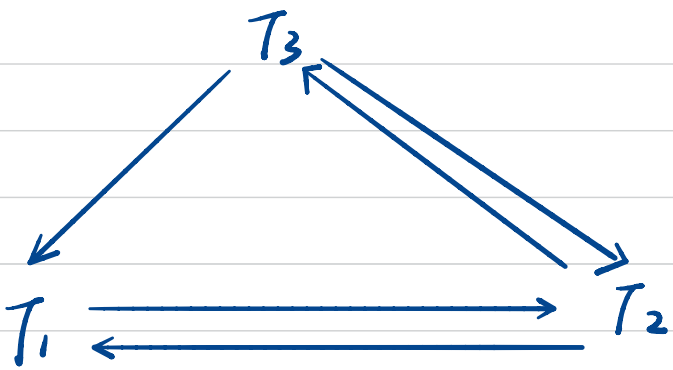
(1) Conflict serialization graph



(2)

T_1	T_2	T_3
lock(x) read(x)		
write(x, x+10)		
	read(u)	
		lock(y) read(y)
		write(y, y+1)
	read(z)	
lock(z) wait		
	lock(y) wait	
		lock(u) read(u)
		unlock(y)
		write(u, u+y)
	lock(y)	
	write(y, z+2)	
	unlock(z)	
lock(z) read(z)		
write(z, z+1)		
		unlock(u)
lock(u)		
write(u, u+z)		
	lock(x) read(x)	

(3)

T_1	T_2	T_3	x
timestamp(t_1)			
read(x)			$x: t_1$
write(x, $x+10$)			
	timestamp(t_2)		
	read(u)		$u: t_2$
		timestamp(t_3)	
		read(y)	$y: t_3$
		write(y, $y+1$)	
	read(z)		$z: t_2$
read(z)			$z: t_2 : t_1$
write(z, $z+1$)			$z: t_2 : t_1$
	write(y, $z+2$)		$y: t_3 : t_2$
		read(v)	$v: t_3$
		write(v, $v+y$)	
write(v, $v+z$)			$v: t_3 : t_1$
	read(x)		$x: t_1 : t_2$