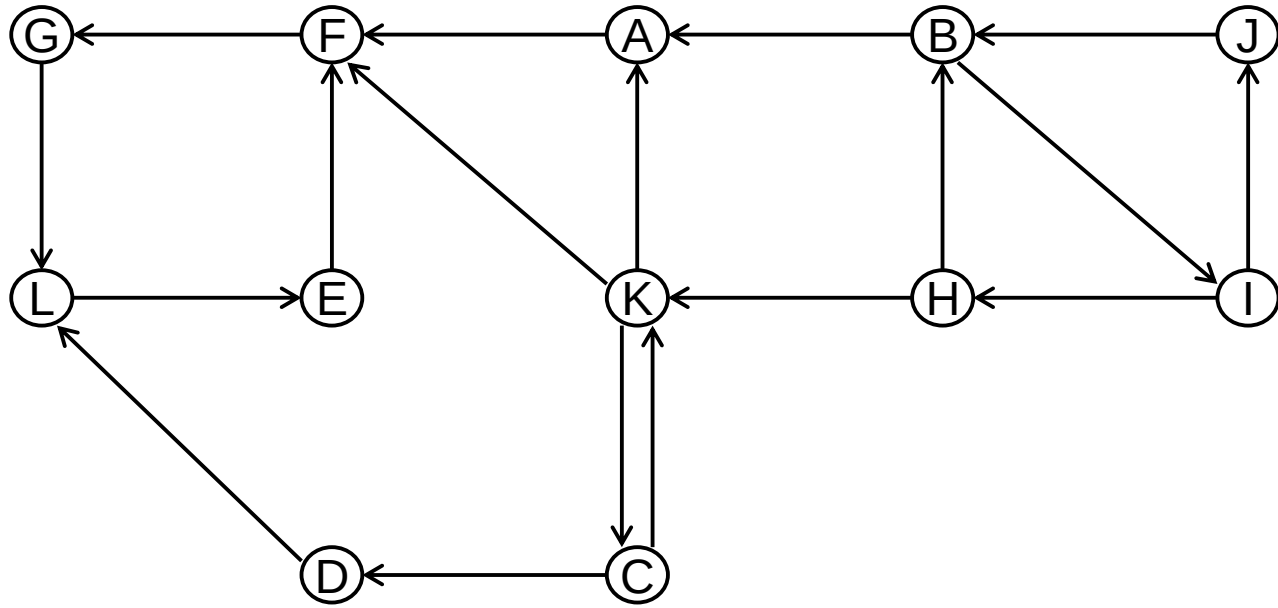
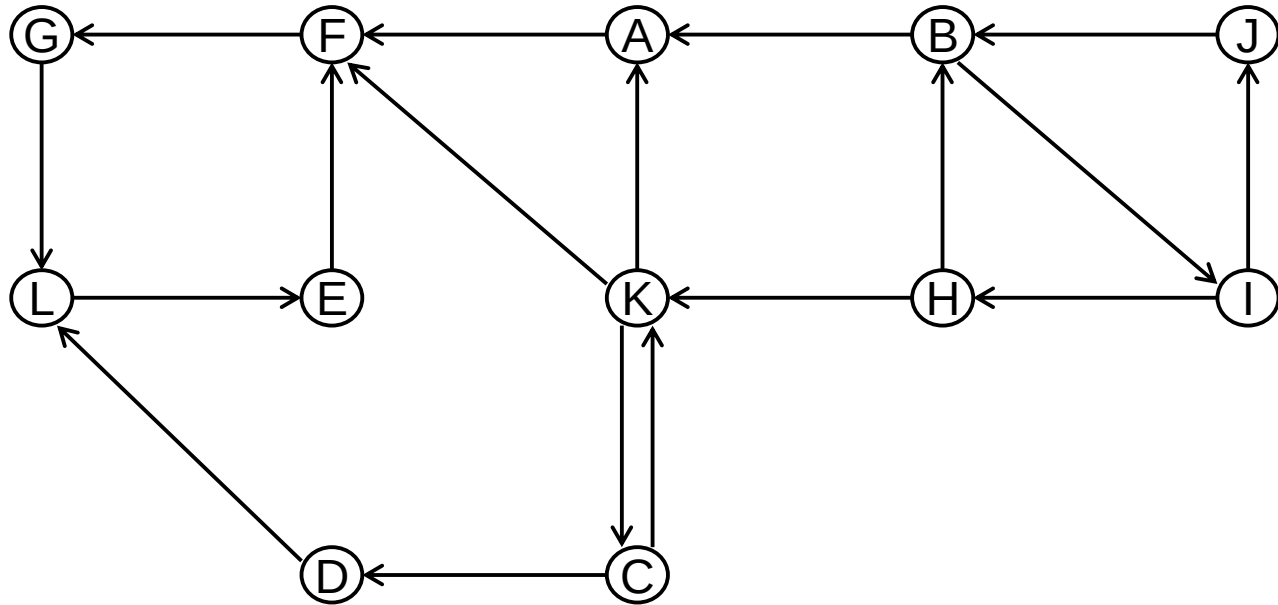


G:

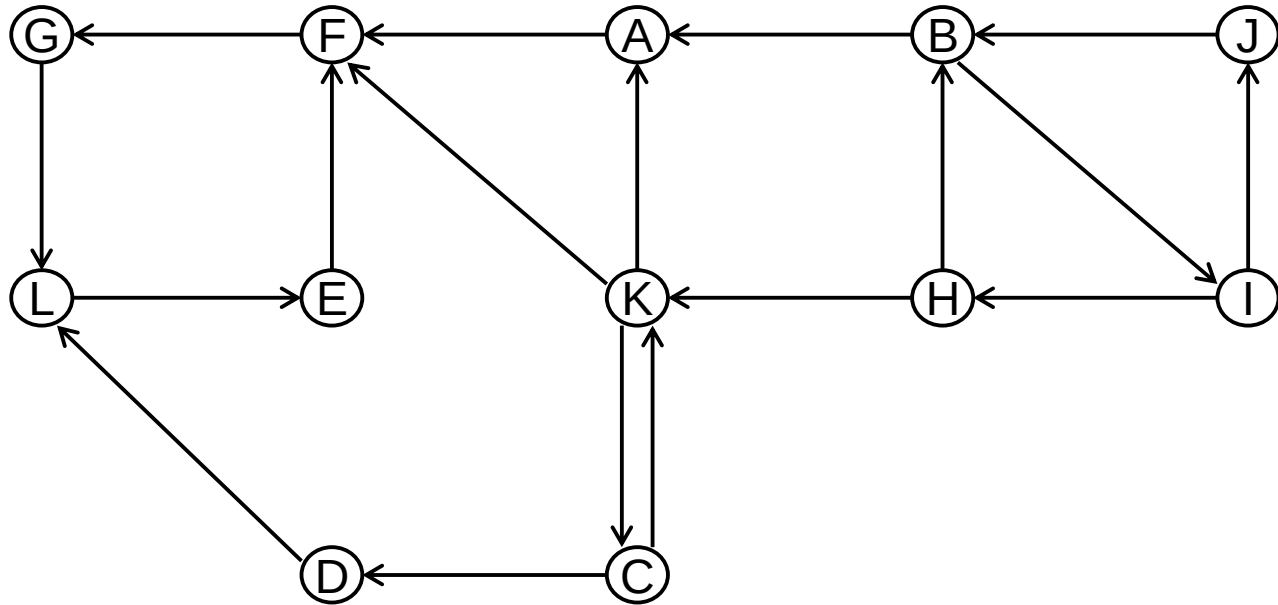


G:

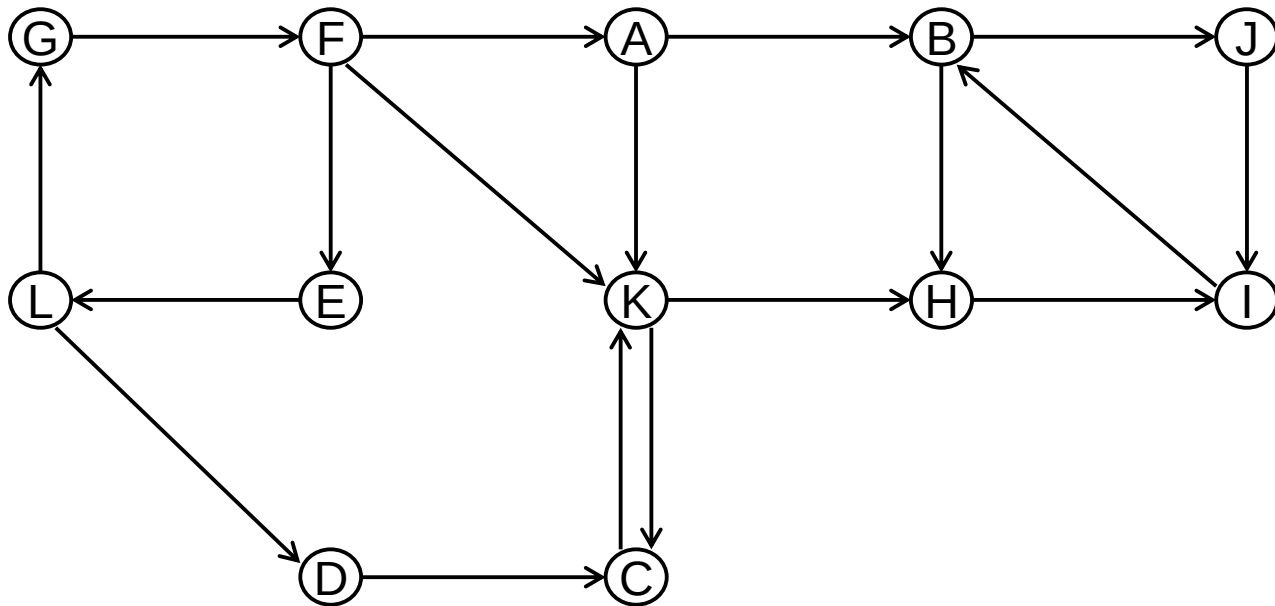


Compute the Reverse of the Graph:

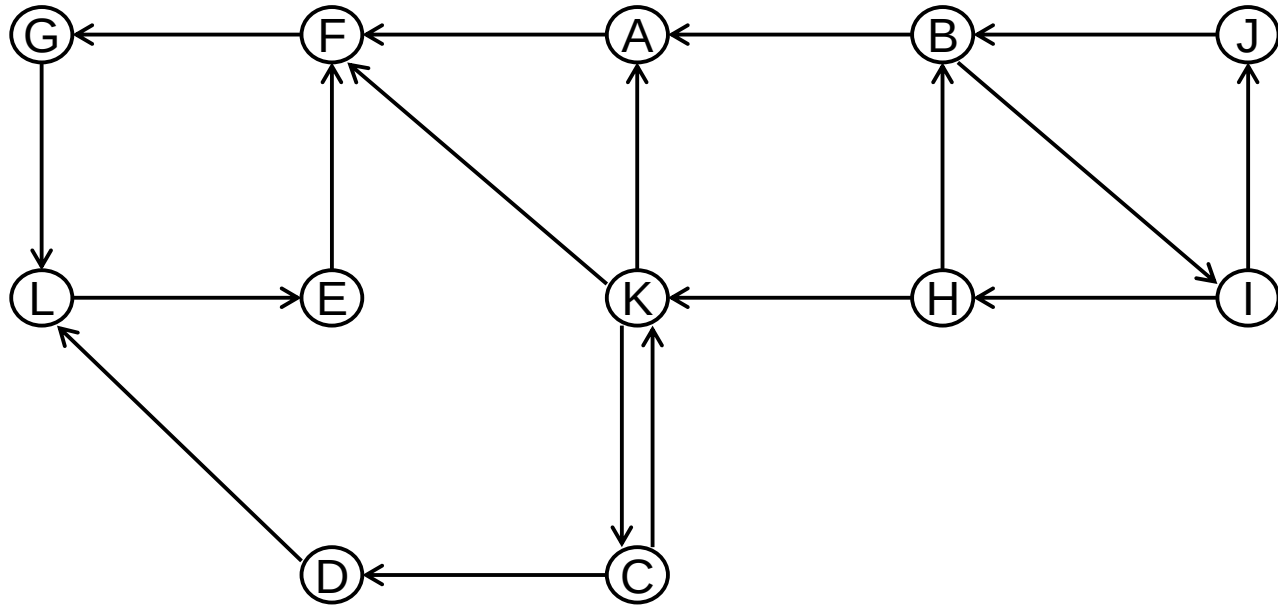
G:



G^R :

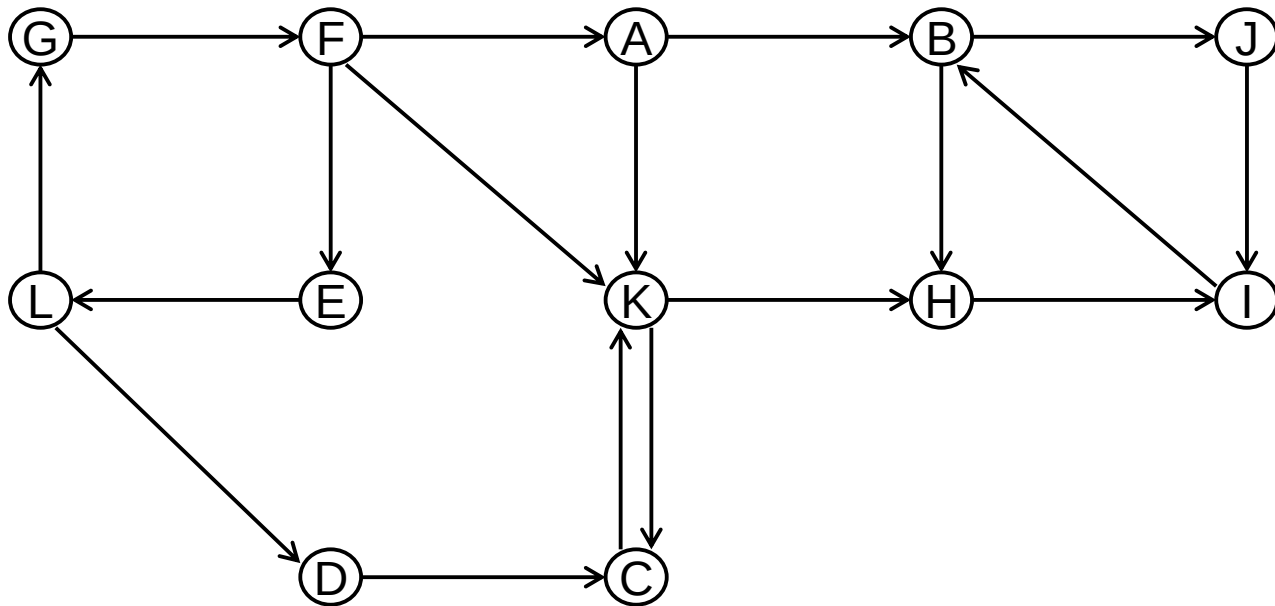


G:

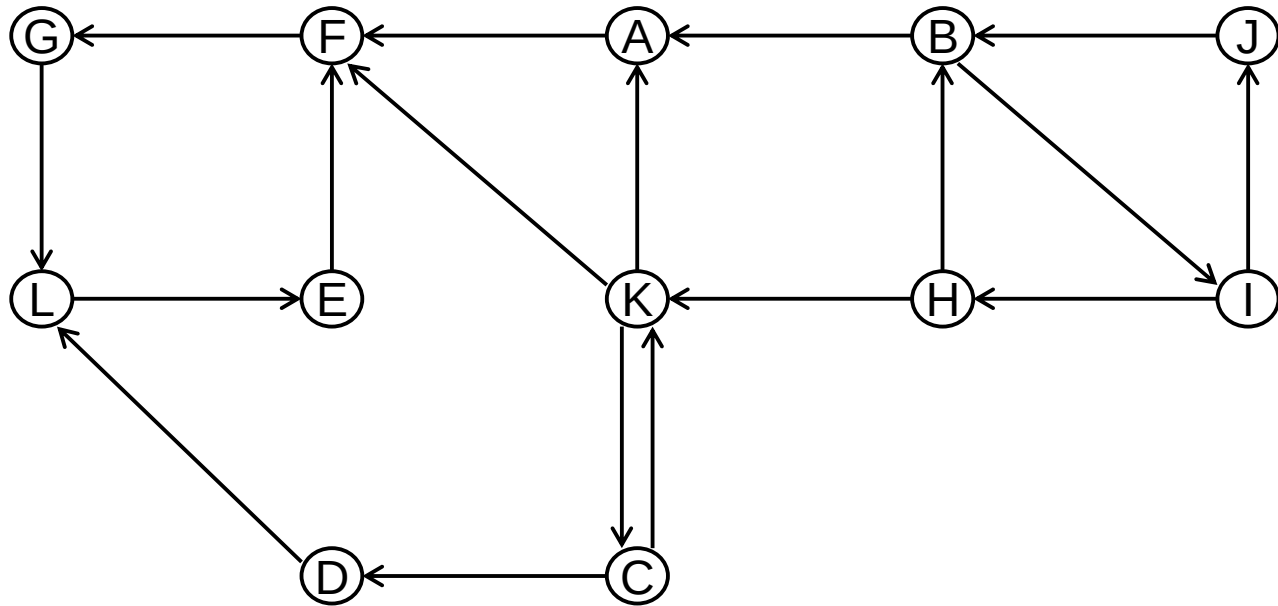


Do DFS on the reverse of G

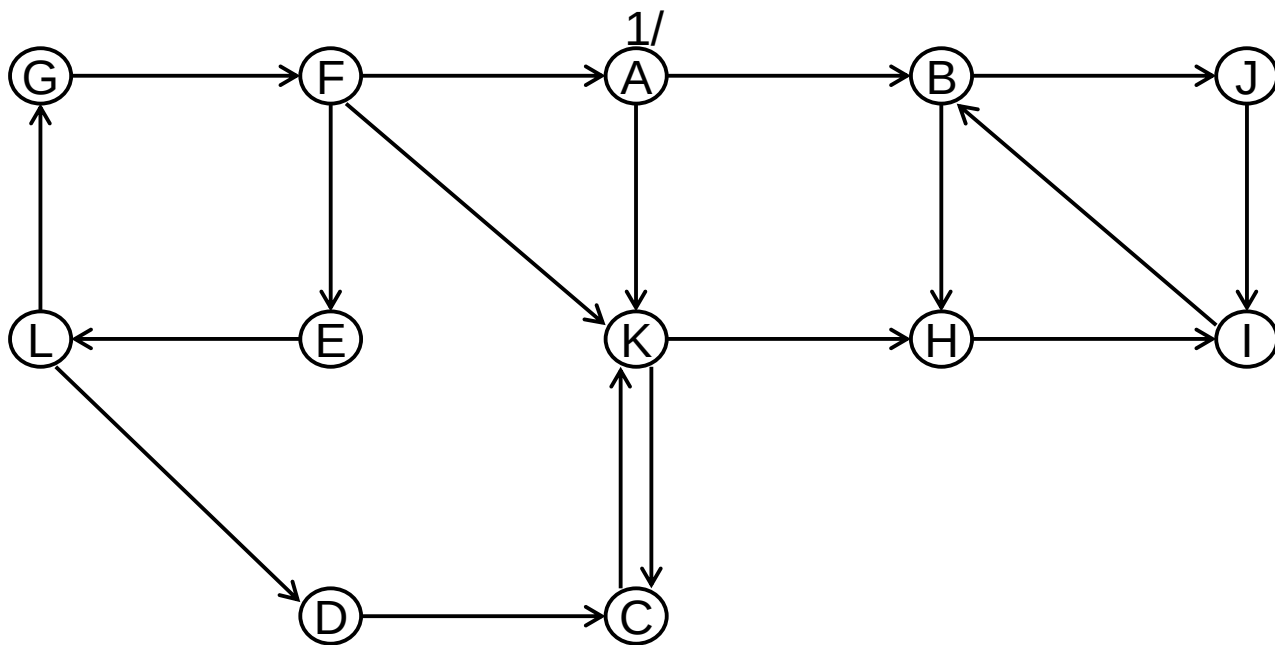
G^R :



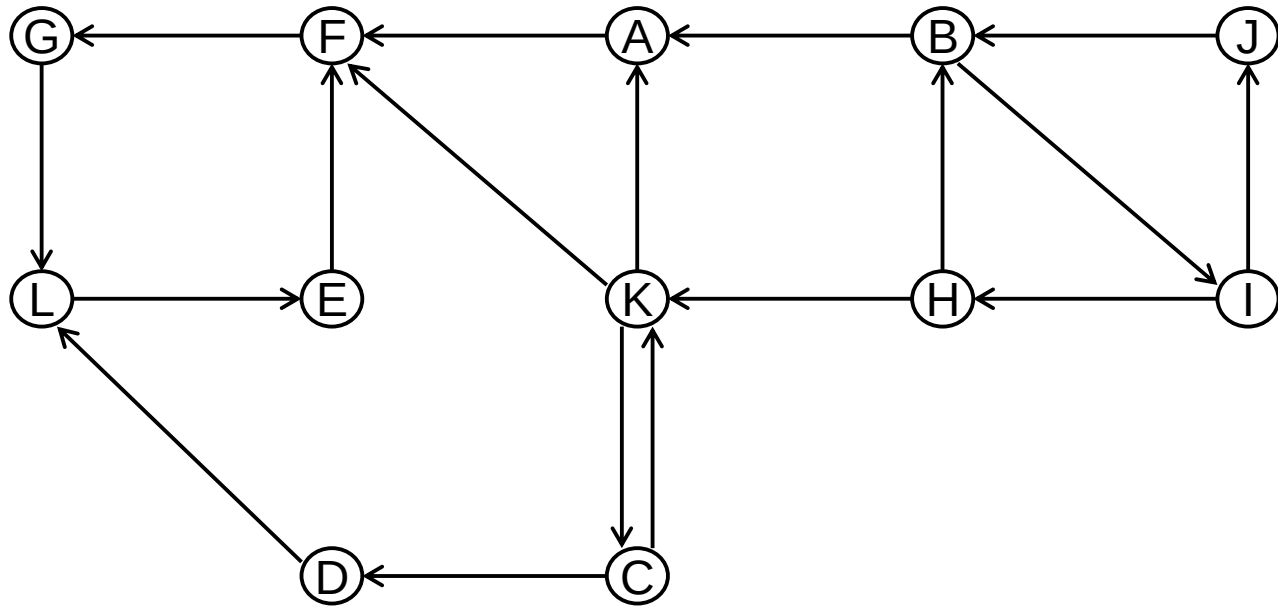
G:



