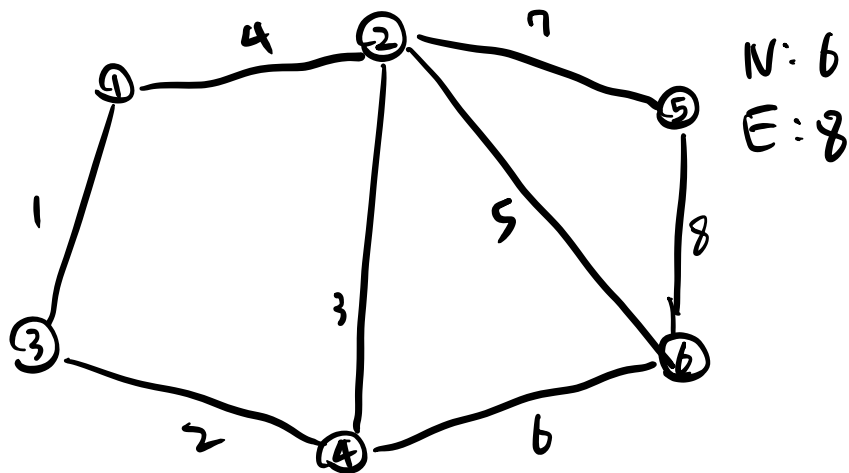


# < 최소신장트리 > - Minimum Spanning Tree

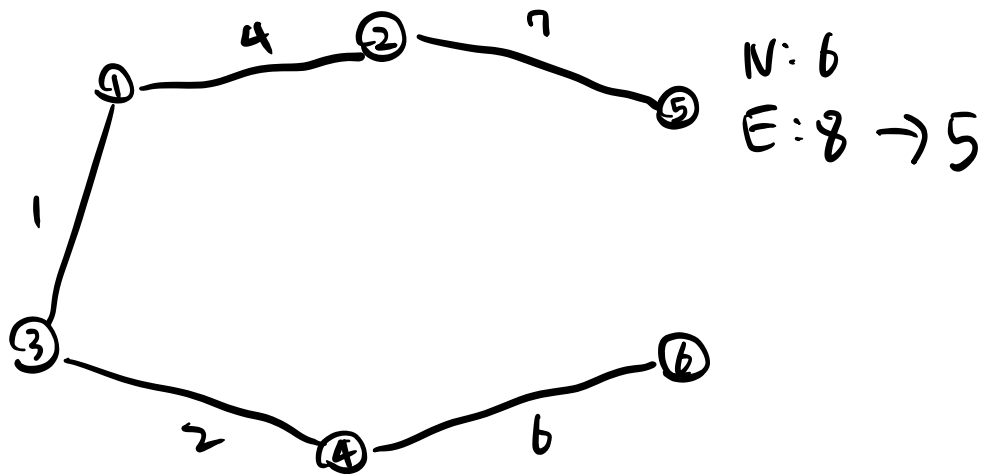
↳ ?

신장 트리?



