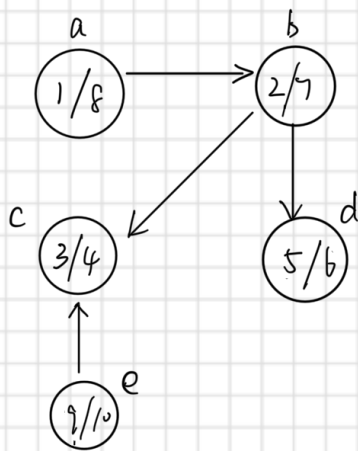


# DSAA Lab 14. 12310401 王子恒

1.



a.  $\pi = NIL$

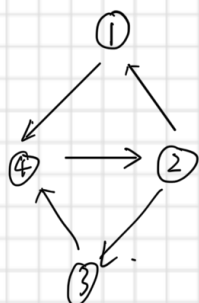
b.  $\pi = a$

c.  $\pi = a$

d.  $\pi = b$

e.  $\pi = NIL$ .

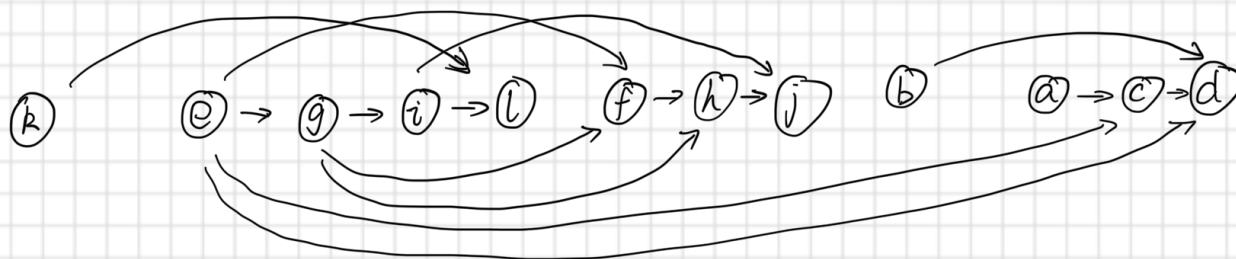
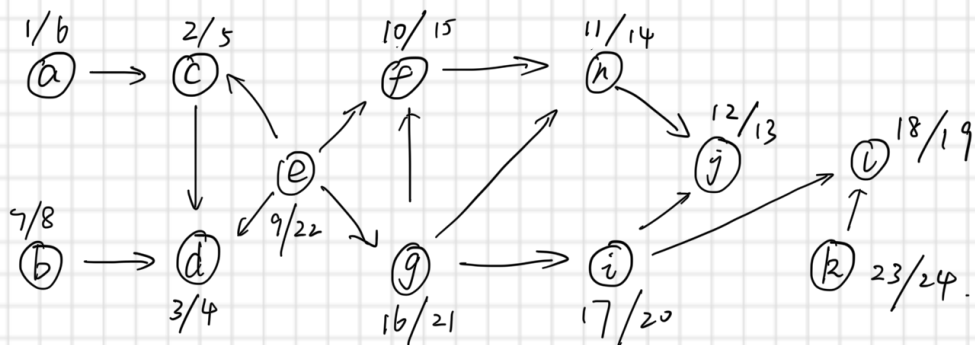
2.



from 2: one back edge

from 4: two back edge

3.



4. Count the edges number when exploration .

Call DFS until find  $|V|-1$  edges or had explored all nodes .

If that time there's no white nodes , then it has no cycles.  
Or stop at found the  $|V|$  edges, it has cycles.