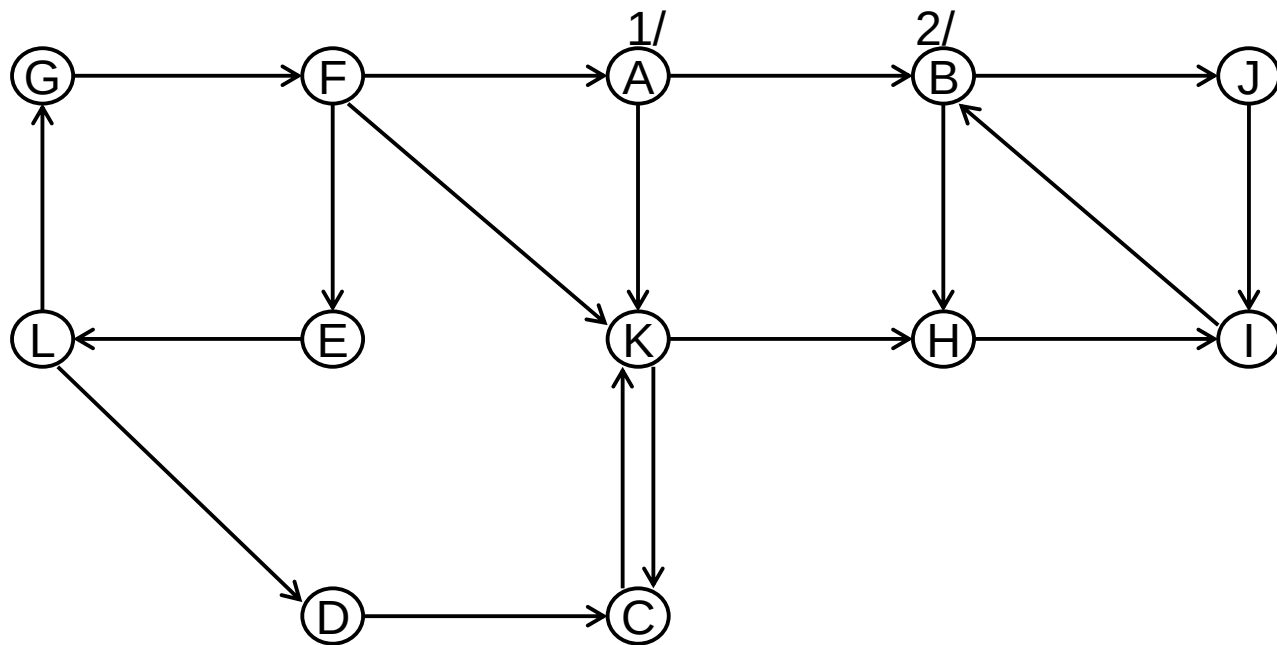
G^R :



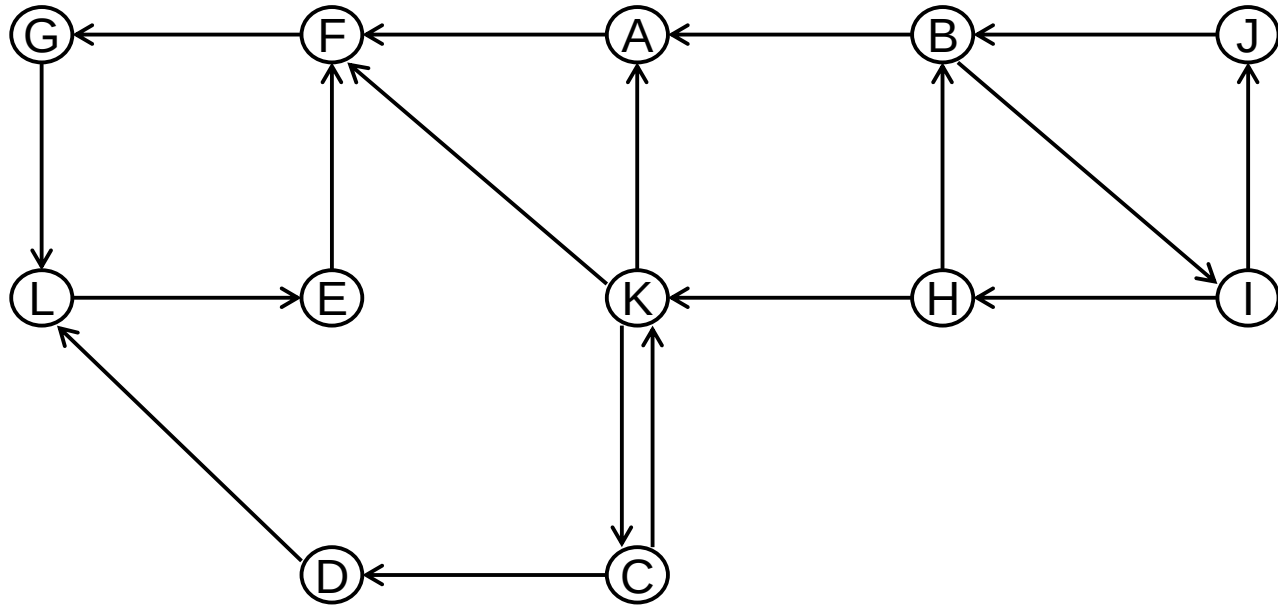
G:



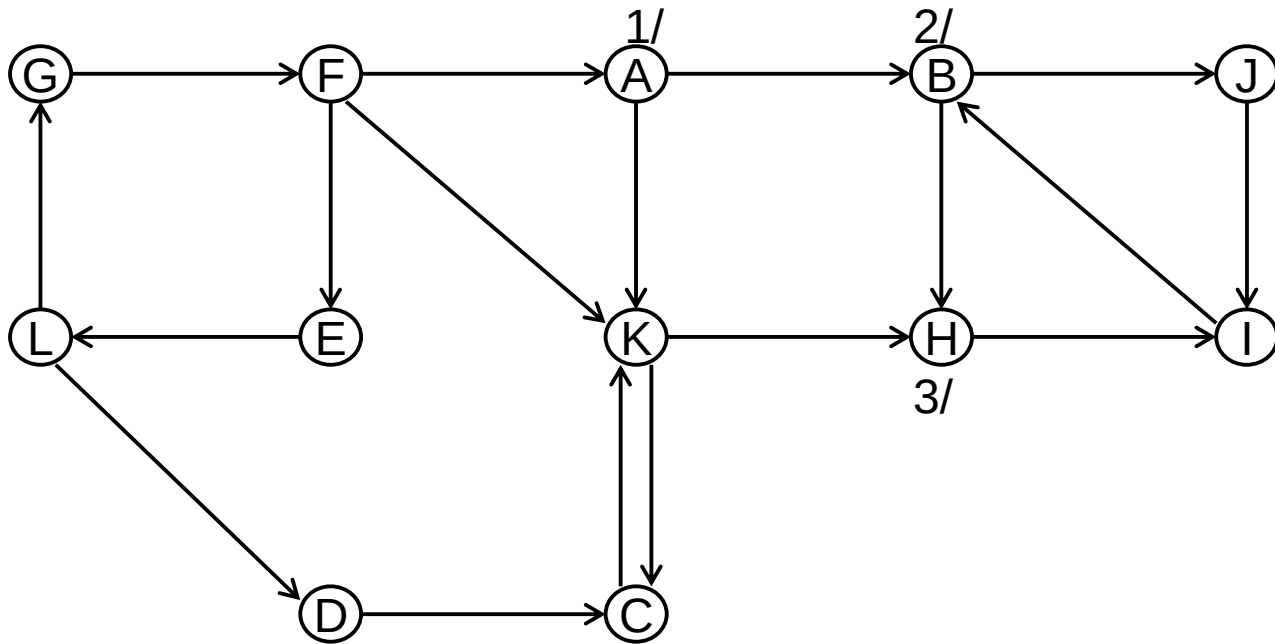
G^R :



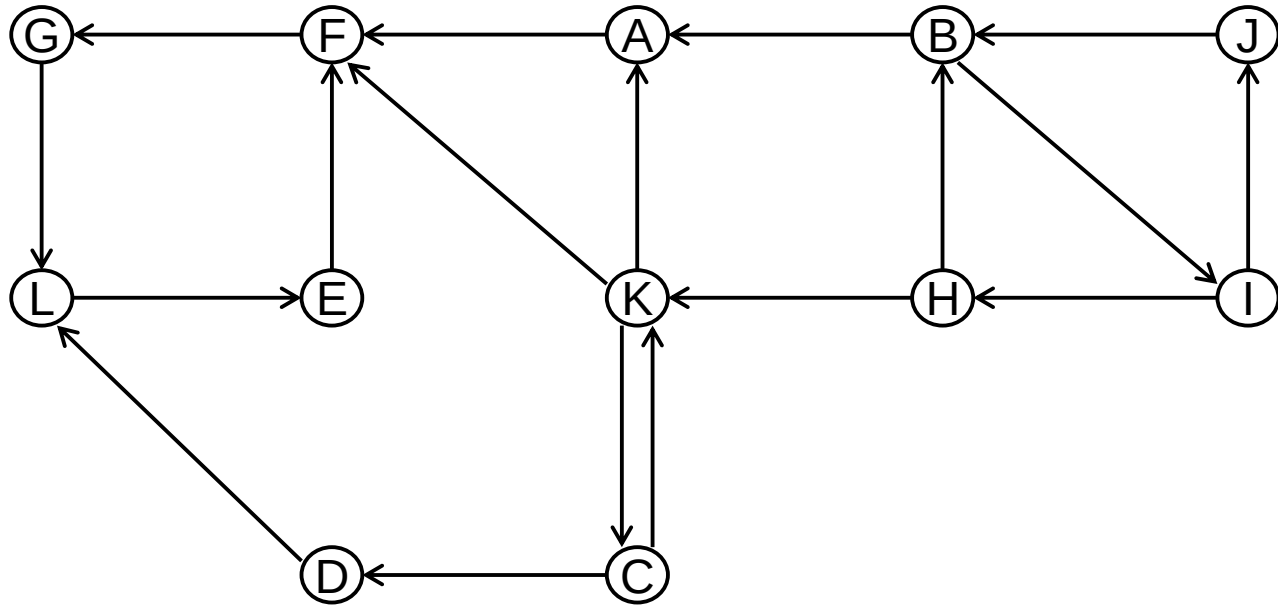
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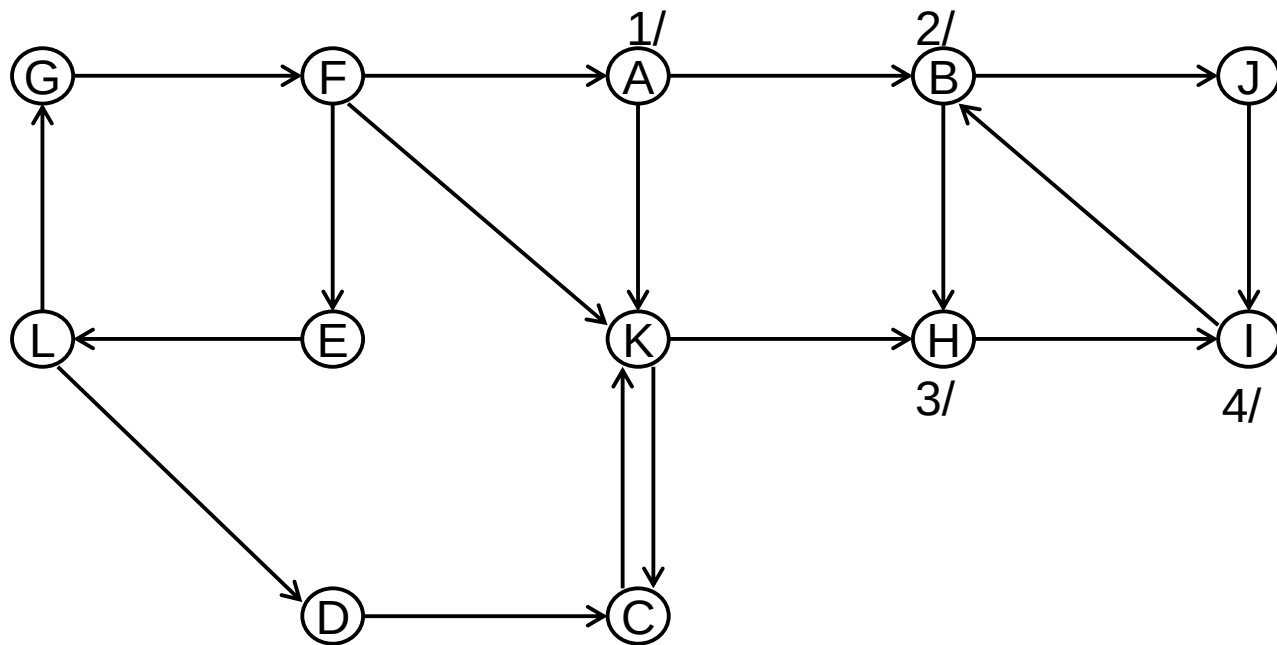
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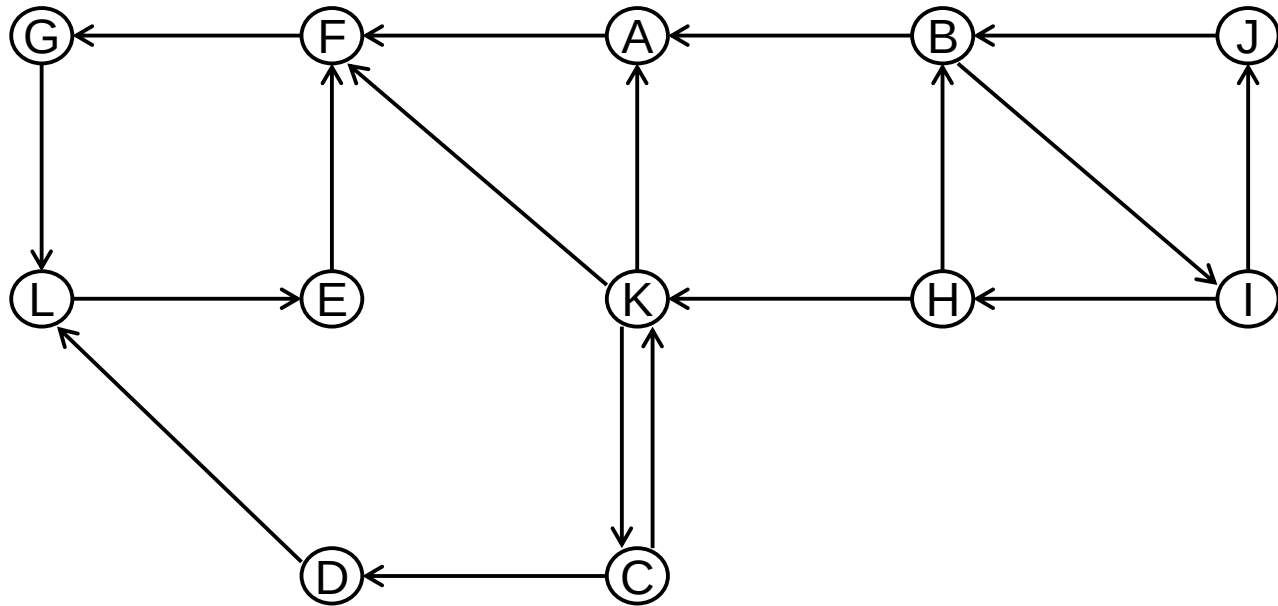
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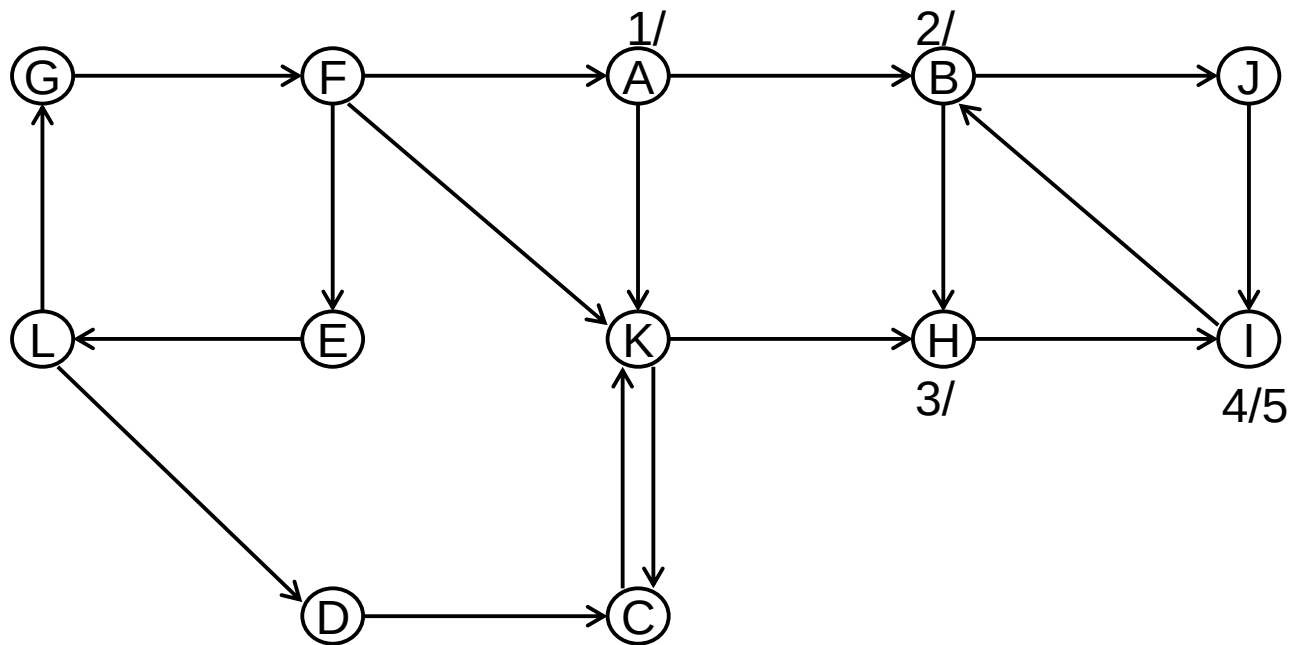
G^R :



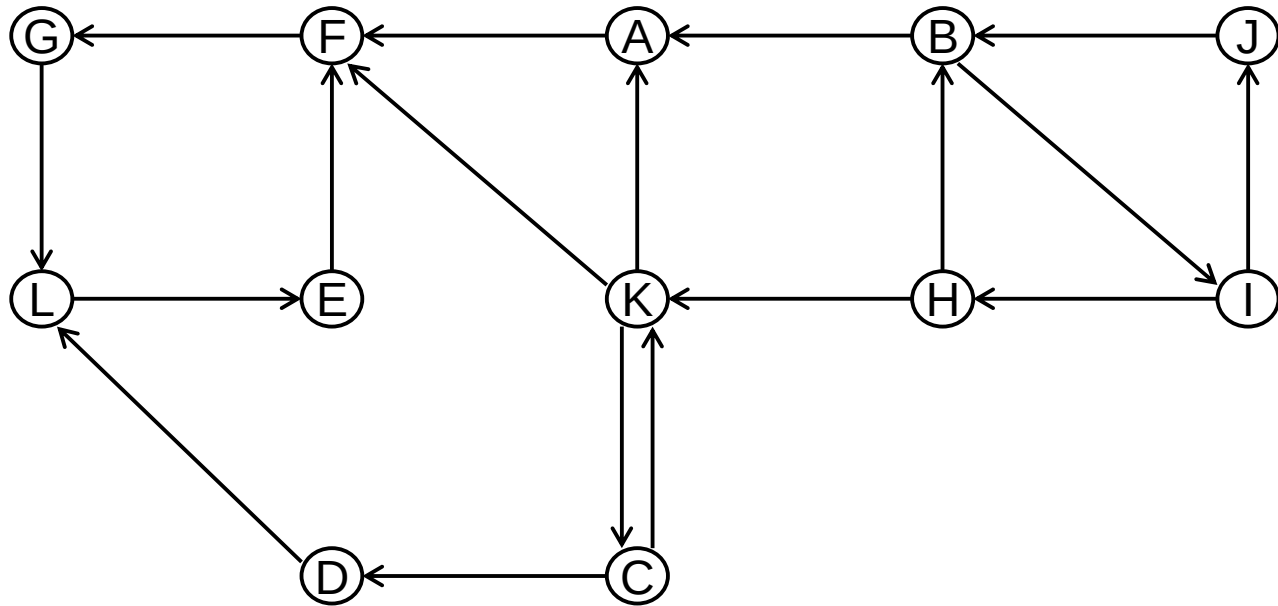
G:



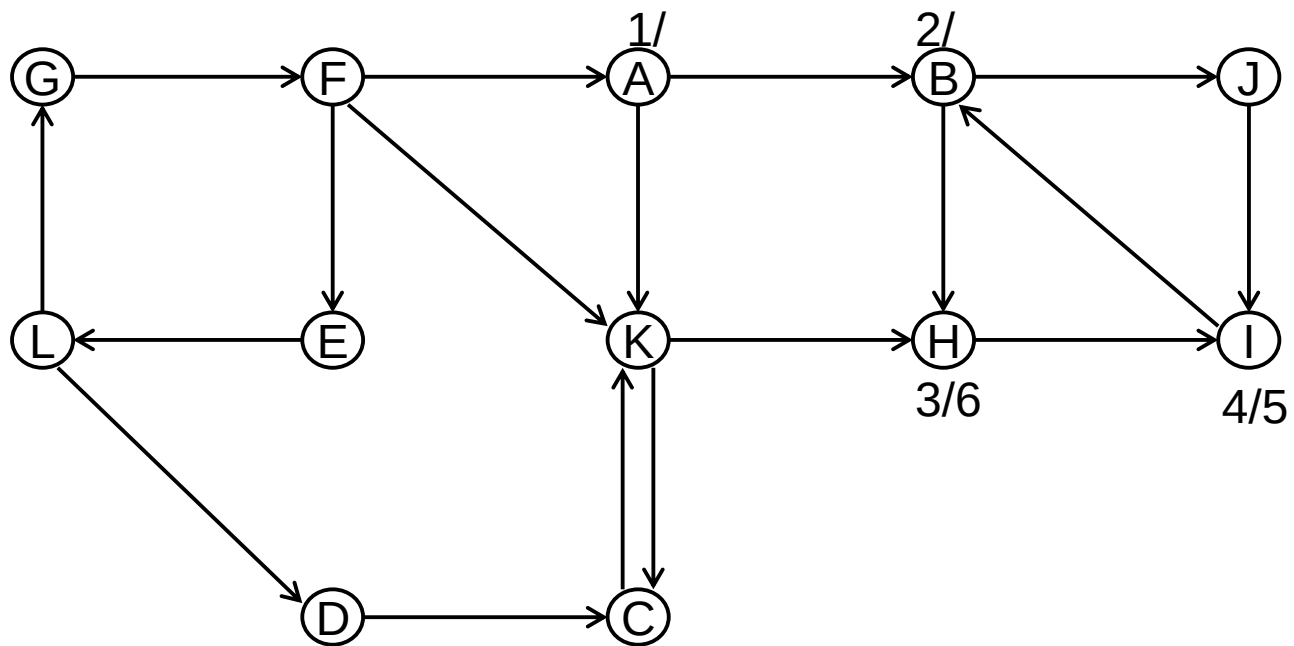
G^R :