- 1) 모든 정점을 지나가야 함
- 2) 모든 정점끼리의 경로 존재
- 3) 사이클 X
- 4)  $E = N - 1$

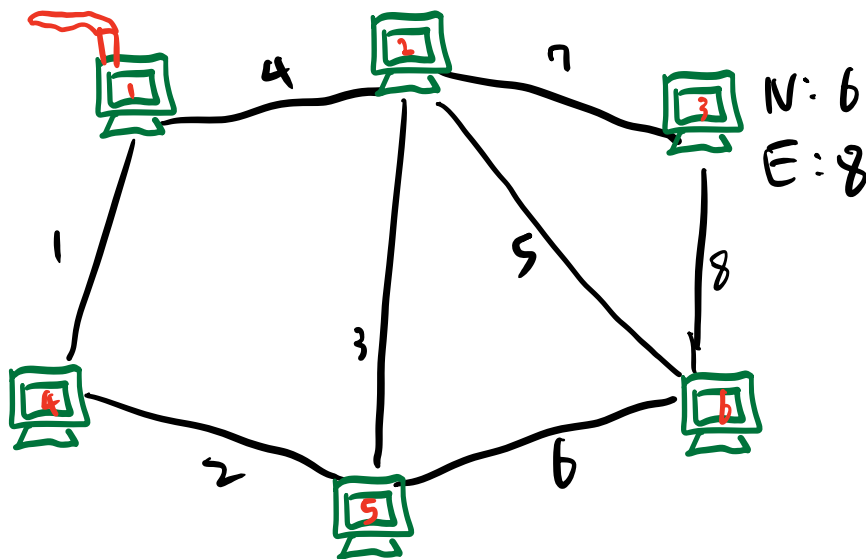
## < 신장 트리 >



## < 최소 신장 트리 >

- 1) 모든 정점을 지나가야 함
- 2) 모든 정점 사이의 경로 존재
- 3) 사이클 X
- 4)  $E = N - 1$

5) 간선의 가중치 합 최소  $\Rightarrow$  비용 최소



< How to build ? >

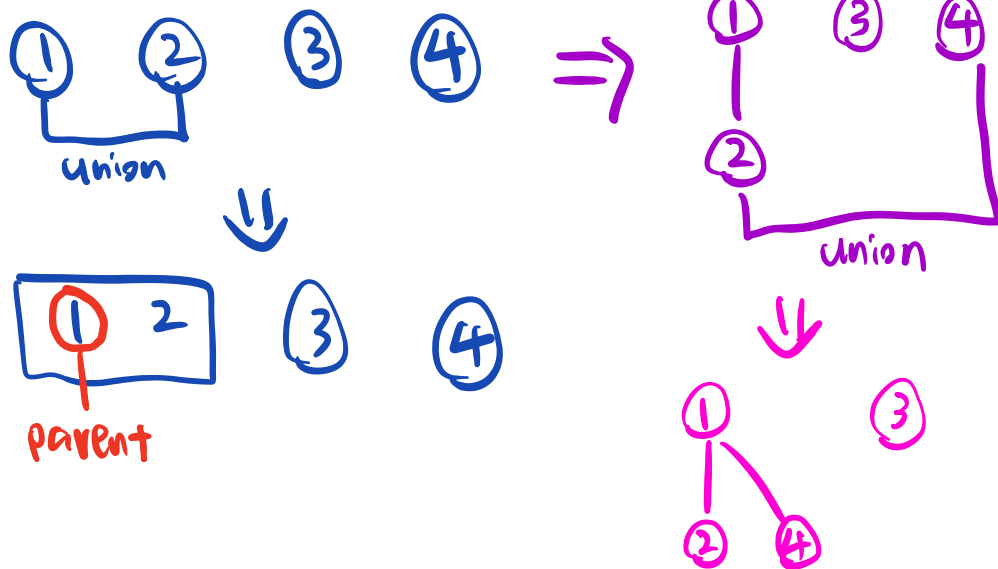
4, 7, 1, 3, 5, 8, 2, 6

Priority Queue  $\Rightarrow$  1 2 3 4 5 6 7 8  
 오름 차순

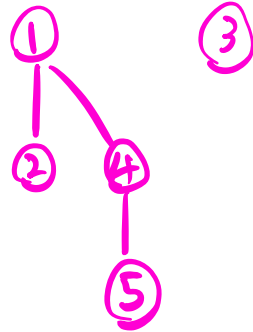
Parent  $\Rightarrow$ 

	1	2	3	4	5	6
--	---	---	---	---	---	---

Union ( )



find()



find(4)  $\Rightarrow$  1

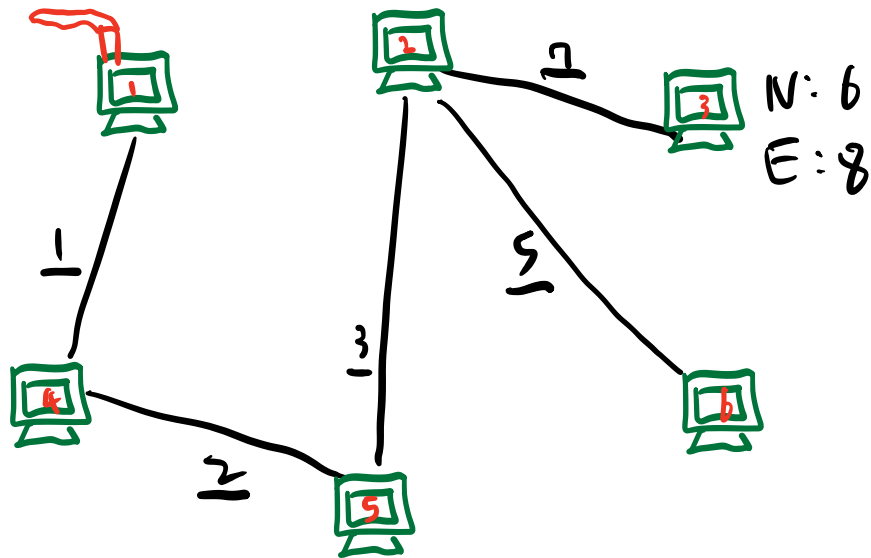
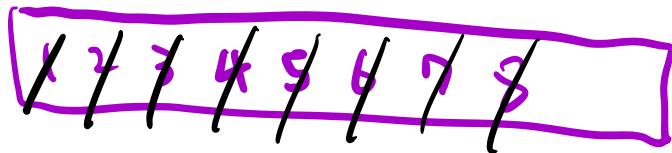
find(2)  $\Rightarrow$  1

find(1)  $\Rightarrow$  1

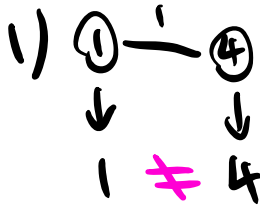
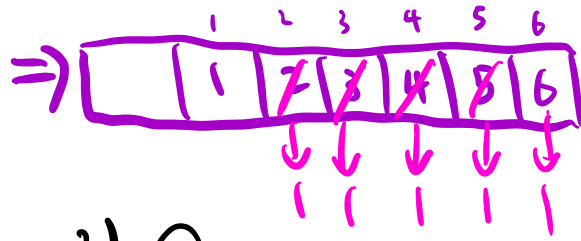
find(5)  $\Rightarrow$  1

find(3)  $\Rightarrow$  3

Priority Queue  $\Rightarrow$   
오름 차순



Parent



↓

사이클 형성 X

