

简况

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AC 7题 , Rank 9th

总结与反思

cmx

lpy

xsy

题解

A. Is Your System Safe?

B. Tiling Dominoes

C. Skating on Weiming Lake

D. Travel to Qomolangma

E. Walking Around the Country

题意:

有一个完全有向图,给定许多条有向边(会重复),求一条最短路径要求每条边至少经过一次

题解:

很像欧拉通路,不同的是不同块之间不联通,且每个点度数可能不符合要求(出度等于入度)

考虑引入结点0,作为转换结点,用于连接联通块和平衡度数

```
Q[0].clear();
```

```
for (int i = 1; i <= N; i++) {  
    if (indeg[i] == outdeg[i]) continue;  
    int cnt = abs(outdeg[i] - indeg[i]);  
    if (outdeg[i] > indeg[i])  
        while (cnt--) Q[0].push_back(i);  
    else  
        while (cnt--) Q[i].push_back(0);  
}
```

接着从0点开始寻找欧拉通路即可(注意处理无关结点——没有边相连)

```
void dfs(int u) {  
    vis[u] = true;  
    while (!Q[u].empty()) {  
        int v = Q[u].front();  
        Q[u].pop_front();  
        dfs(v);  
    }  
    S.push(u);  
}
```

F. A Simple Math Problem

题意:

求解 $(7+4\sqrt{3})^n$ 的整数部分

题解:

$(7+4\sqrt{3})^n = x+y\sqrt{3}, (7-4\sqrt{3})^n = x-y\sqrt{3}$

$0 < (7-4\sqrt{3}) < 1, 0 < (7-4\sqrt{3})^n < 1 \Rightarrow x, y\sqrt{3}$ 整数部分相差不超过1
又 $x \in \mathbb{N}^+, y\sqrt{3} = x-1, [(7+4\sqrt{3})^n] = 2x-1$

$\$$ 在 $\mathbb{Z}(\sqrt{3})$ 空间上快速幂即可 $\$$

by Hardict

G. Go! Go! Go!

H. Reverse K-th Problem

I. Stairs of Tetris

J. Pairs

K. Lying Island

补题

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