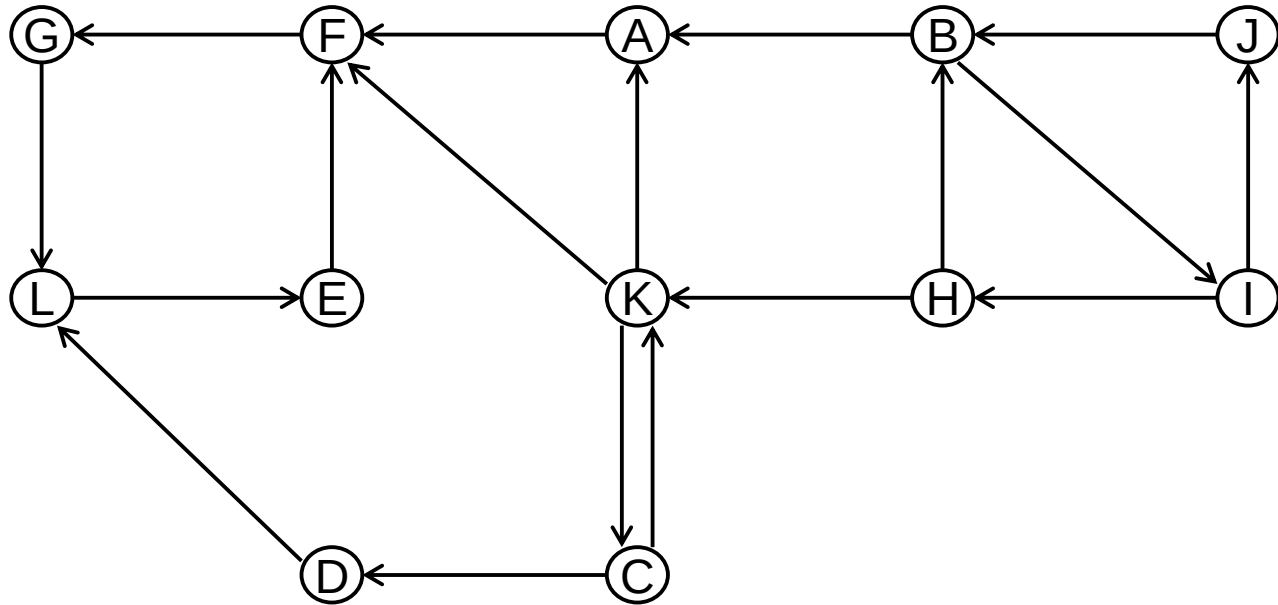
G:



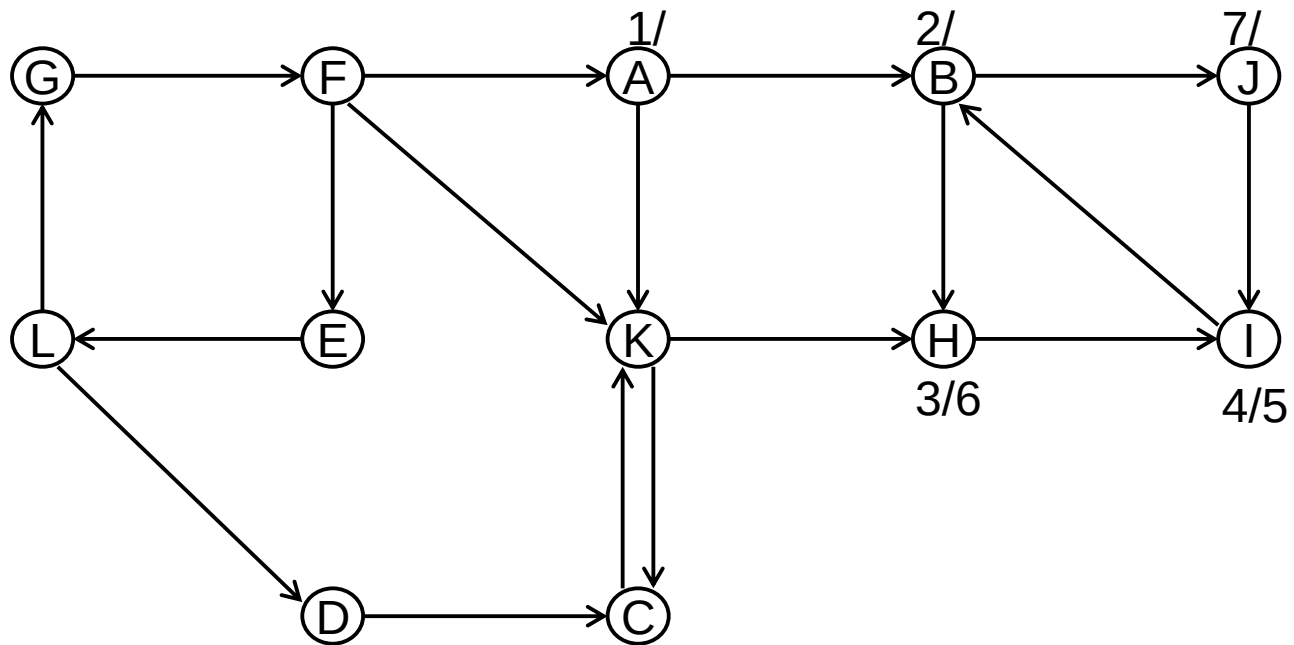
G^R :



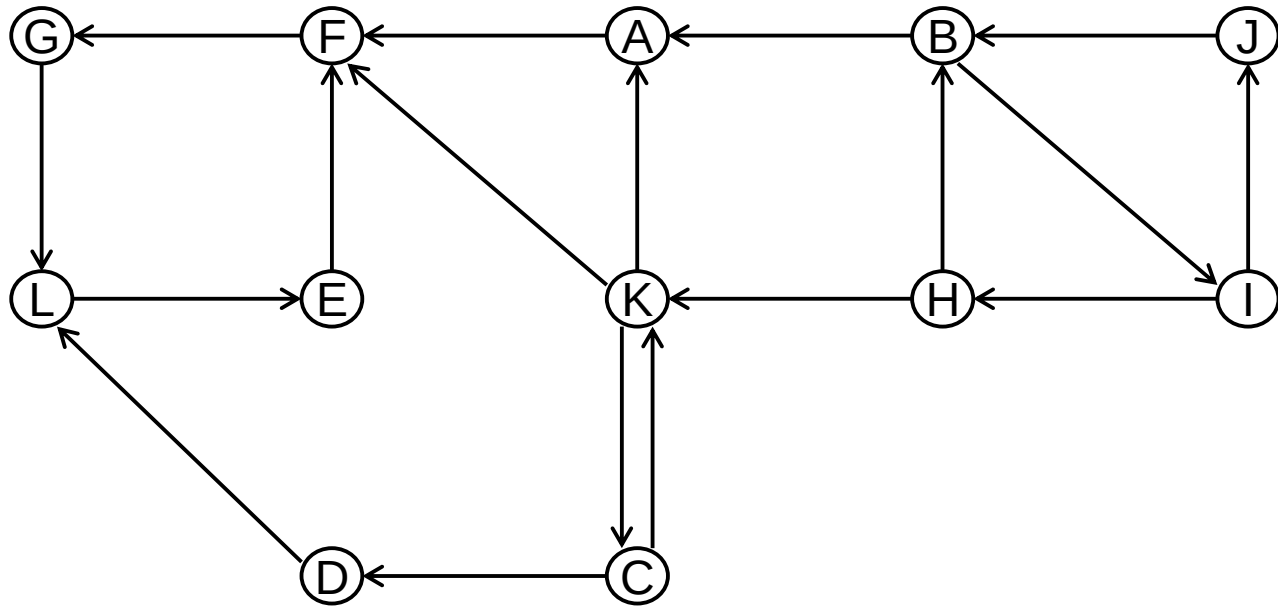
G:



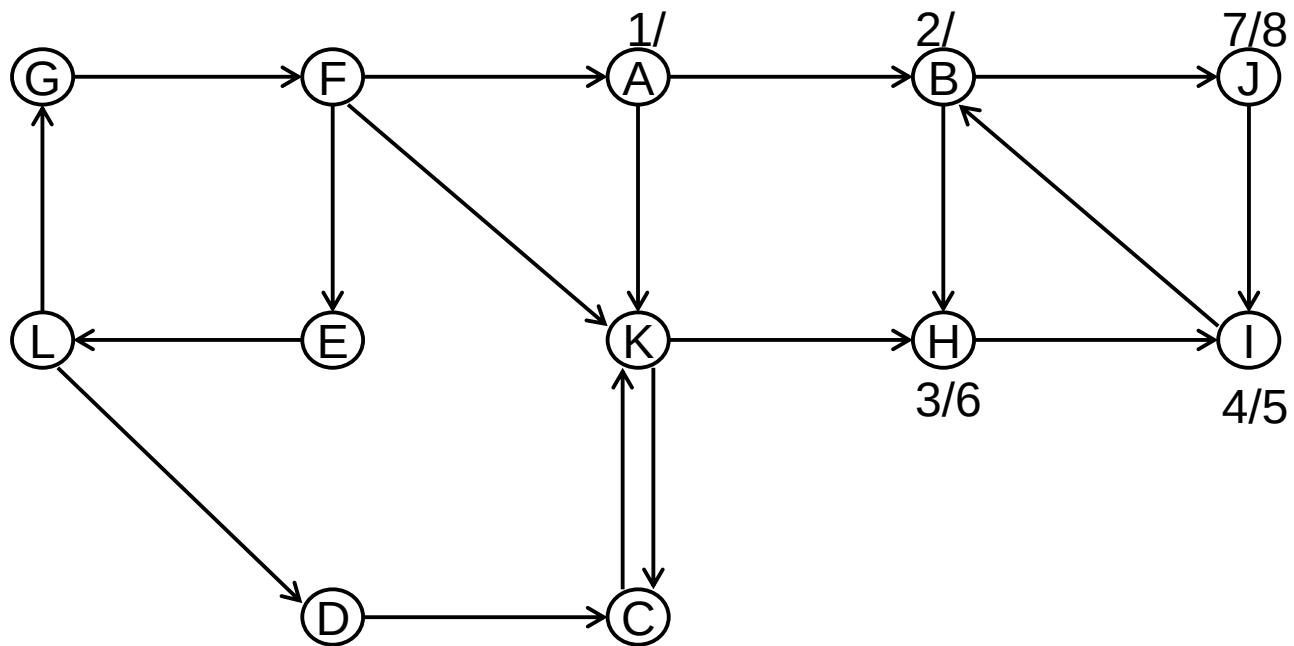
G^R :



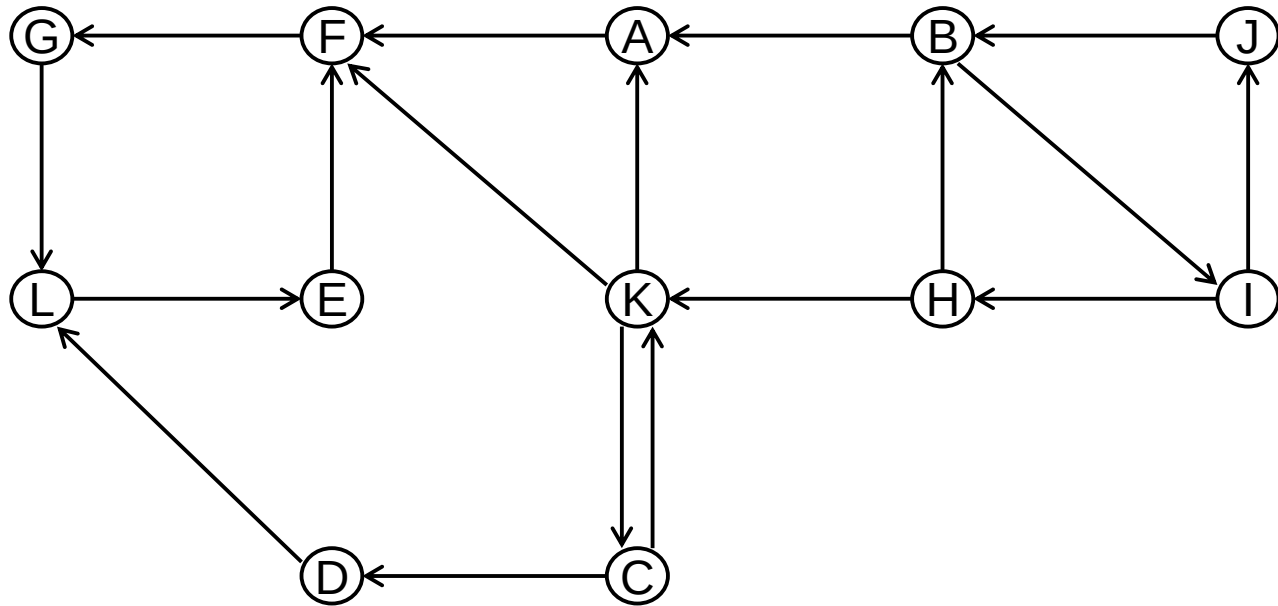
G:



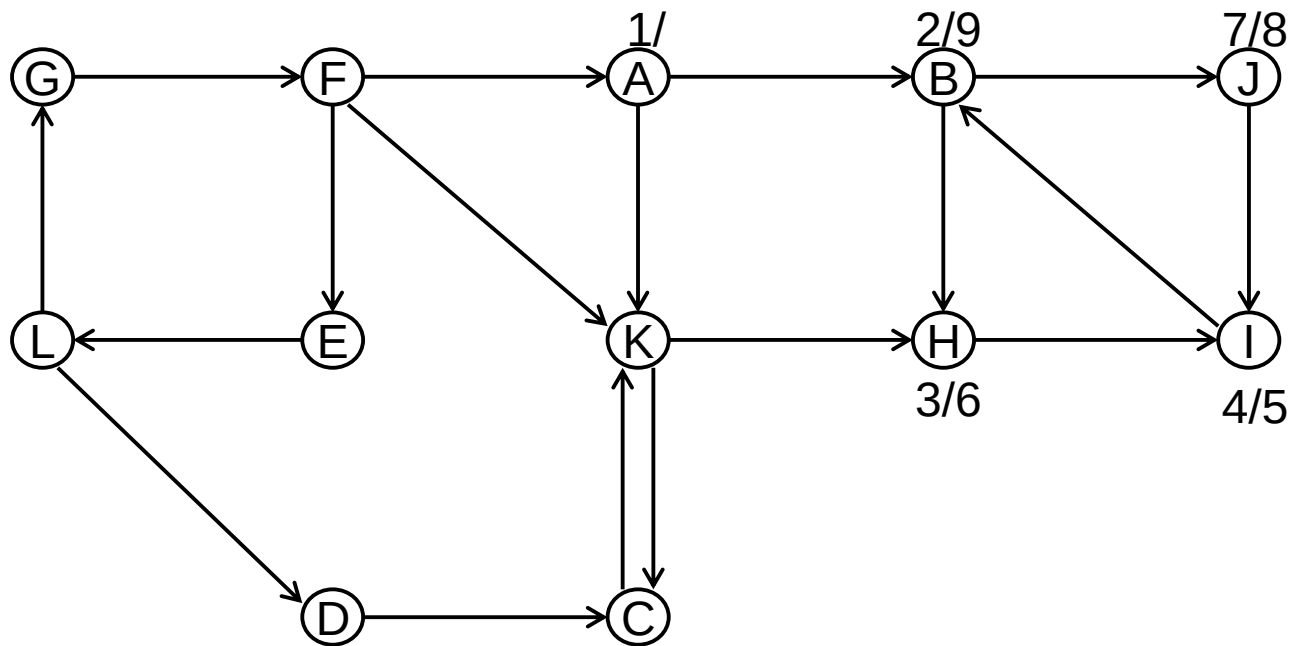
G^R :



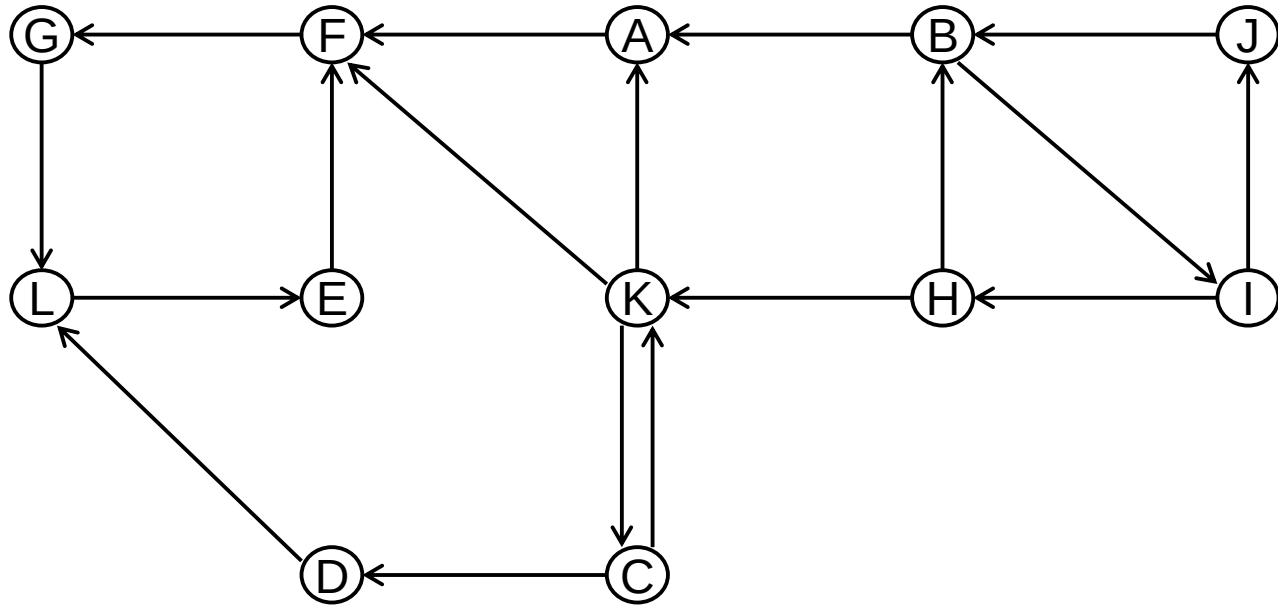
G:



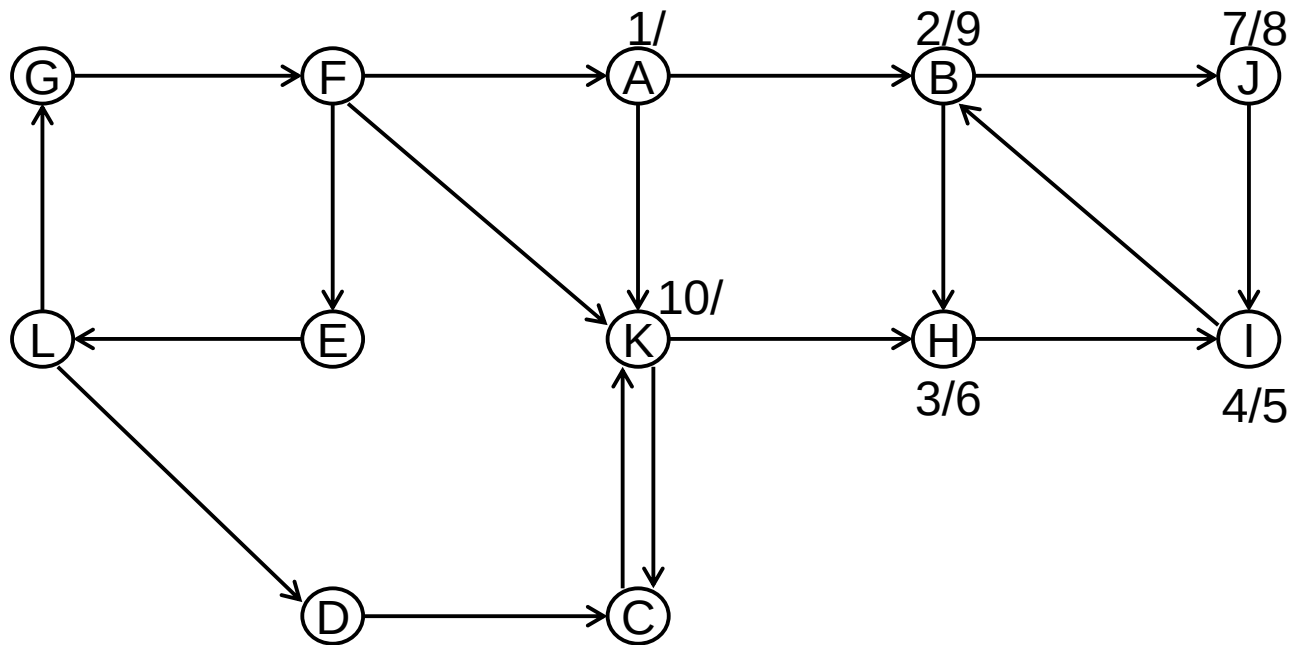
G^R :



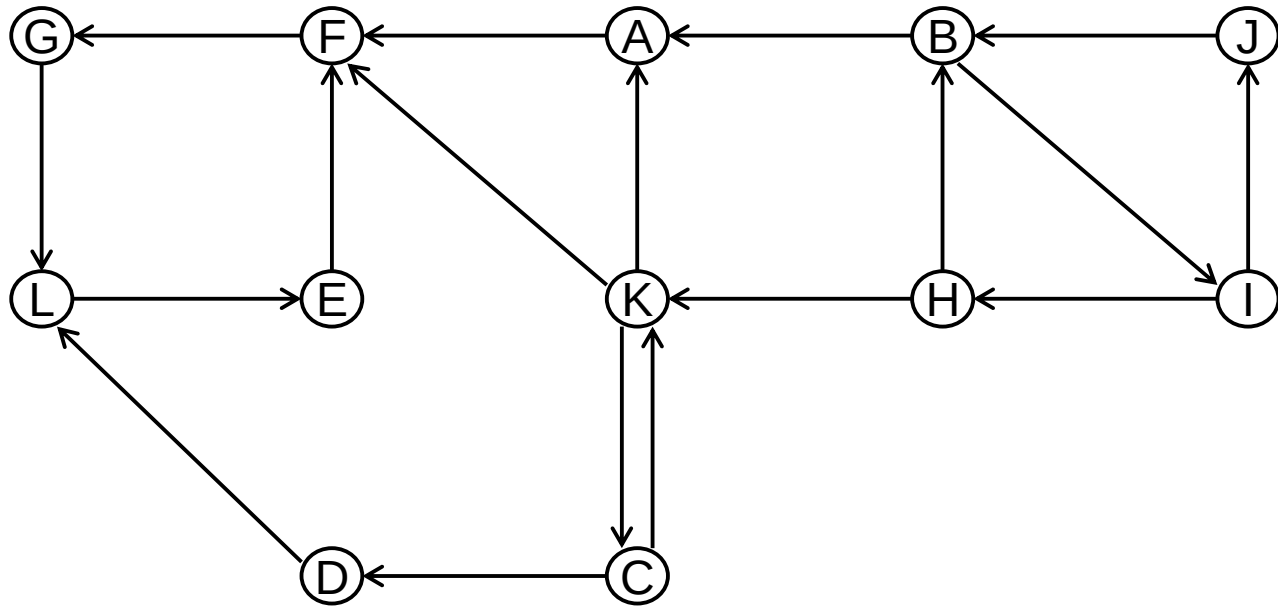
G:



