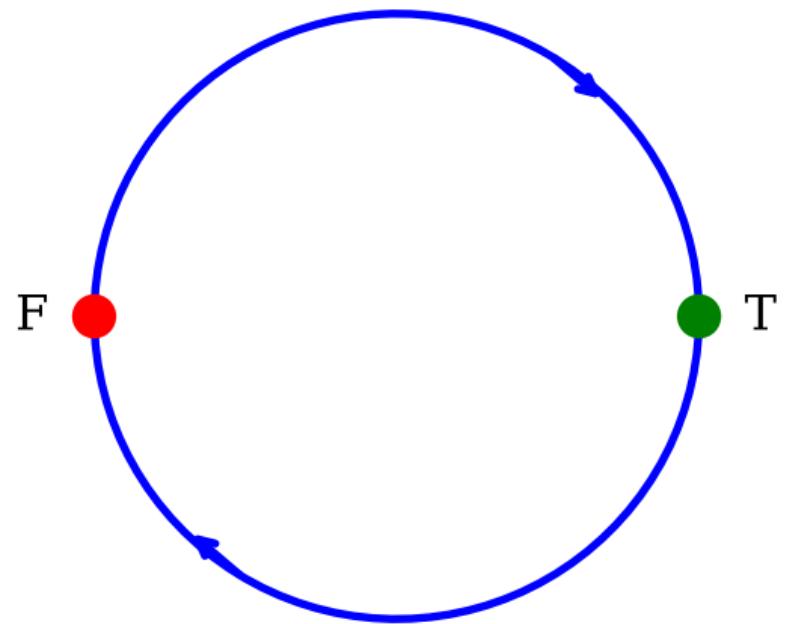
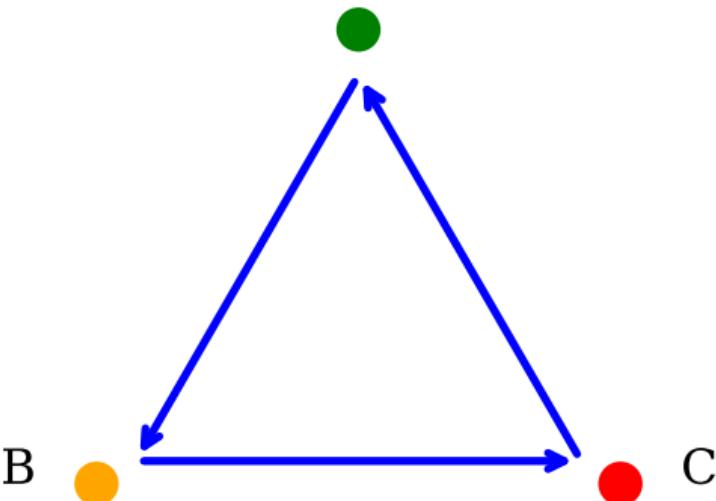


(A) 2-cycle (Liar paradox)



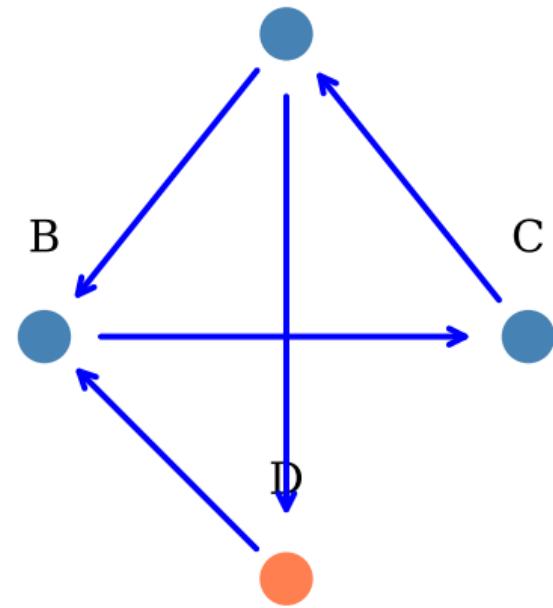
$$k_{\min} = 3$$

(B) 3<sub>A</sub>cycle



$$k_{\min} = 3$$

(C) Graph with nested cycles  
A



$$k_{\min} \geq 3$$