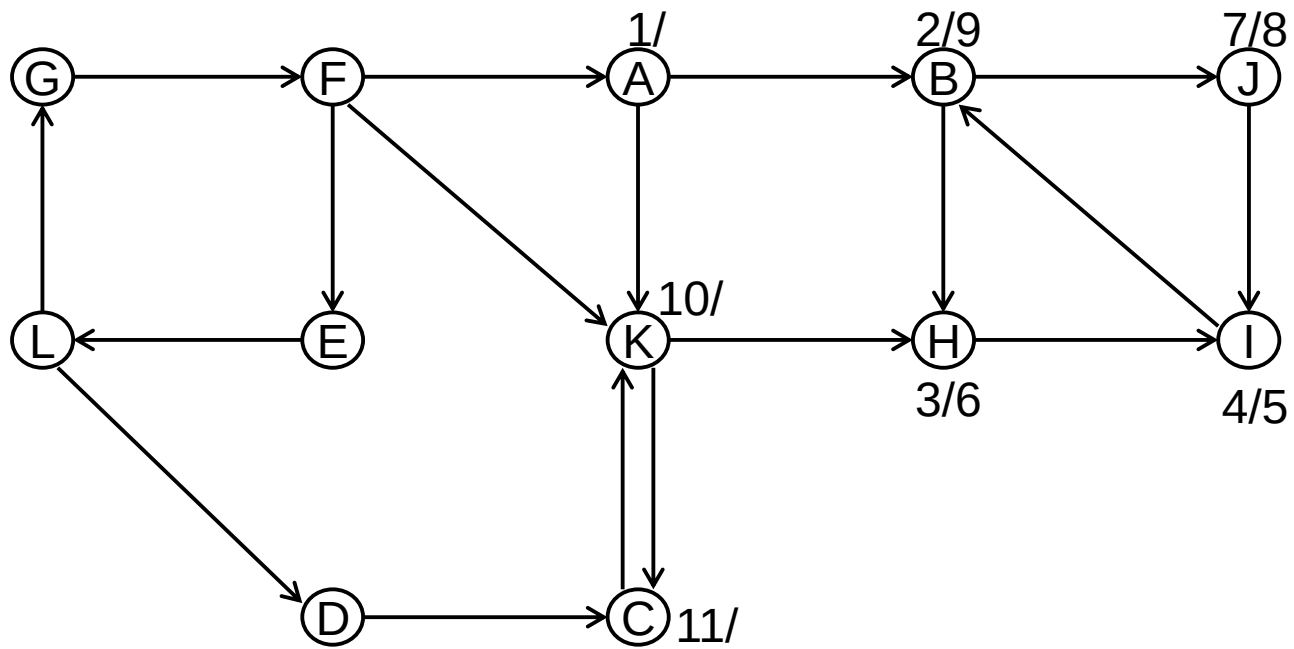
G^R:



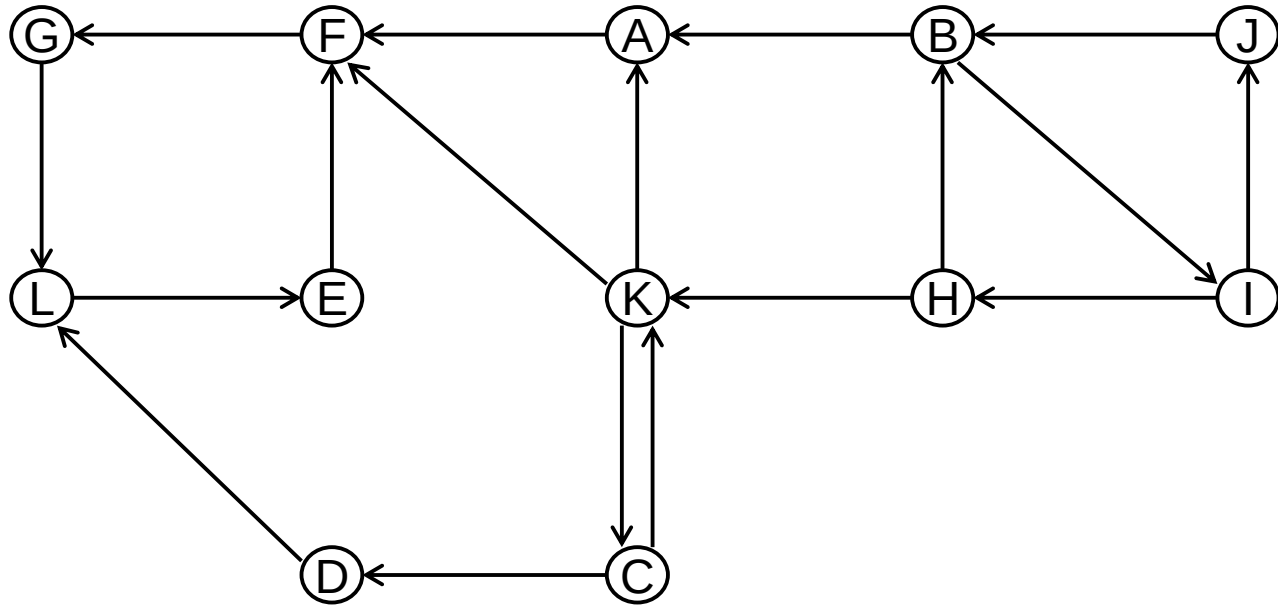
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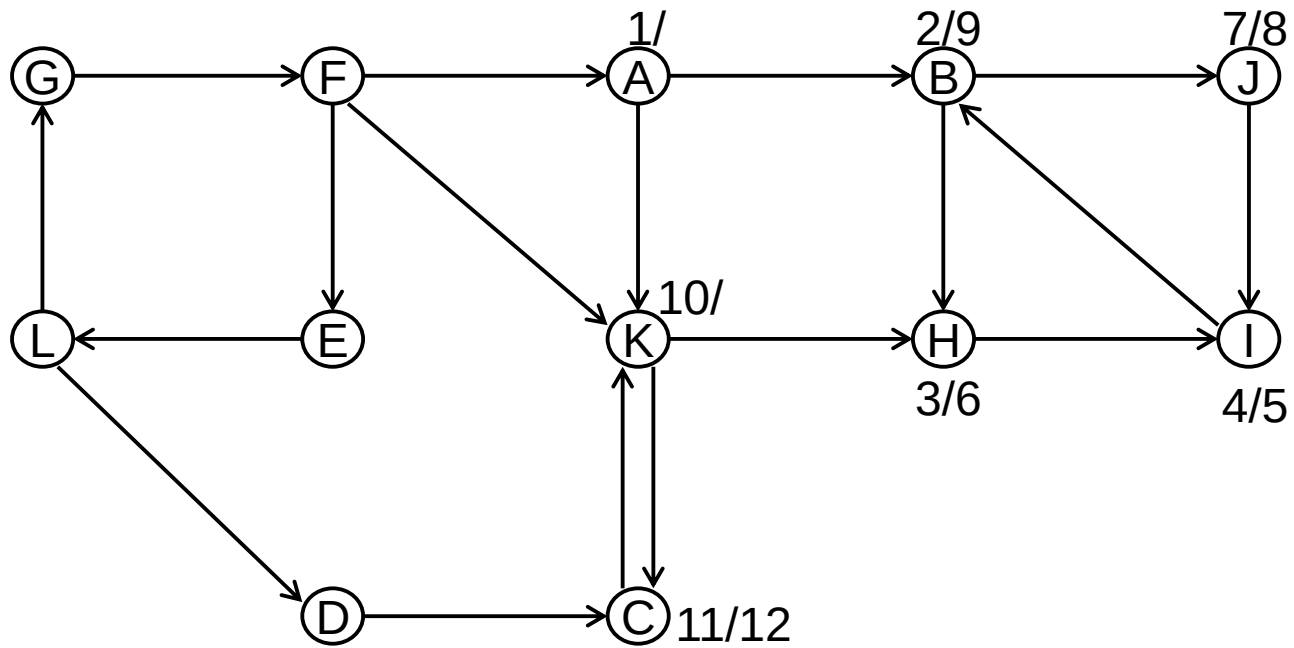
G^R :



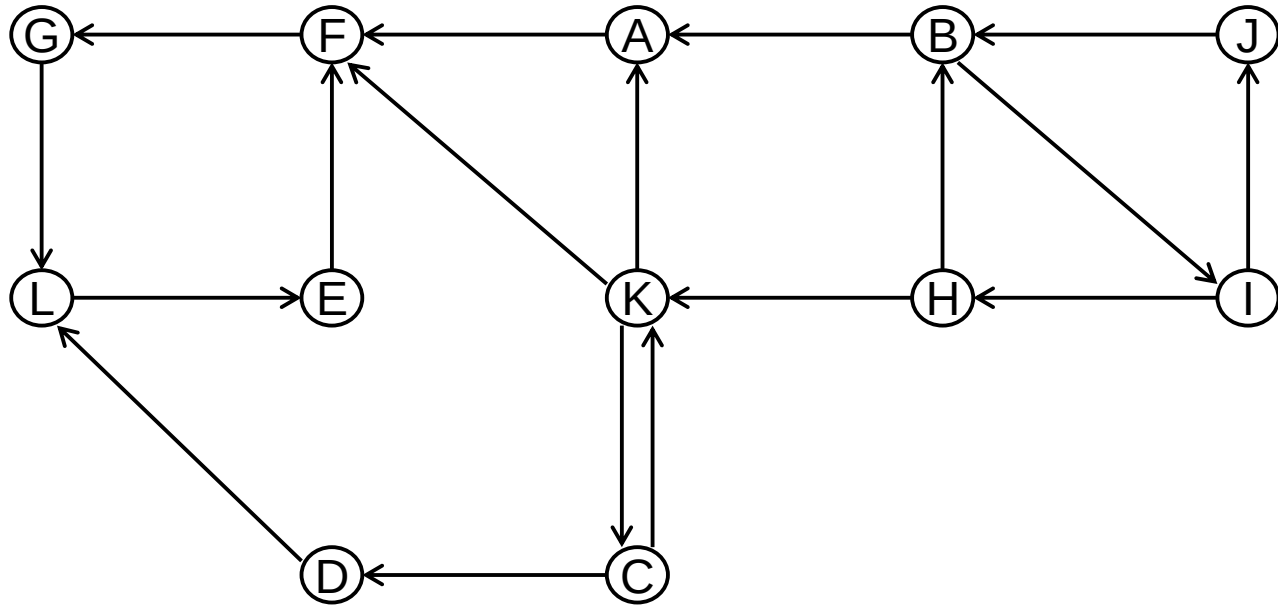
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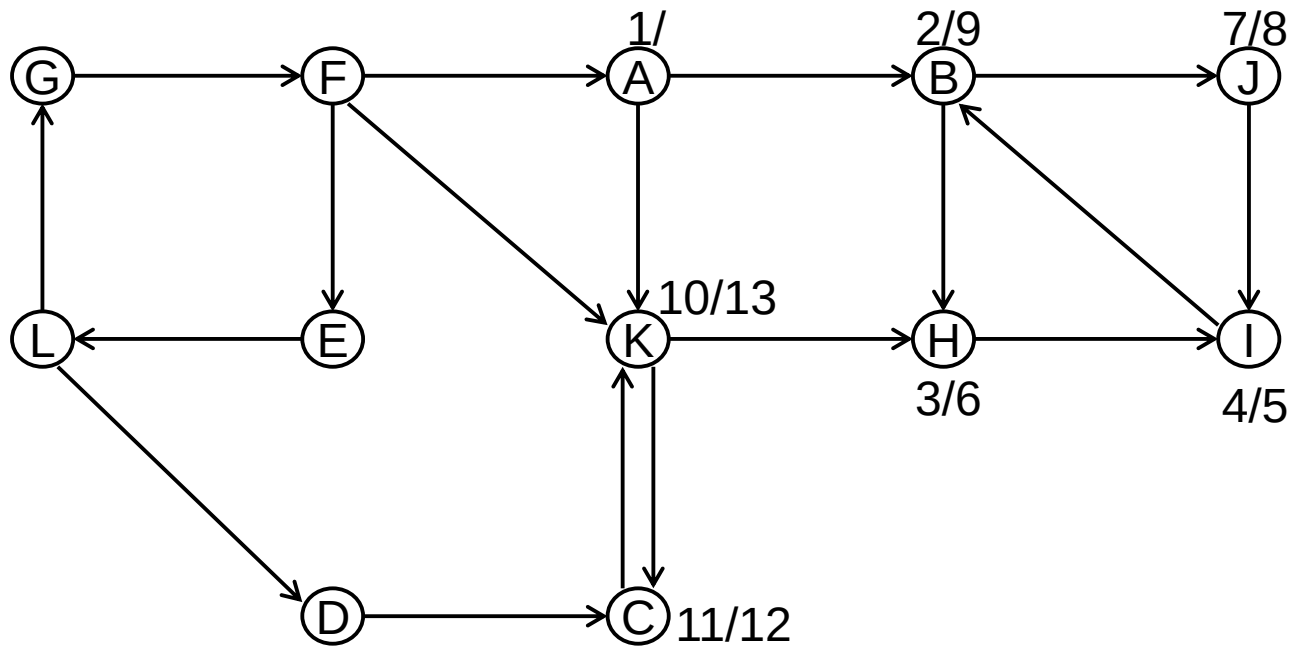
G^R :



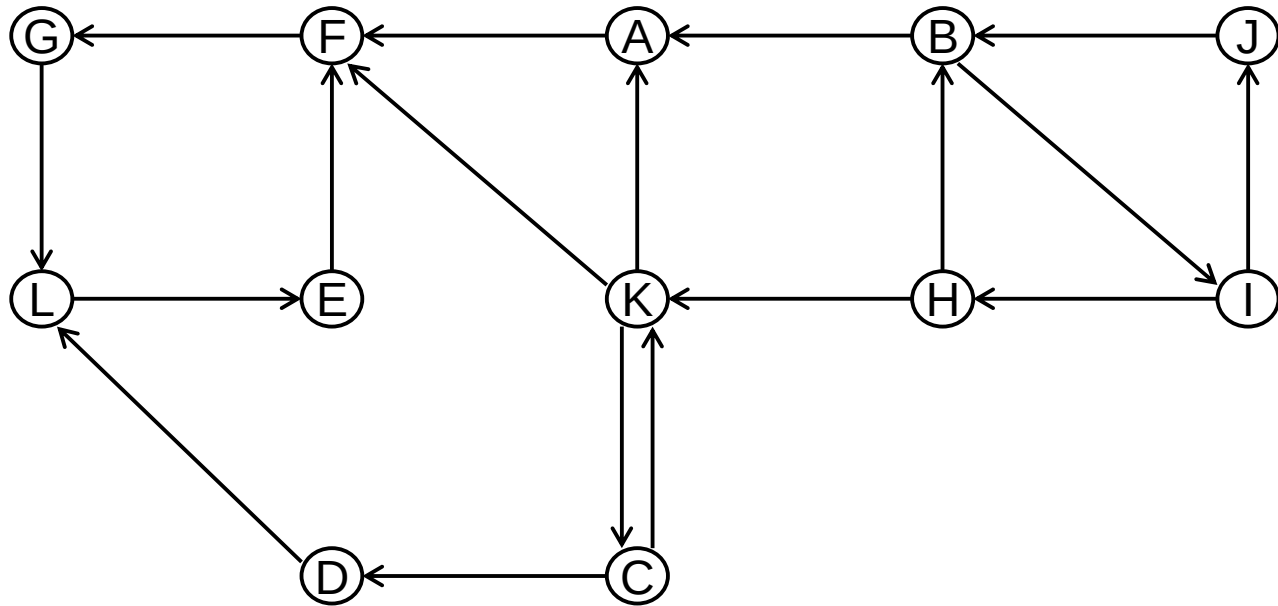
G:



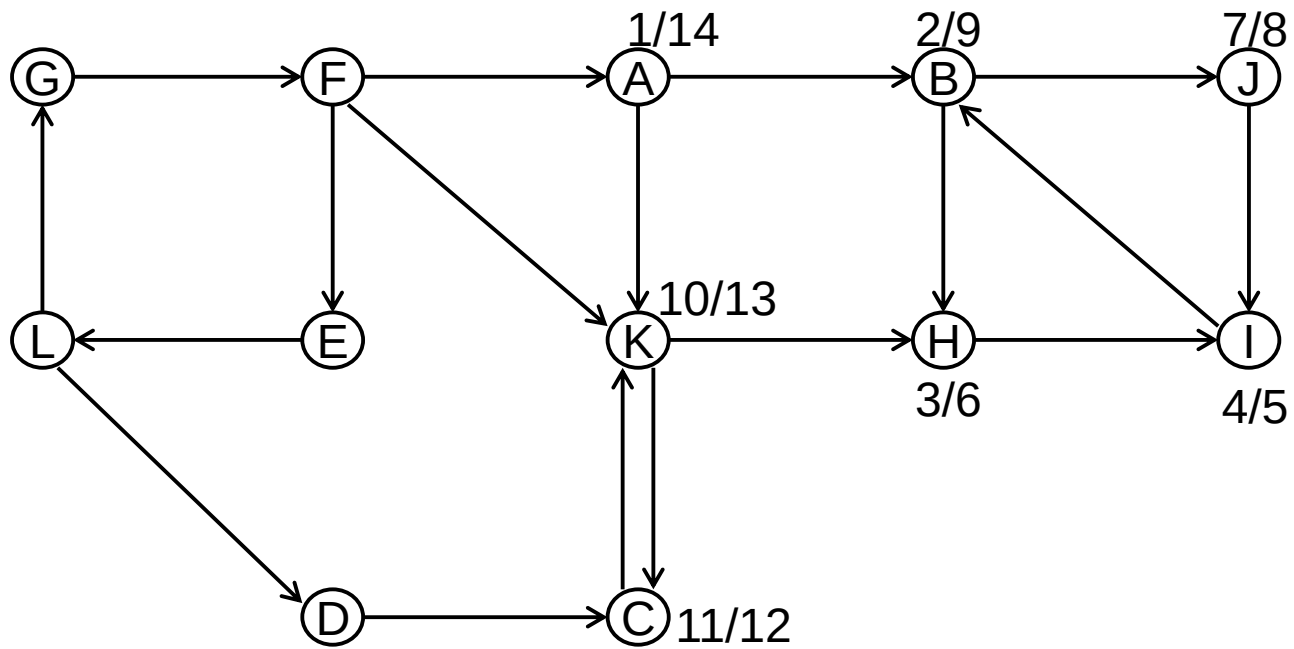
G^R :



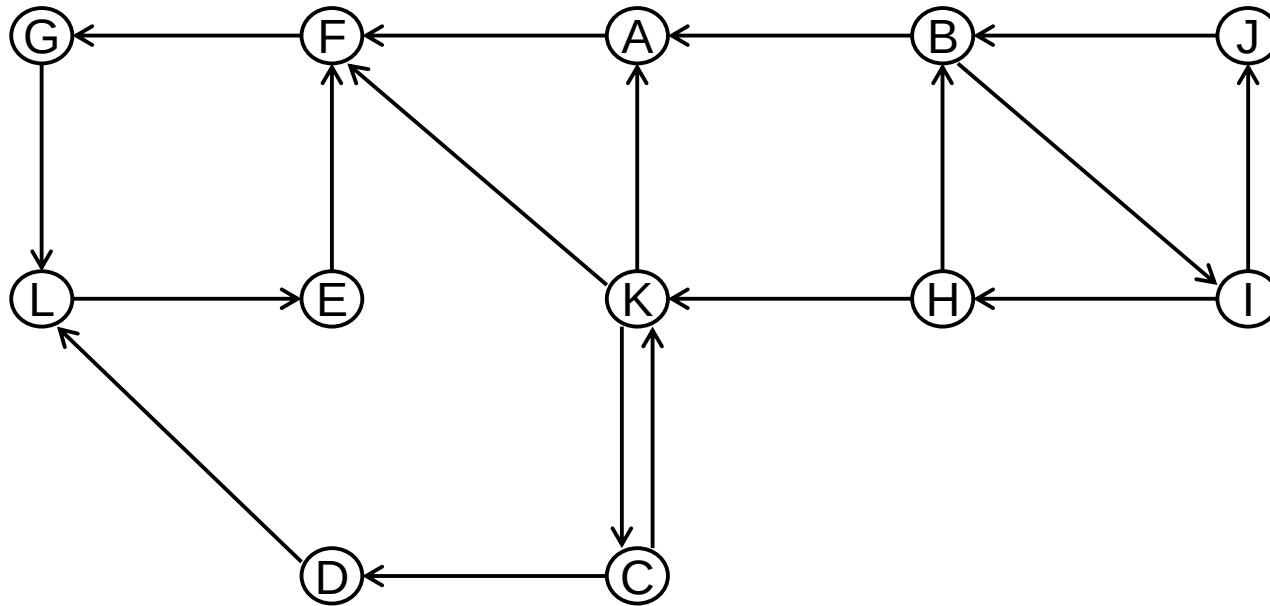
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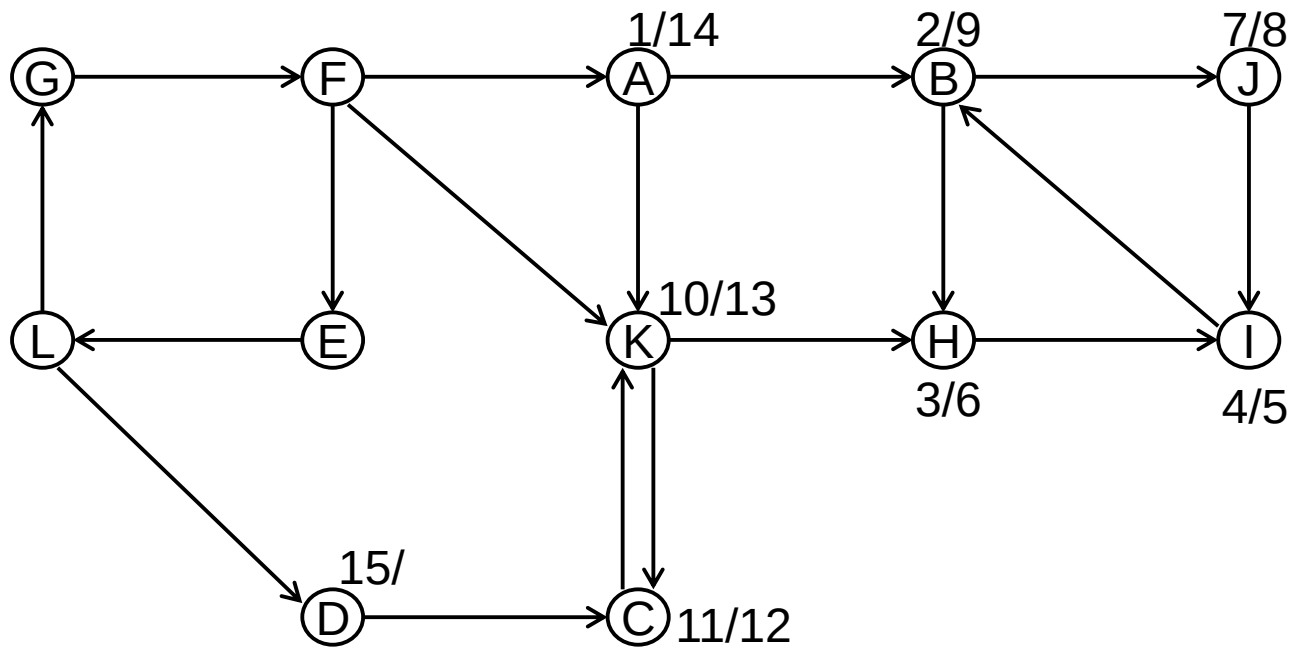
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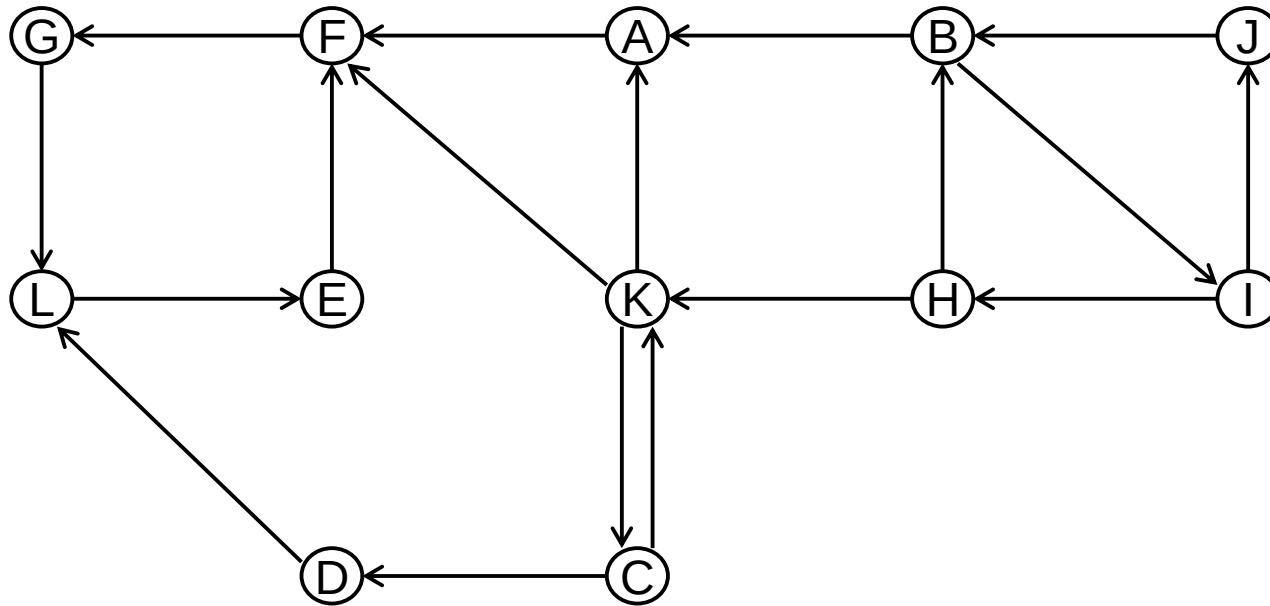
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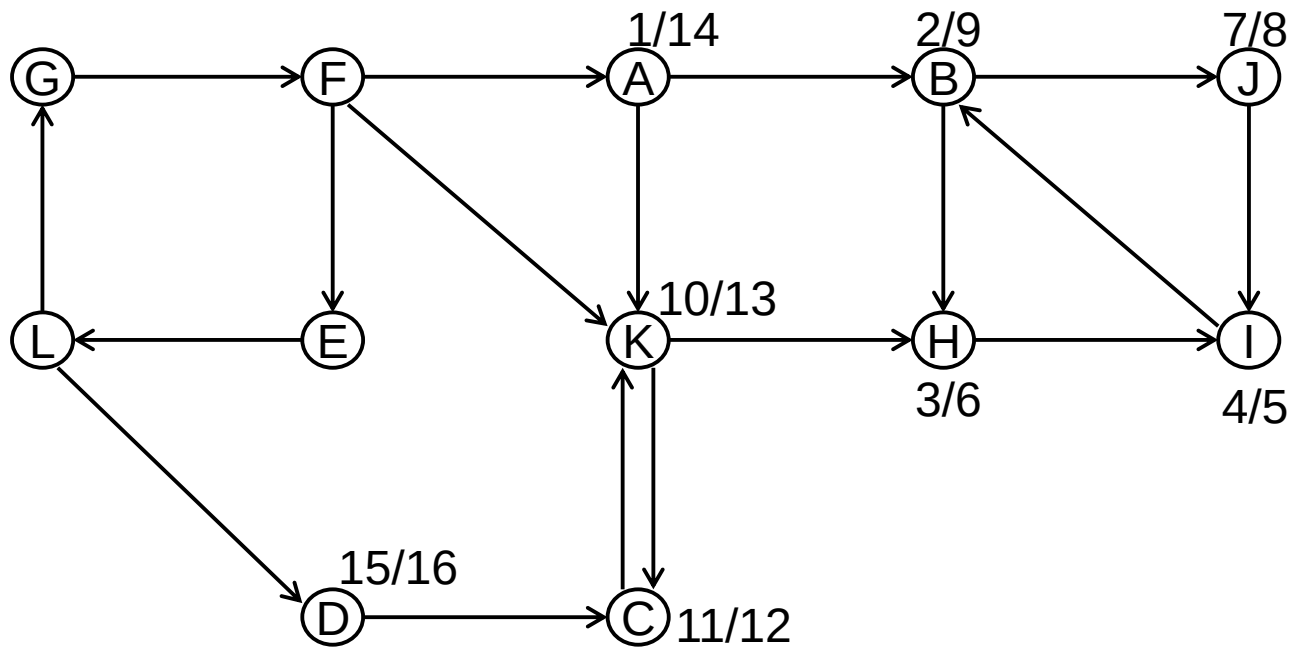
G^R :



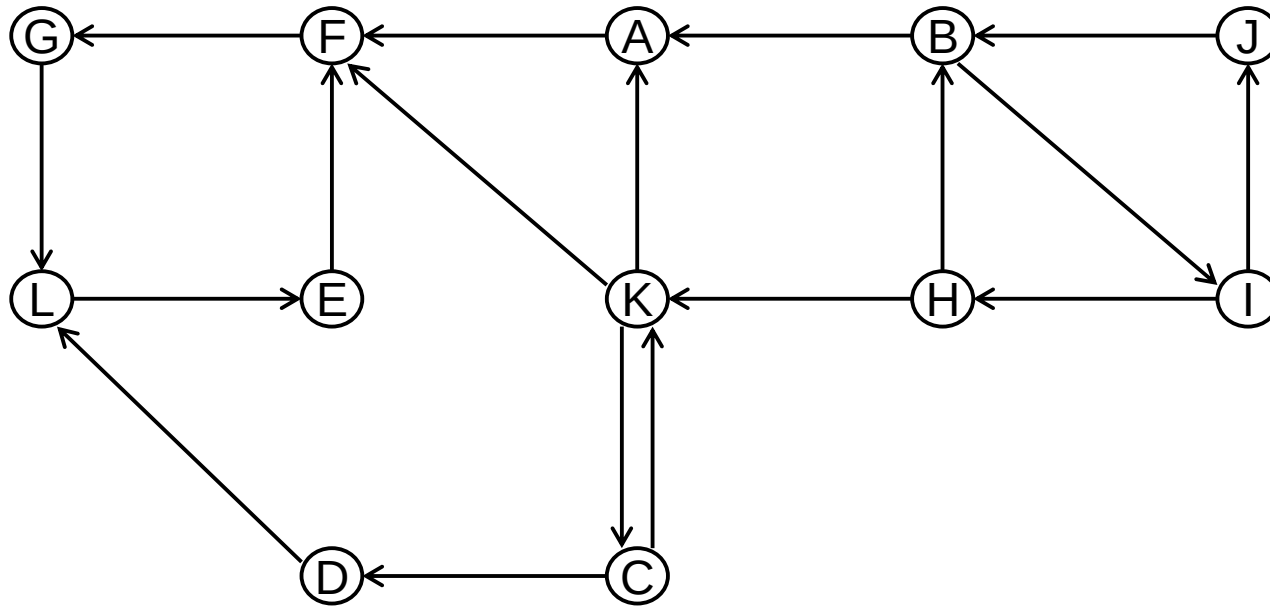
G:



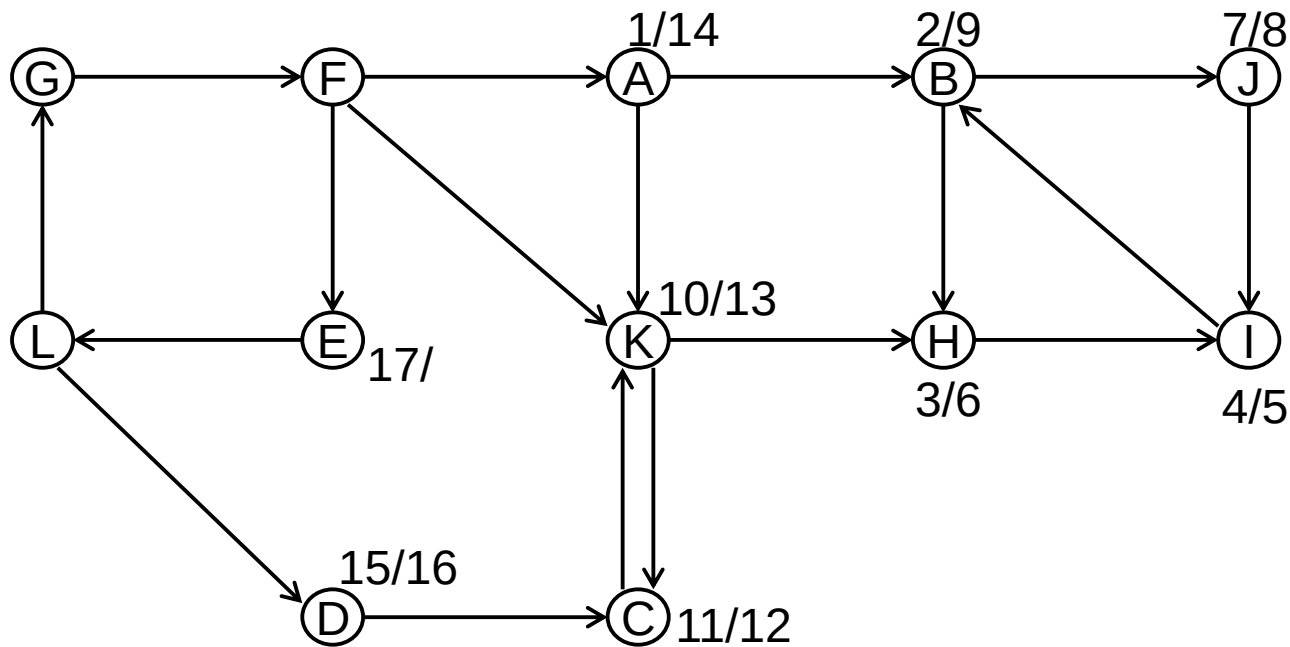
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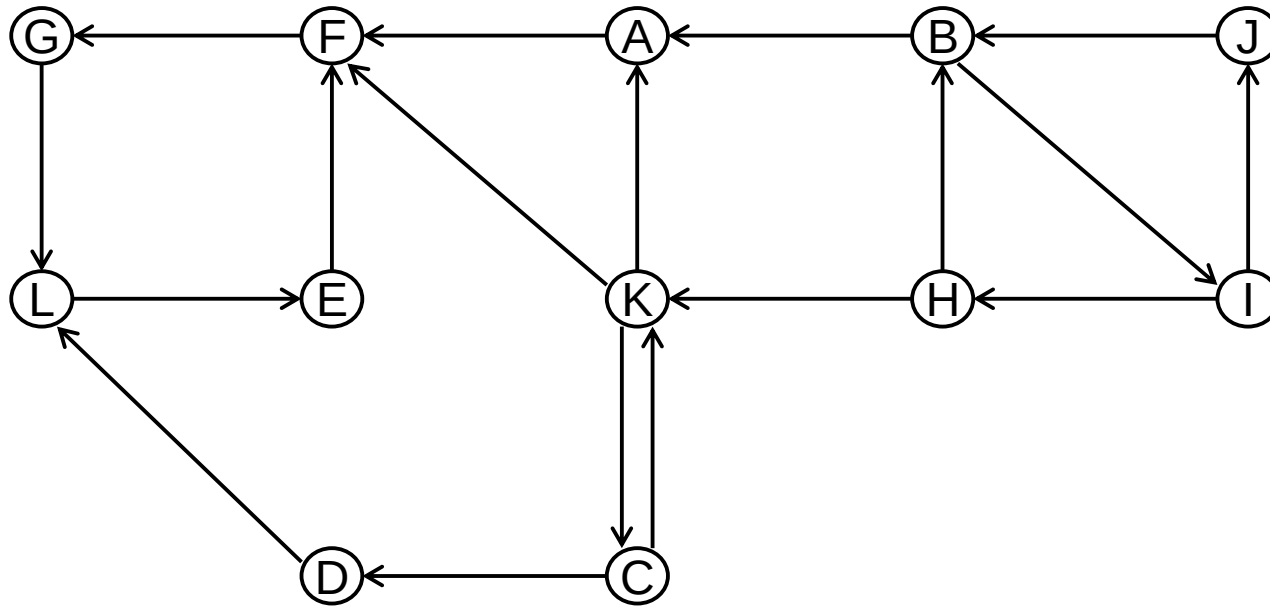
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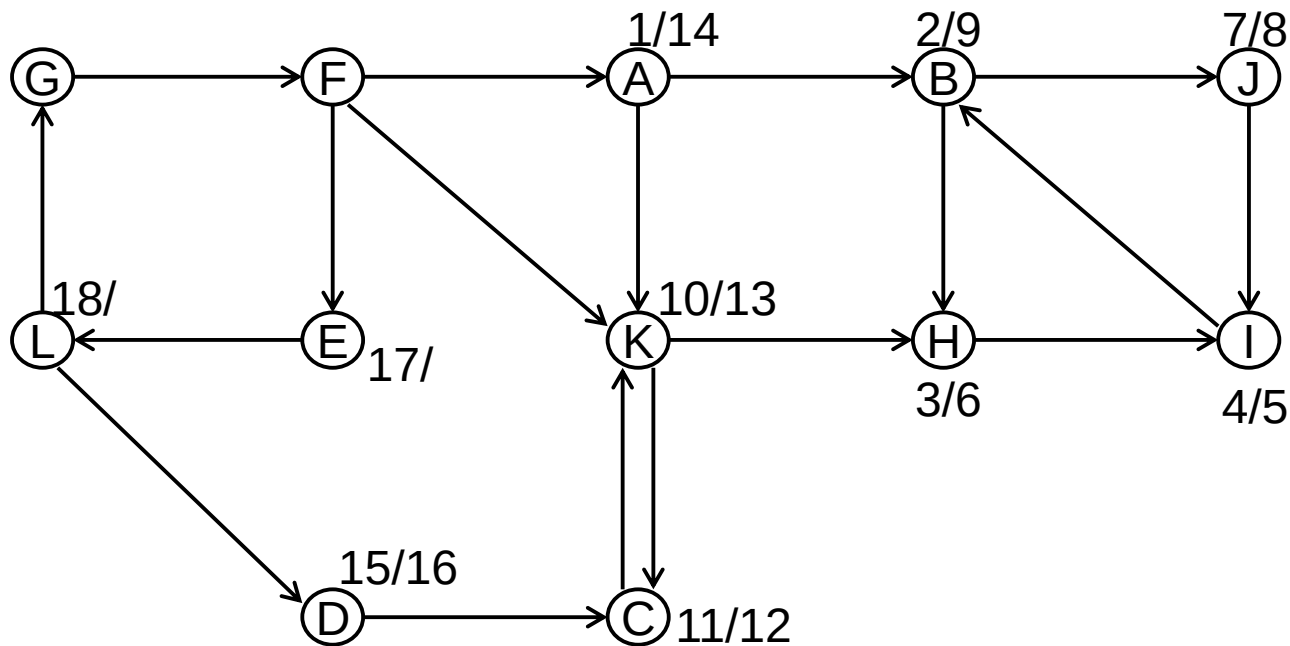
G^R:



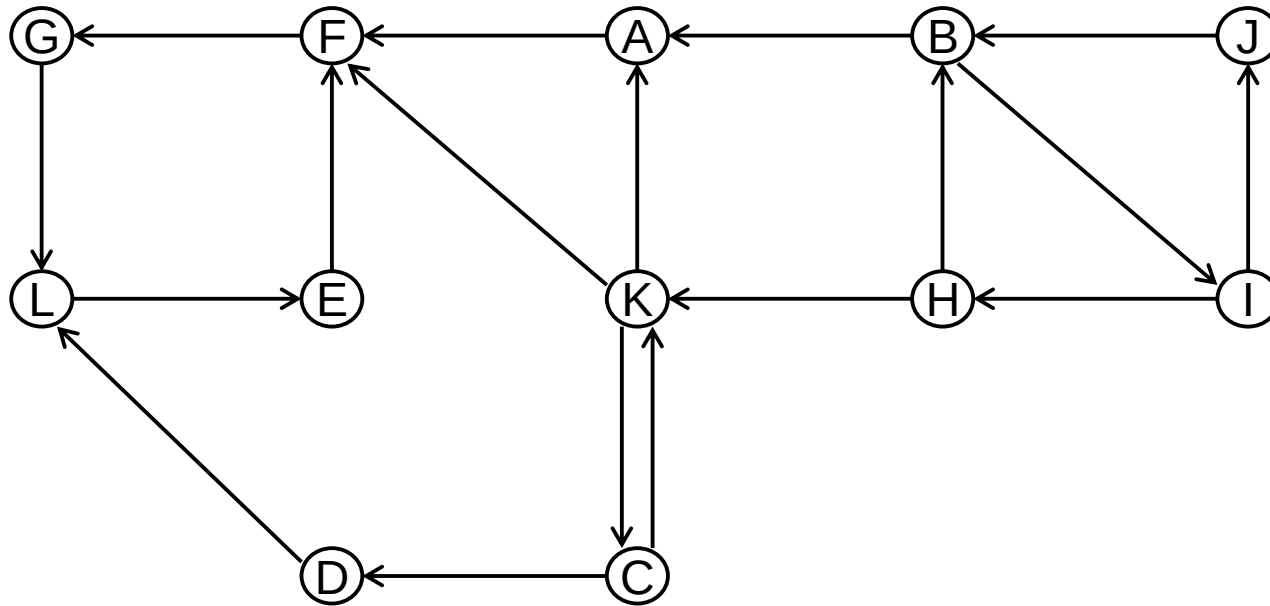
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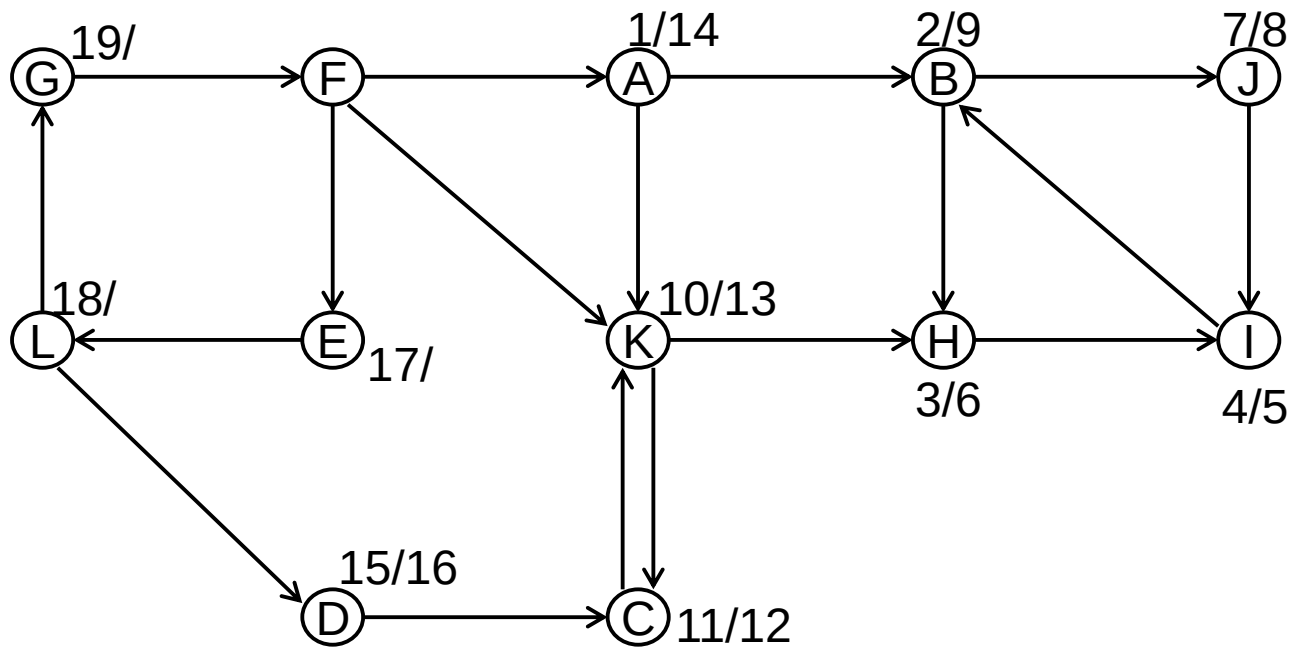
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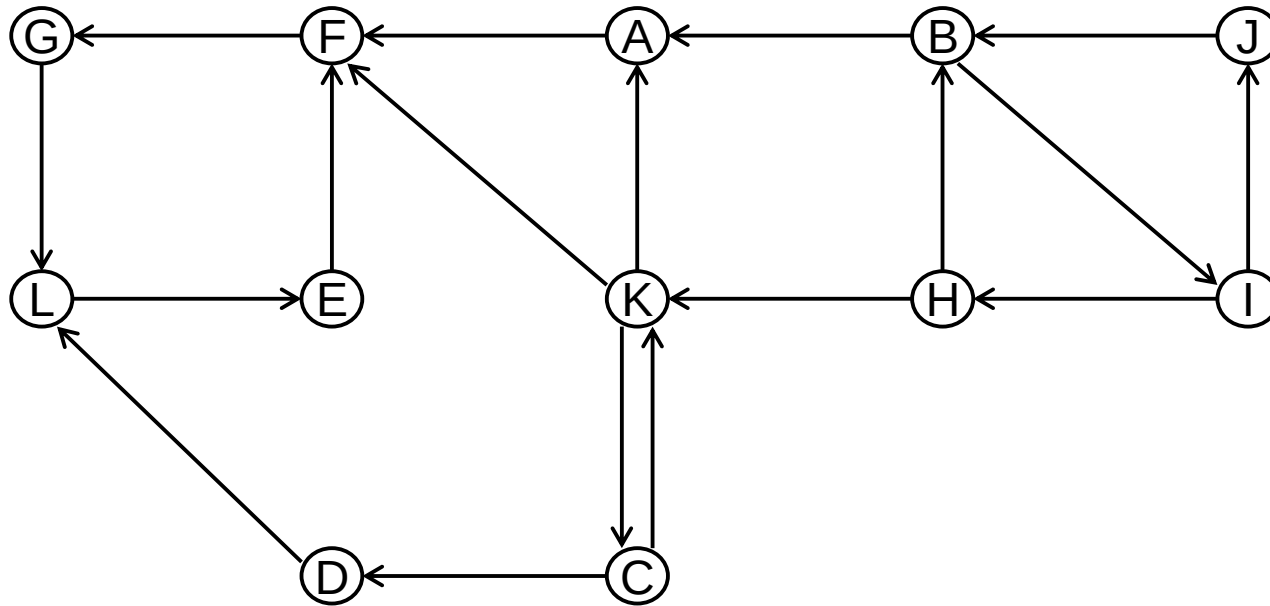
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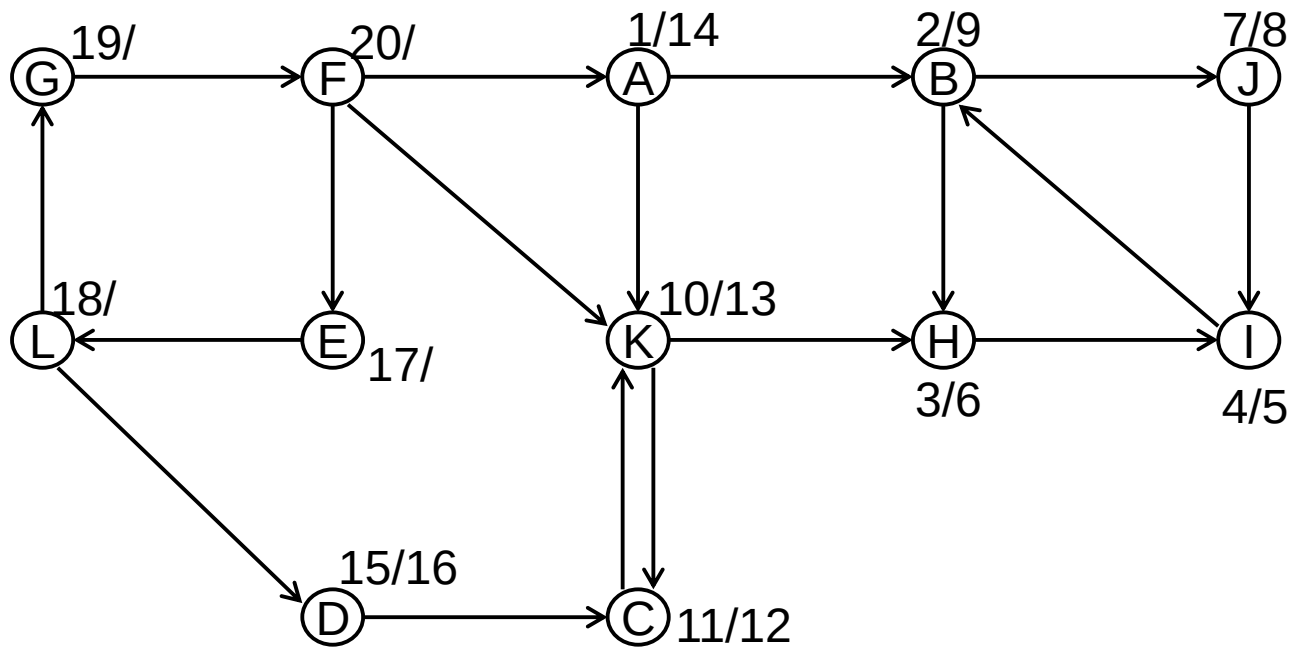
G^R:



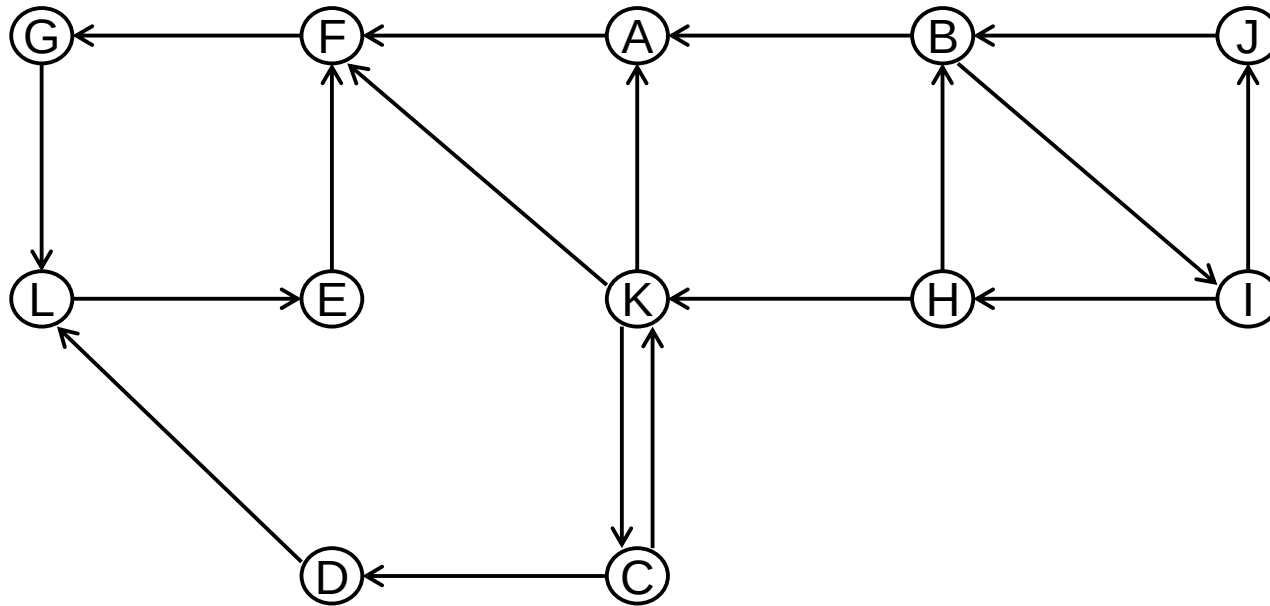
G:



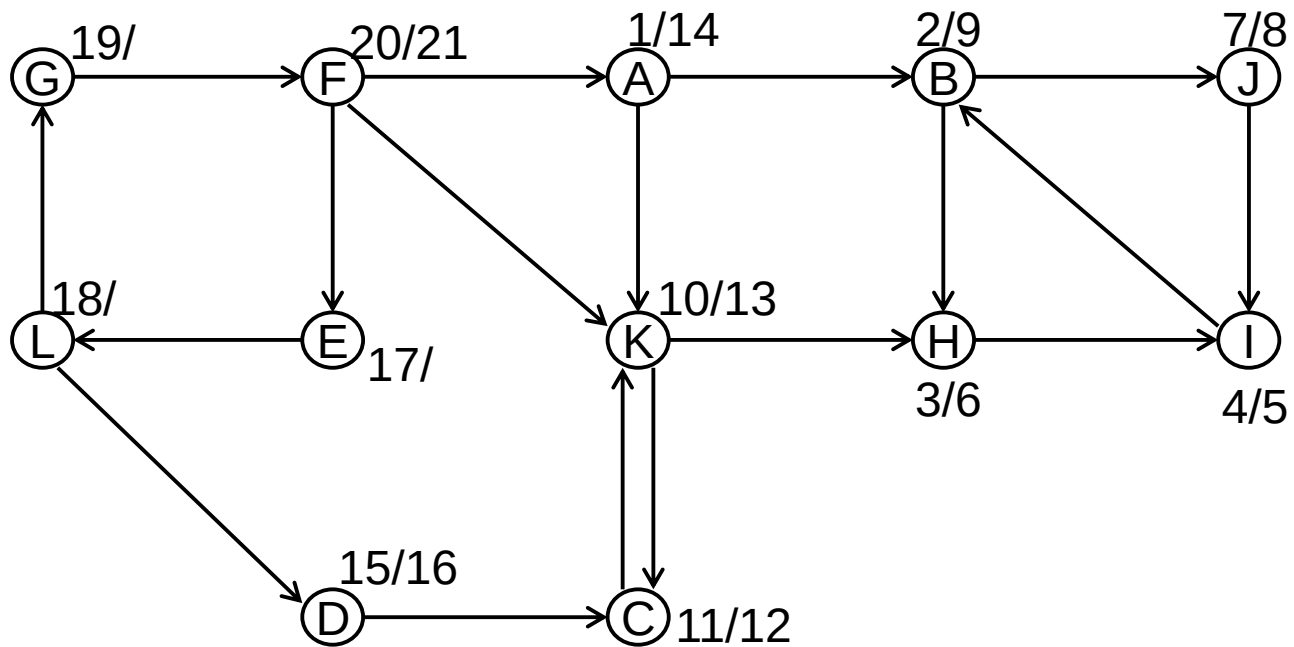
G^R :



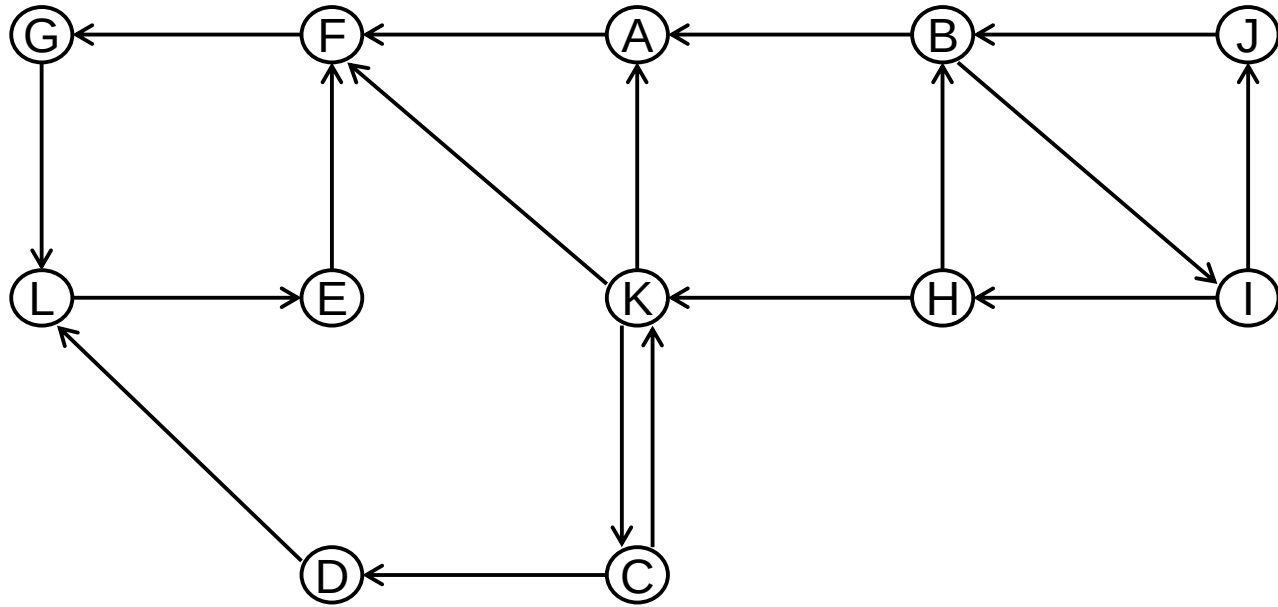
G:



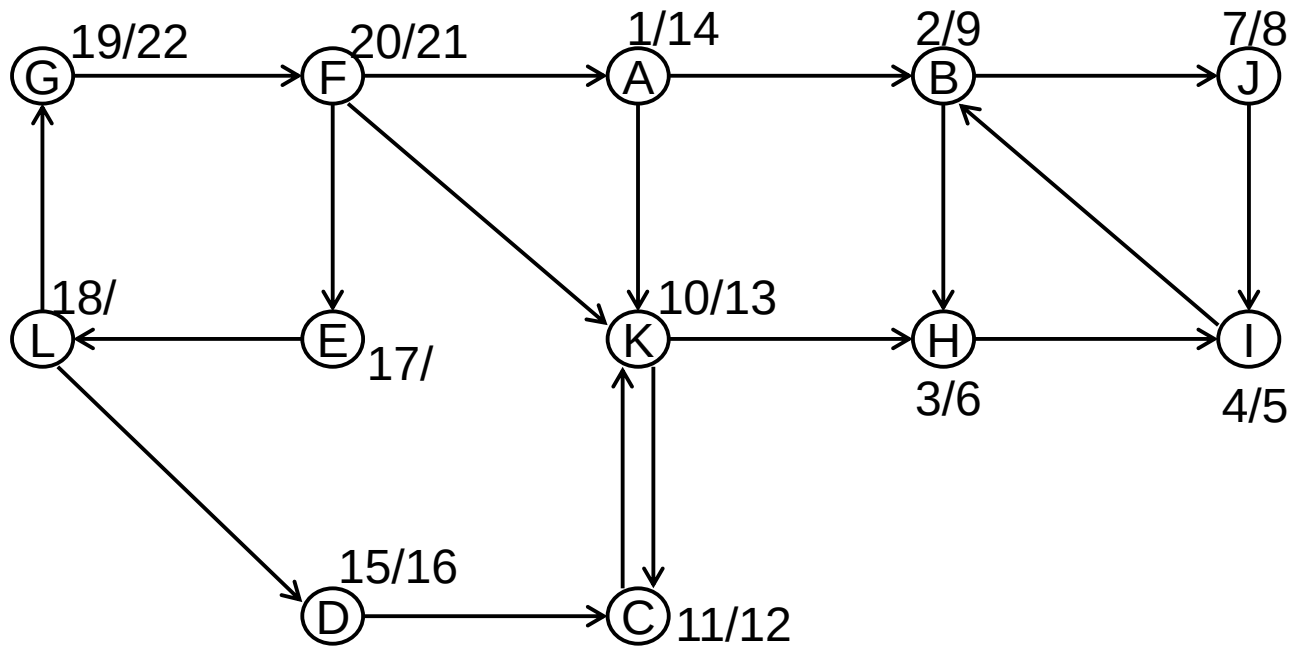
G^R :



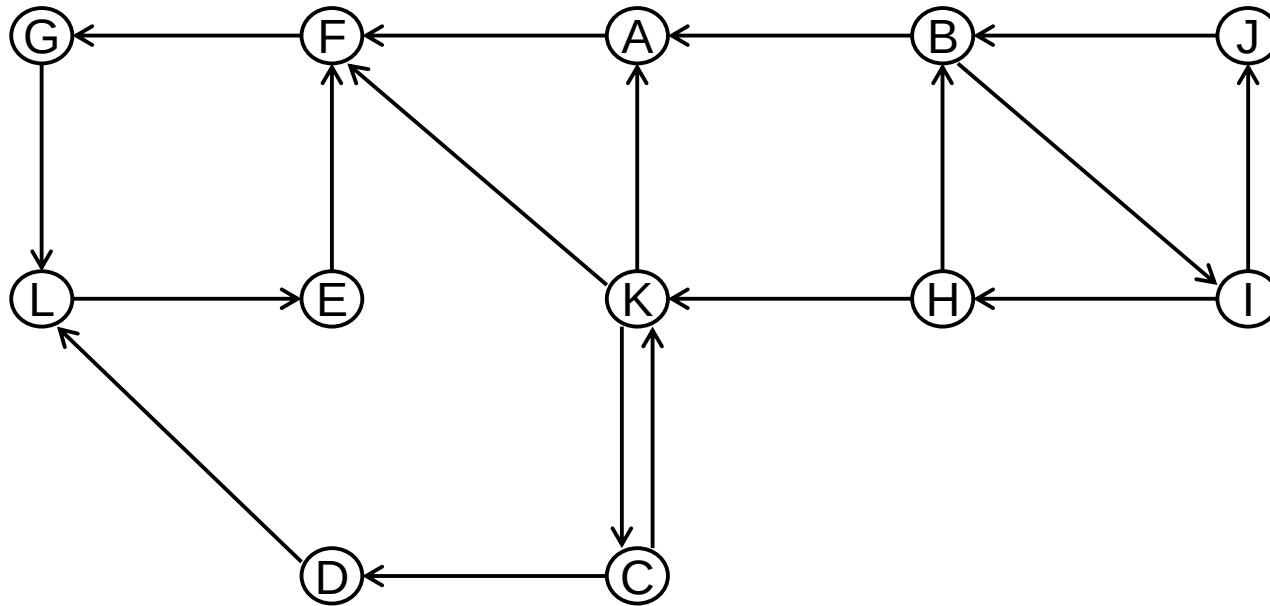
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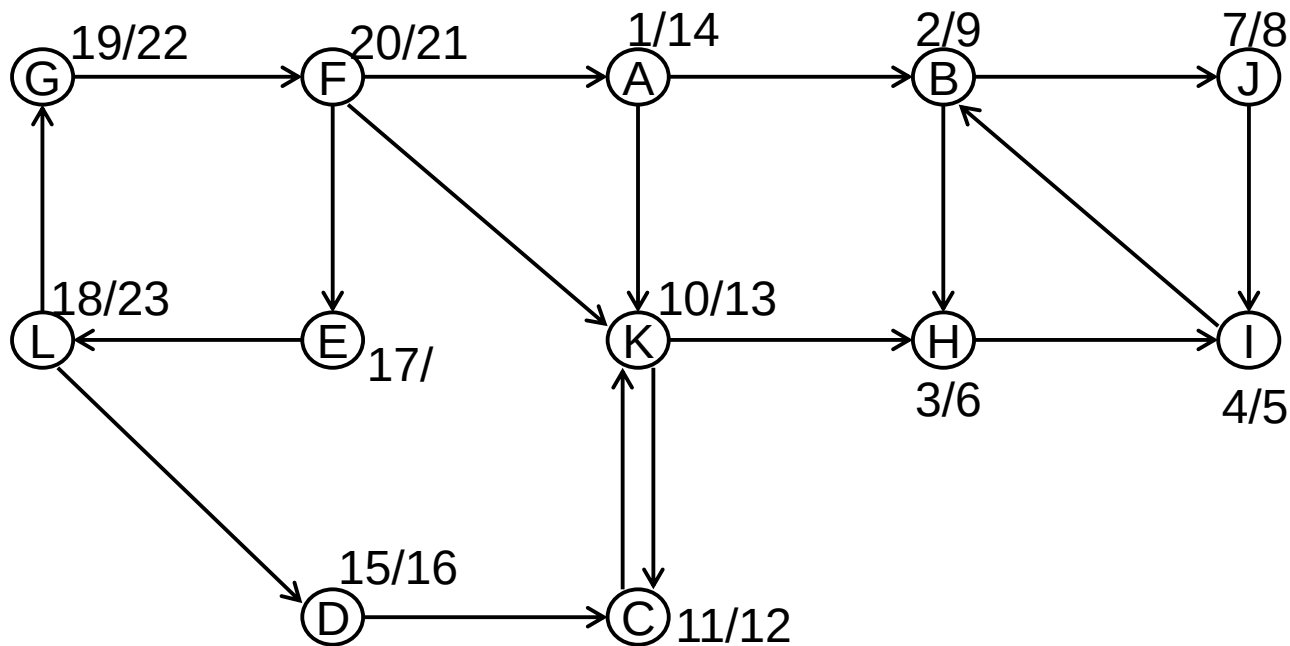
G^R :



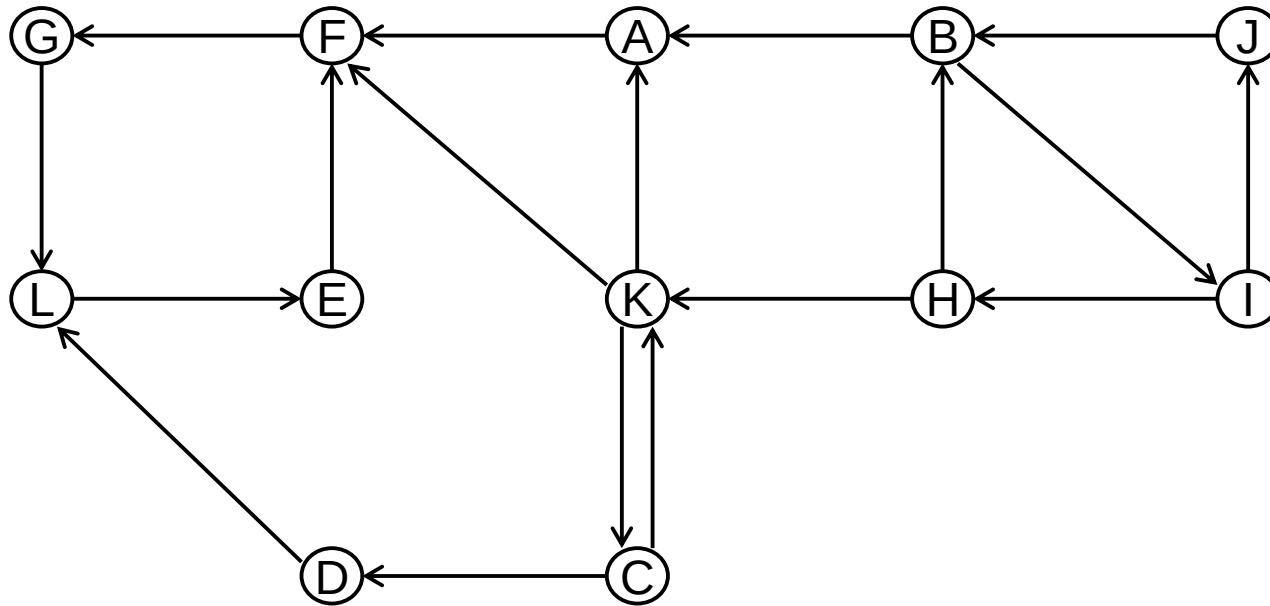
G:



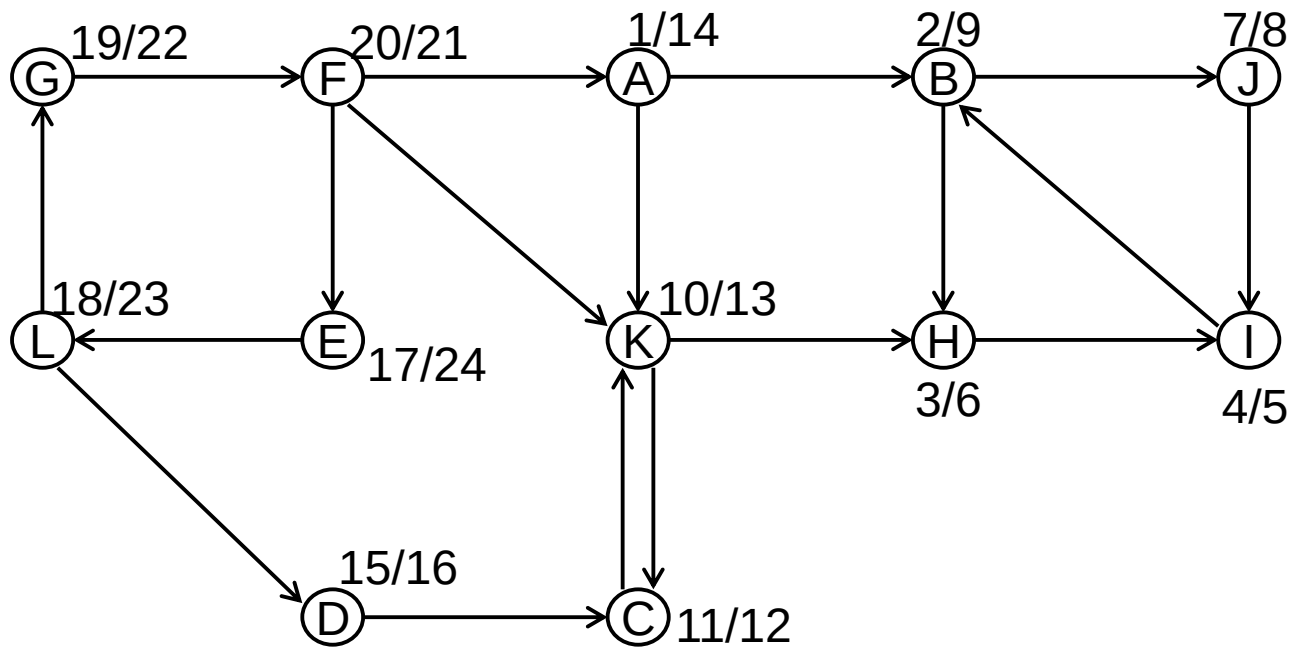
G^R :



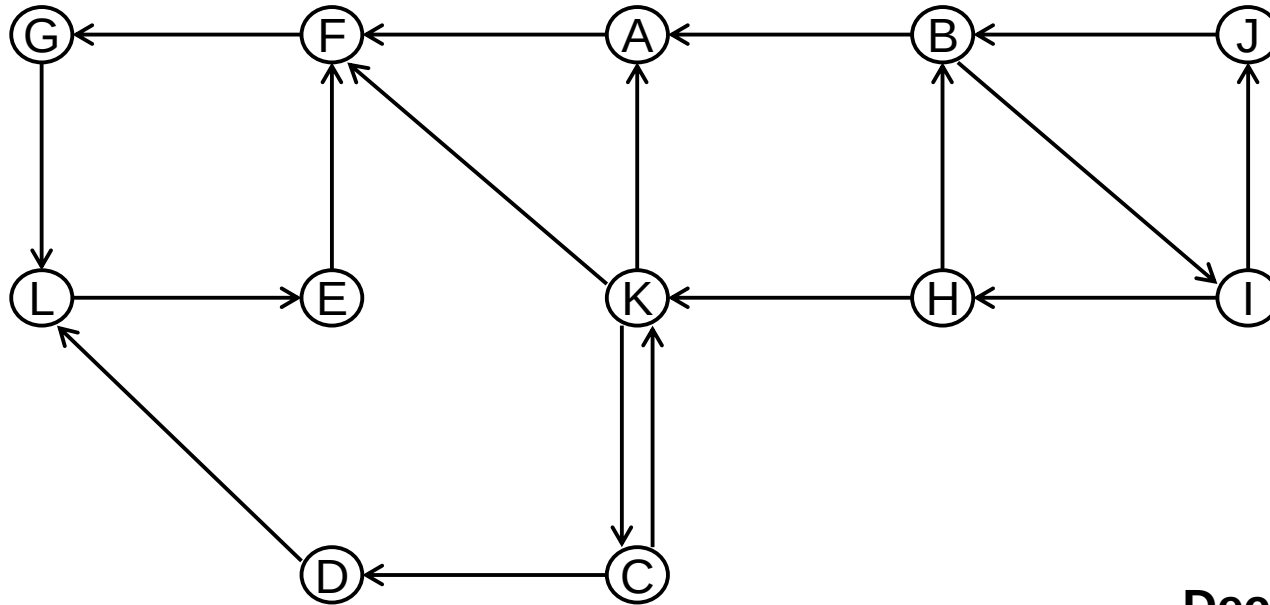
G:



G^R :

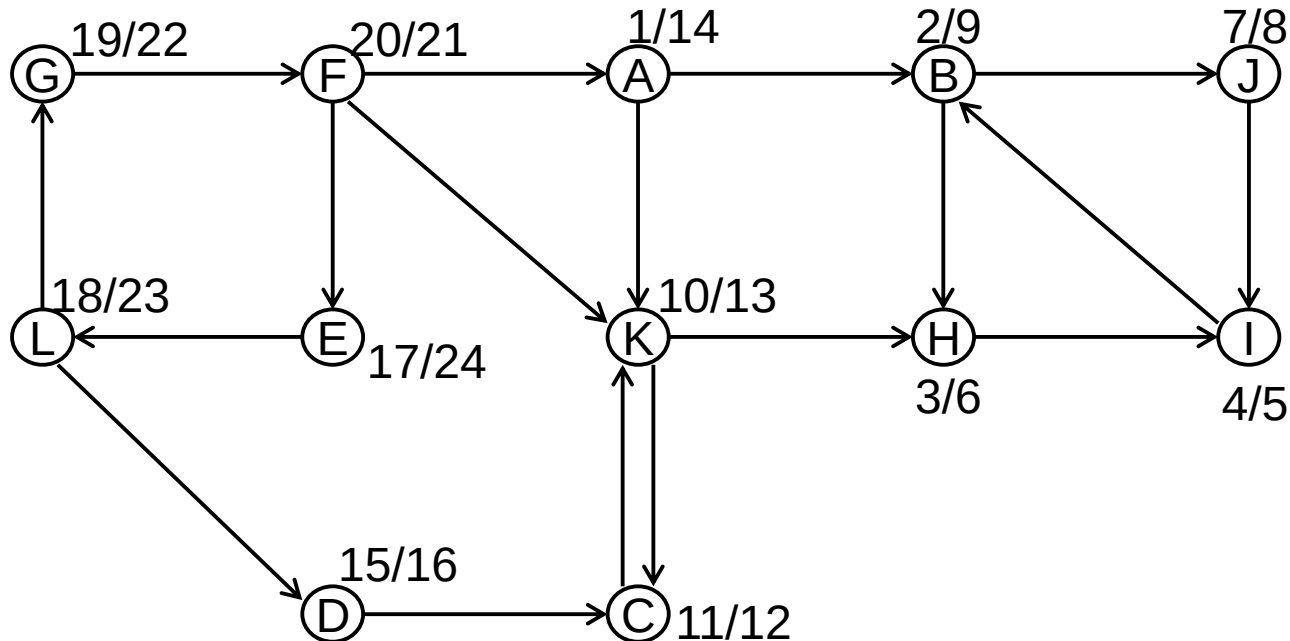


G:



Decreasing post-visit:

G^R:



E (24)
L (23)
G (22)
F (21)
D (16)
A (14)
K (13)
C (12)
B (9)
J (8)
H (6)
I (5)

```

graph LR
    G((G)) --> L((L))
    L --> E((E))
    E --> F((F))
    F --> G
    F --> A((A))
    A --> B((B))
    B --> H((H))
    H --> I((I))
    I --> J((J))
    J --> B
    I --> K((K))
    K --> A
    K --> F
    K --> H
    K --> C((C))
    C --> D((D))
    D --> L
    C --> K
  
```

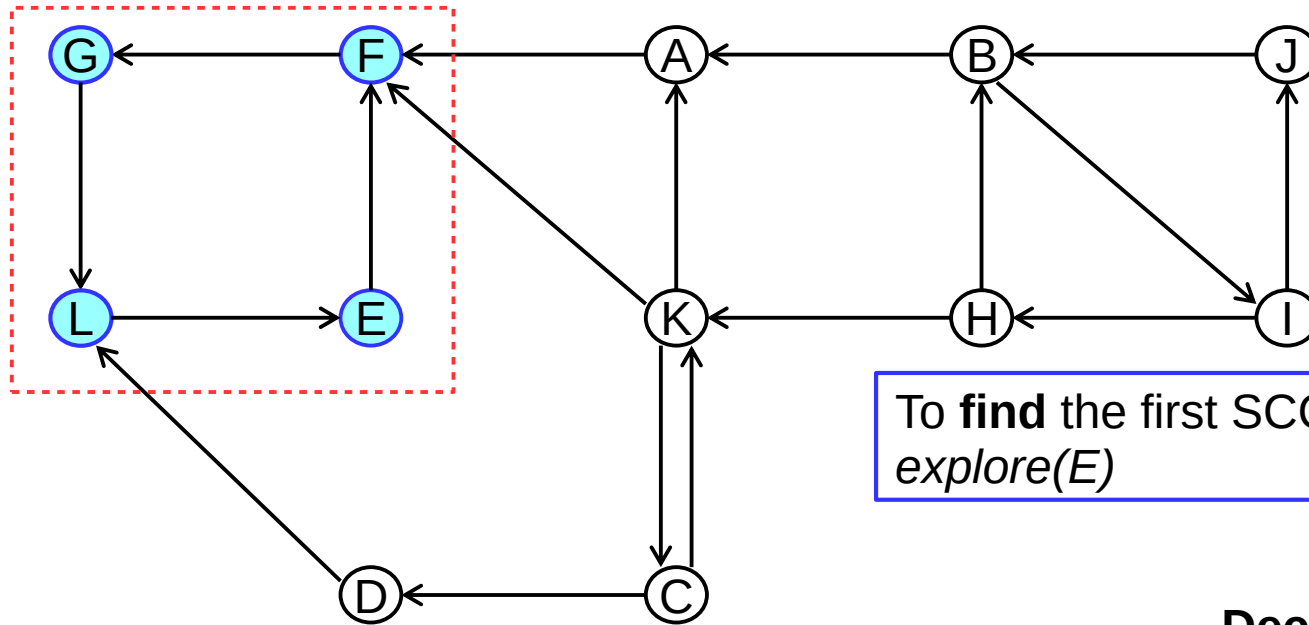
E (24)
L (23)
G (22)
F (21)
D (16)
A (14)
K (13)
C (12)
B (9)
J (8)
H (6)
I (5)

```

graph LR
    G((G)) -- 19/22 --> F((F))
    F -- 20/21 --> A((A))
    F -- 20/21 --> E((E))
    F -- 20/21 --> K((K))
    A -- 1/14 --> B((B))
    A -- 1/14 --> K
    B -- 2/9 --> J((J))
    B -- 2/9 --> H((H))
    J -- 7/8 --> I((I))
    I -- 4/5 --> B
    I -- 4/5 --> H
    H -- 3/6 --> K
    K -- 10/13 --> H
    K -- 10/13 --> C((C))
    C -- 11/12 --> K
    L((L)) -- 18/23 --> G
    L -- 18/23 --> E
    L -- 18/23 --> D((D))
    D -- 15/16 --> C
    
```

E must belong to a Sink SCC of the original graph G

G:

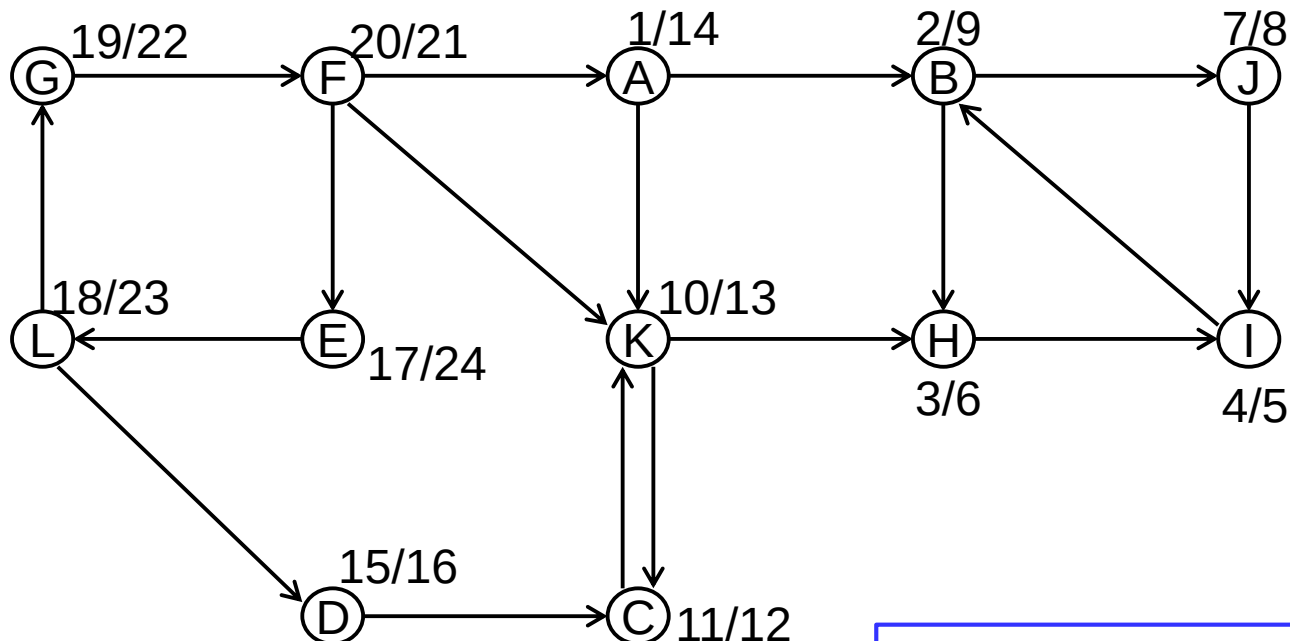


To **find** the first SCC of G we *explore(E)*

Decreasing post-visit:

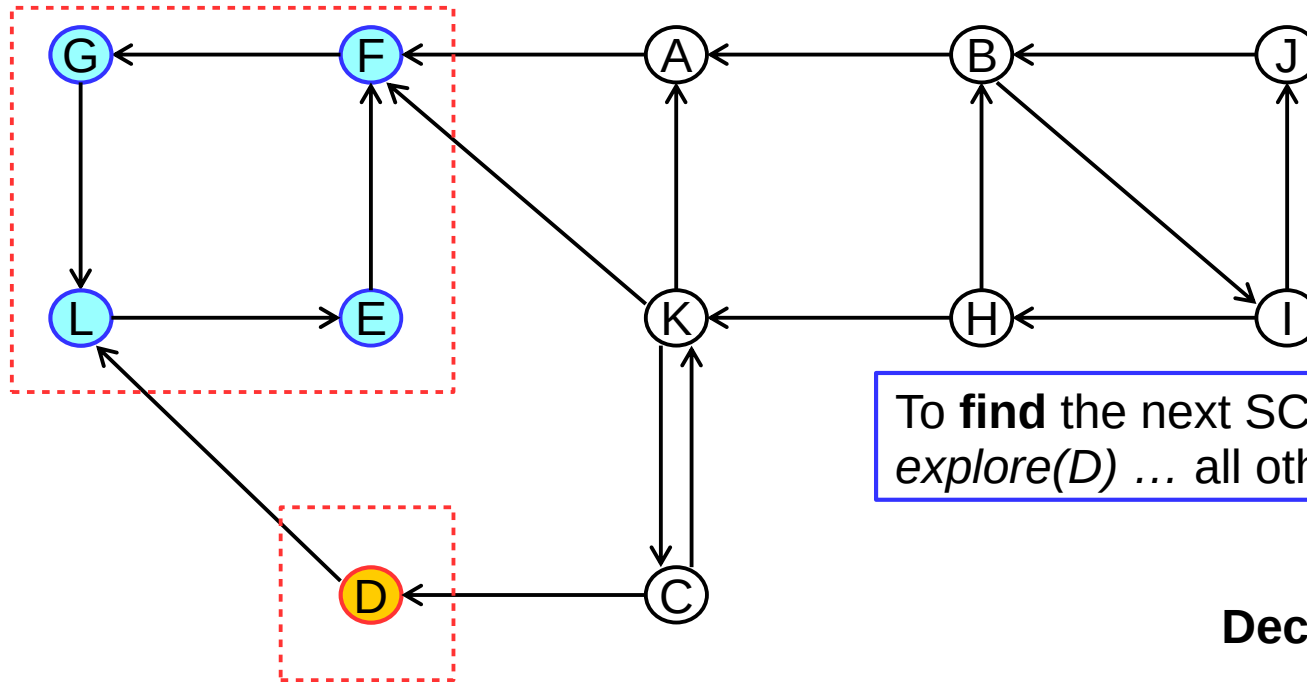
E (24)
L (23)
G (22)
F (21)
D (16)
A (14)
K (13)
C (12)
B (9)
J (8)
H (6)
I (5)

G^R:



E must belong to a Sink SCC of the original graph G

G:

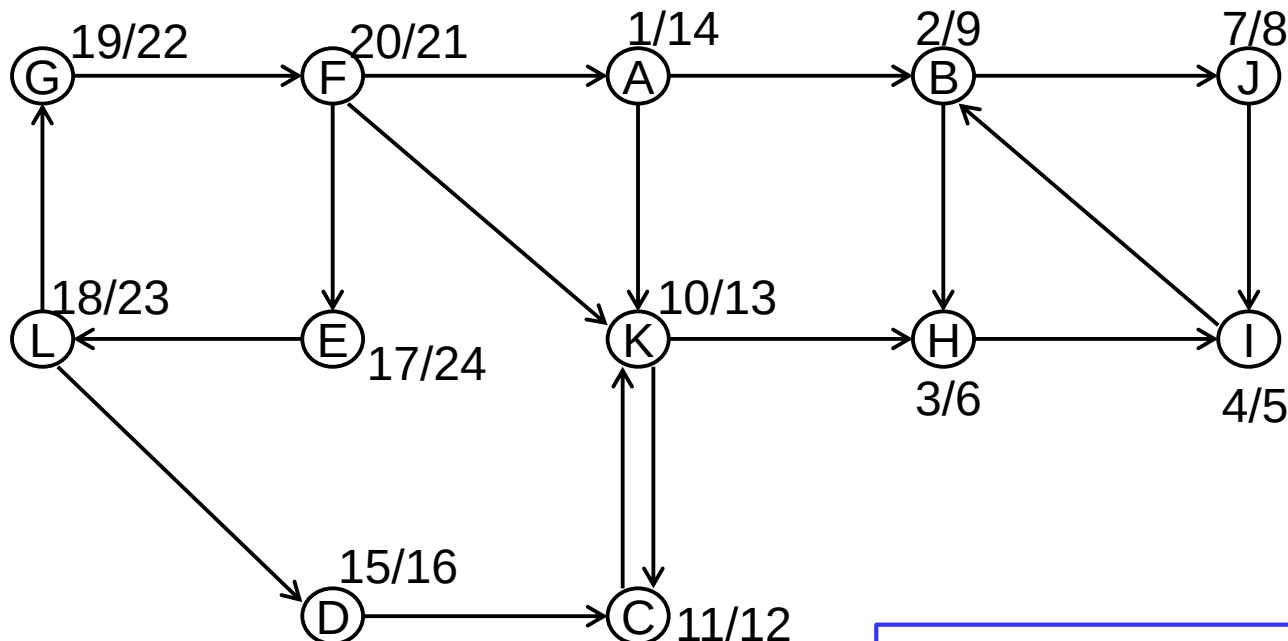


To **find** the next SCC of G we *explore(D)* ... all other are visited

Decreasing post-visit:

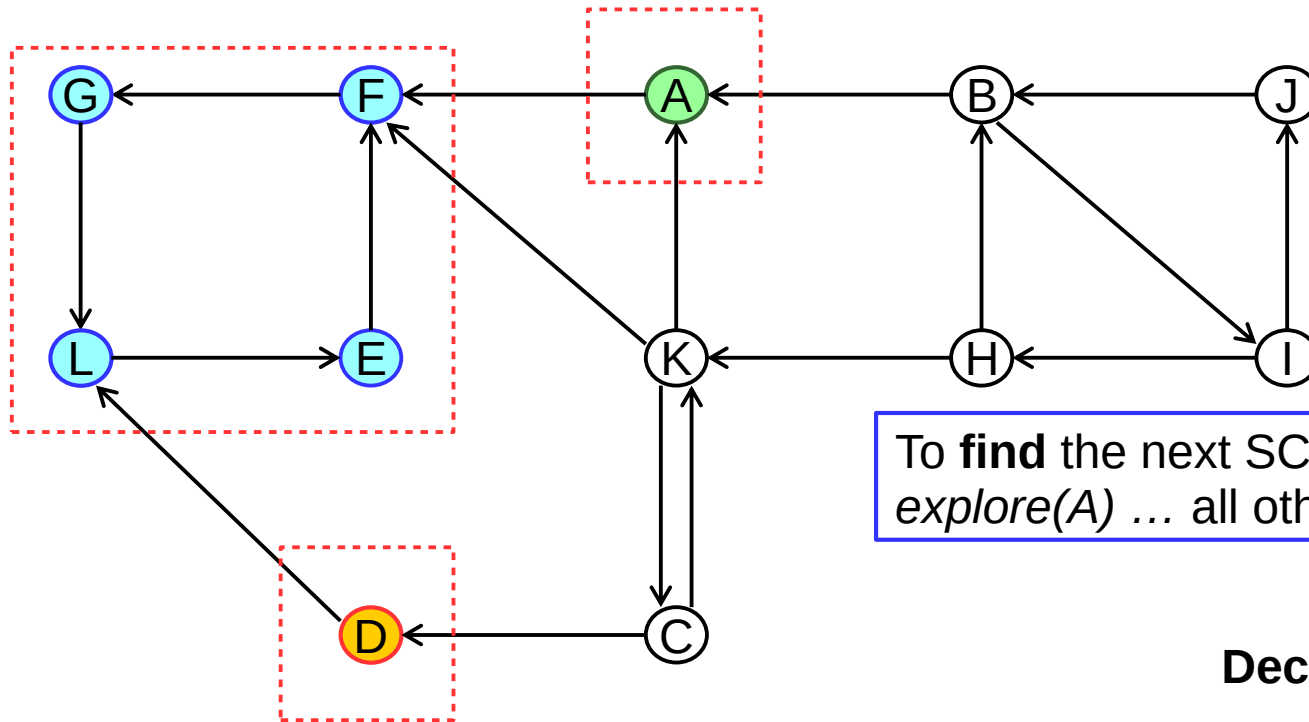
E (24) - visited
 L (23) - visited
 G (22) - visited
 F (21) - visited
 D (16)
 A (14)
 K (13)
 C (12)
 B (9)
 J (8)
 H (6)
 I (5)

G^R:



E must belong to a Sink SCC of the original graph G

G:

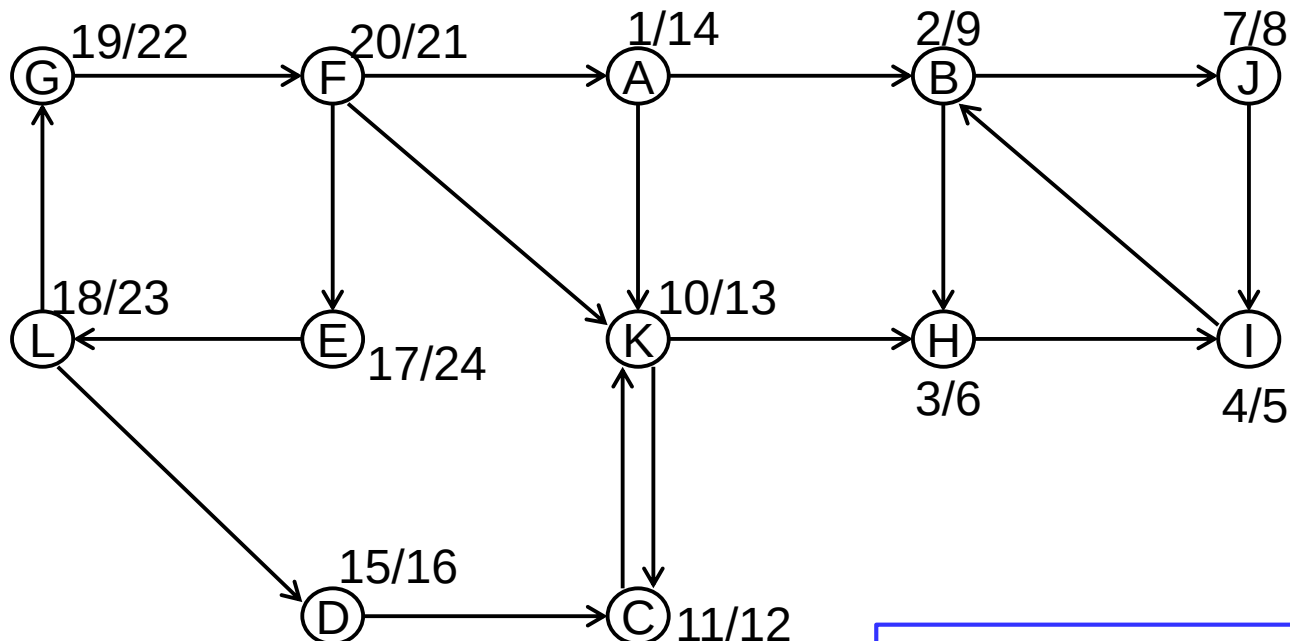


To **find** the next SCC of G we *explore(A)* ... all other are visited

Decreasing post-visit:

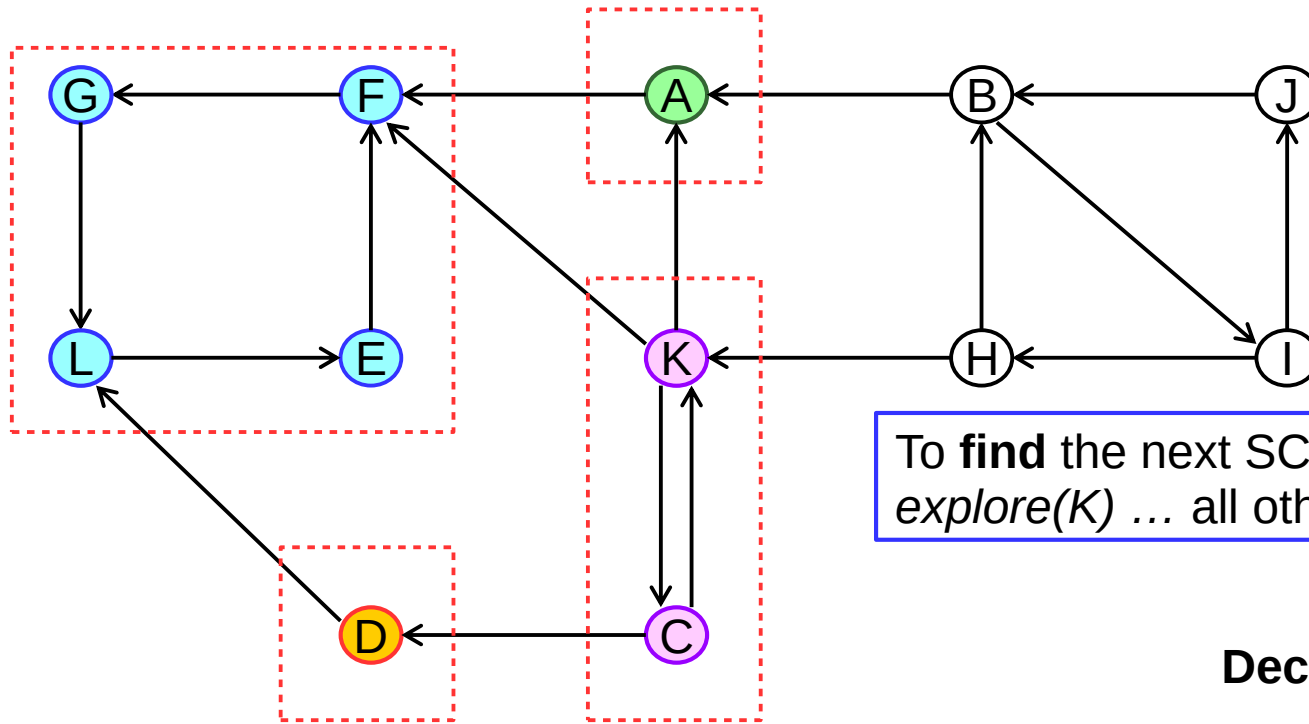
E (24) - visited
L (23) - visited
G (22) - visited
F (21) - visited
D (16) - visited
A (14)
K (13)
C (12)
B (9)
J (8)
H (6)
I (5)

G^R:



E must belong to a Sink SCC of the original graph G

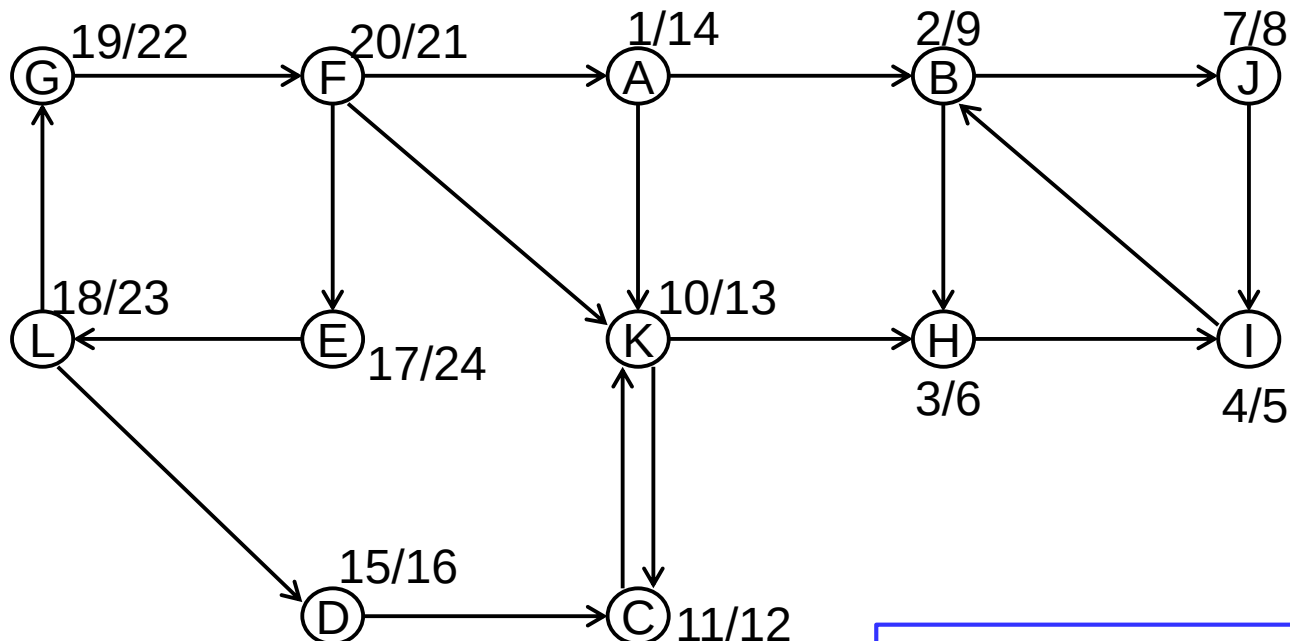
G:



To **find** the next SCC of G we *explore(K)* ... all other are visited

Decreasing post-visit:

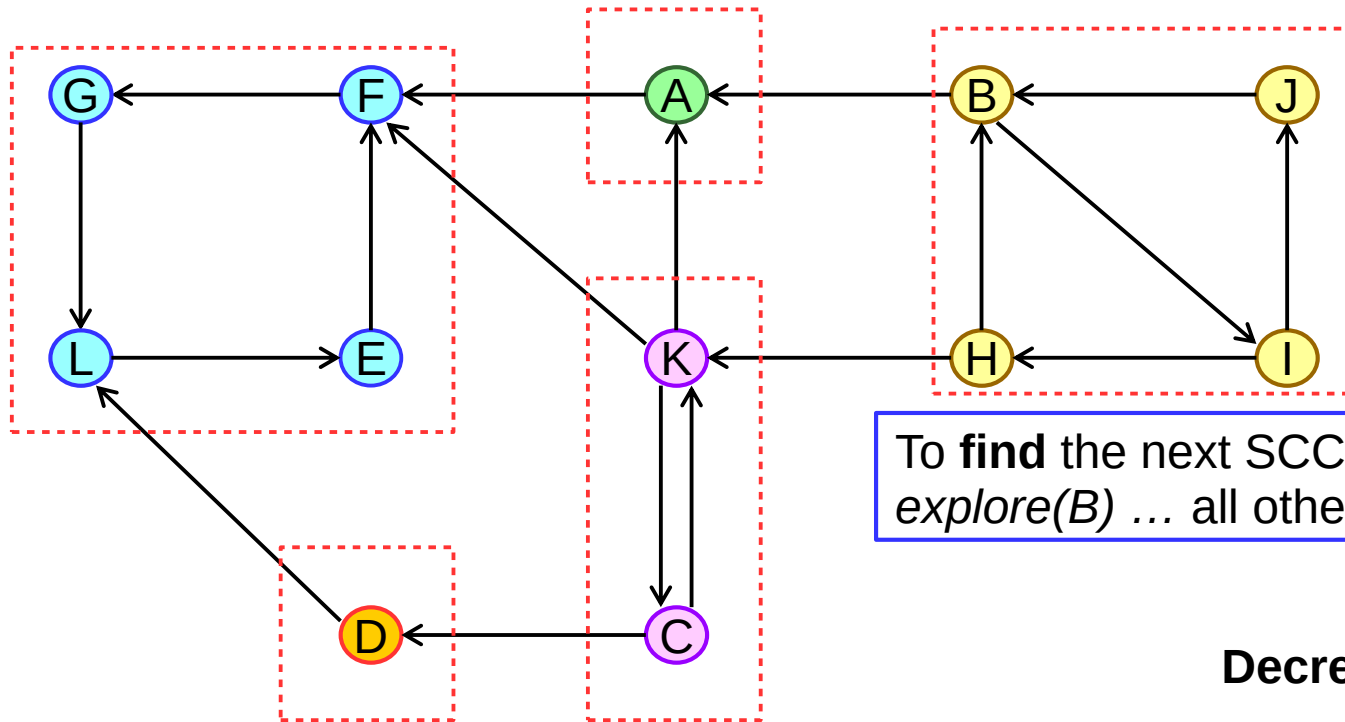
G^R:



E (24) - visited
L (23) - visited
G (22) - visited
F (21) - visited
D (16) - visited
A (14) - visited
K (13) - visited
C (12) - visited
B (9)
J (8)
H (6)
I (5)

E must belong to a Sink SCC of the original graph G

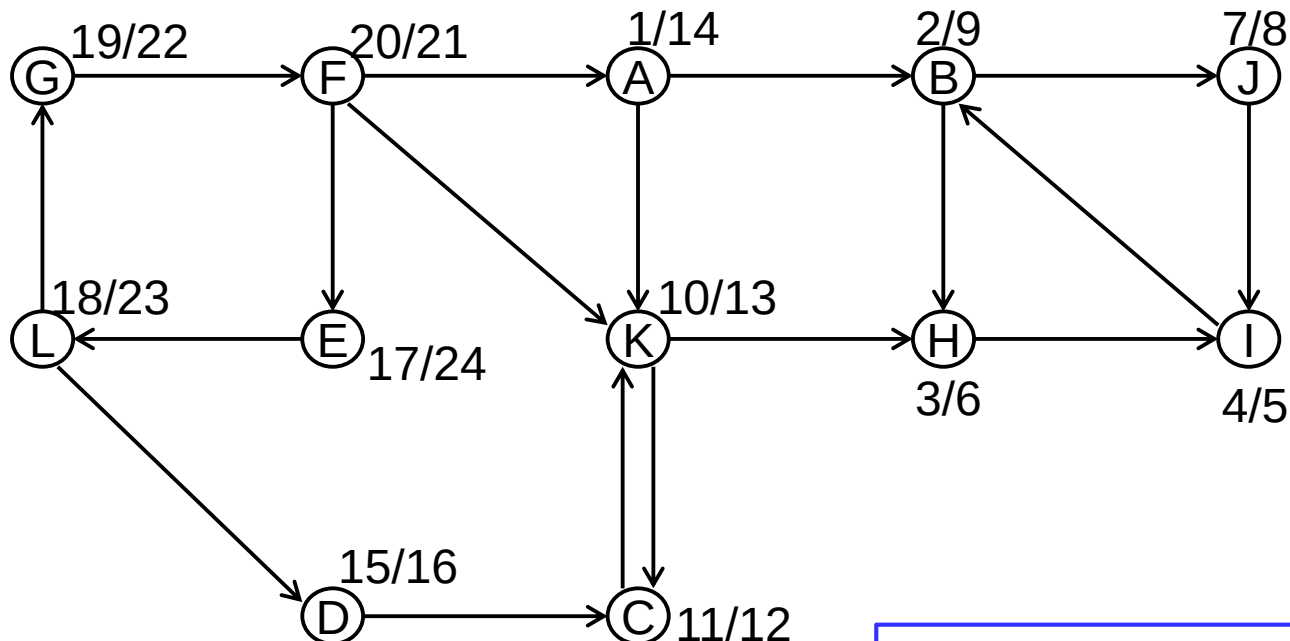
G:



To **find** the next SCC of G we *explore(B)* ... all other are visited

Decreasing post-visit:

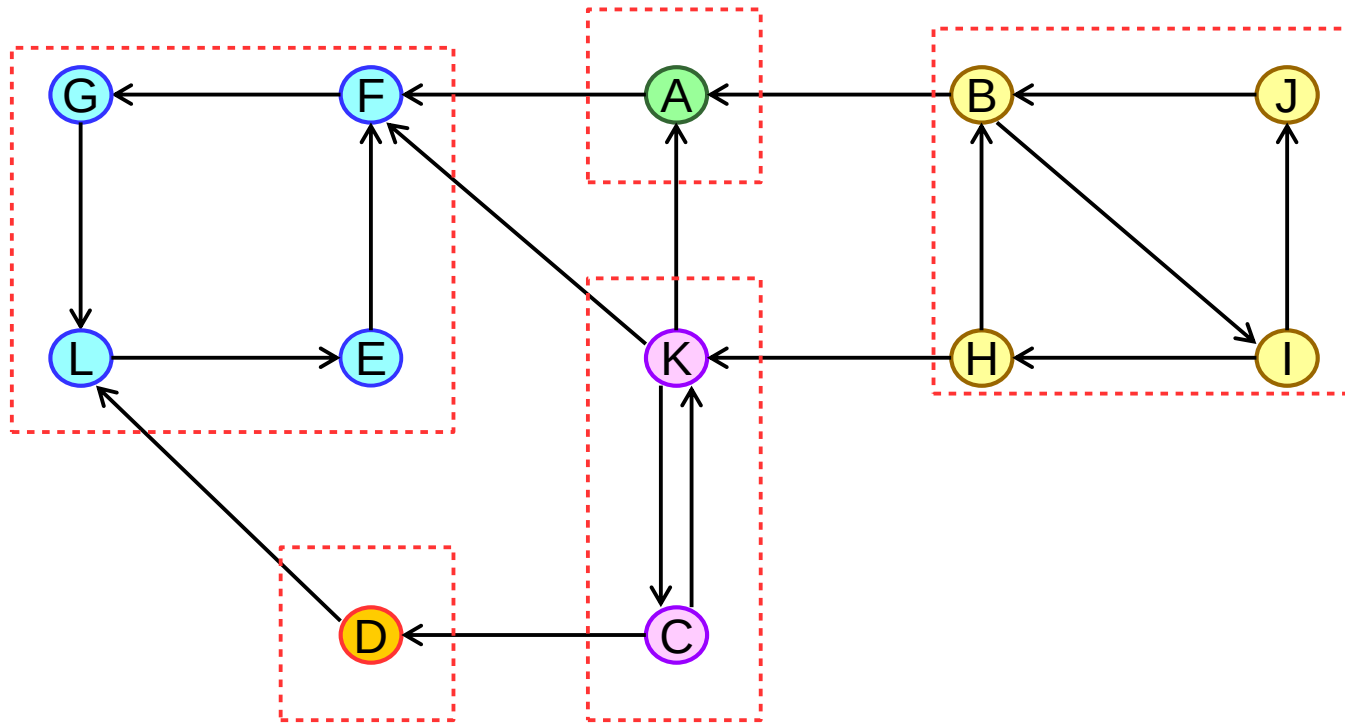
G^R:



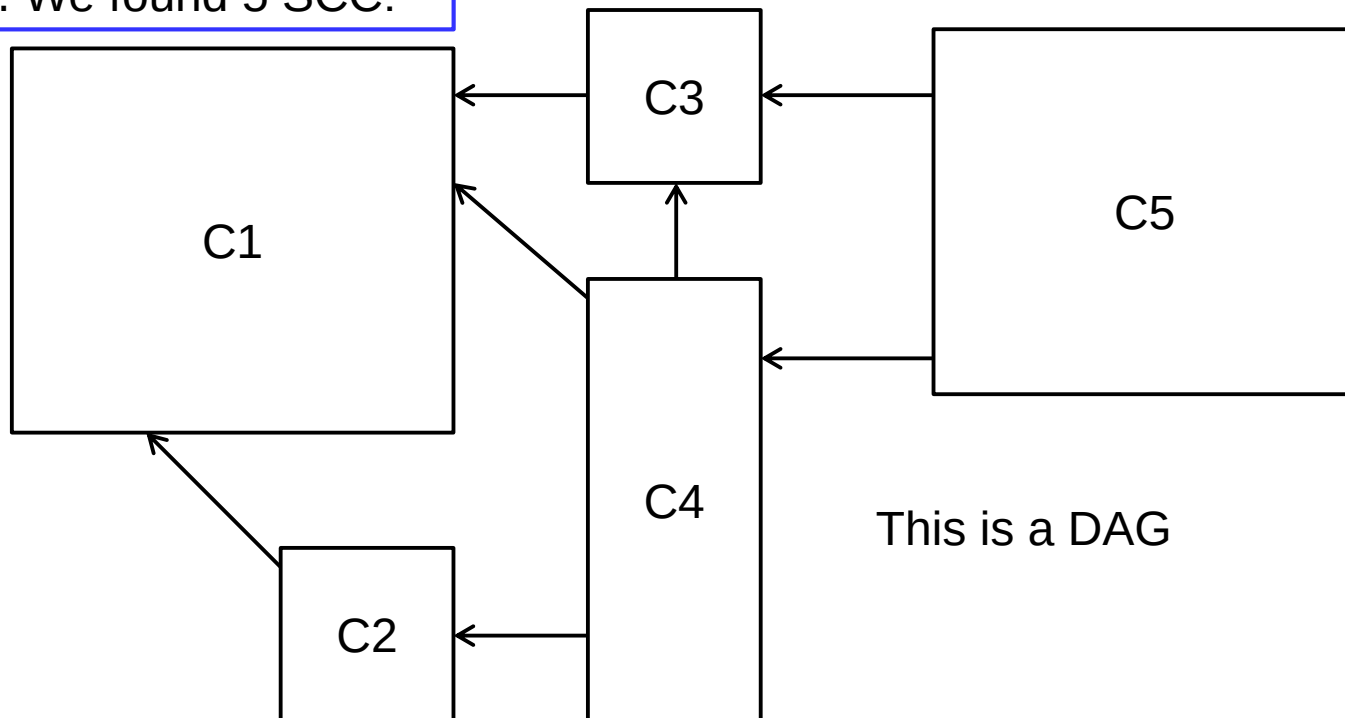
E (24) - visited
 L (23) - visited
 G (22) - visited
 F (21) - visited
 D (16) - visited
 A (14) - visited
 K (13) - visited
 C (12) - visited
 B (9)
 J (8)
 H (6)
 I (5)

E must belong to a Sink SCC of the original graph G

G:



We are done. We found 5 SCC:



This is a DAG