

其它

## 目录

### 1 快读

```
1 inline int read(){//如果是long long, 这行和下面一行int改ll
2     int x=0,f=1;
3     char ch=getchar();
4     while(ch<'0' || ch>'9'){
5         if(ch=='-')
6             f=-1;
7         ch=getchar();
8     }
9     while(ch>='0' && ch<='9'){
10         x=(x<<1)+(x<<3)+(ch^48);
11         ch=getchar();
12     }
13     return x*f;
14 }//打死我都不用!!!!
```

### 2 int128

```
1 inline __int128 read()
2 {
3     __int128 x=0,f=1;
4     char ch=getchar();
5     while(ch<'0' || ch>'9')
6     {
7         if(ch=='-')
8             f=-1;
9         ch=getchar();
10    }
11    while(ch>='0' && ch<='9')
12    {
13        x=x*10+ch-'0';
14        ch=getchar();
15    }
16    return x*f;
17 }
18
19 inline void write(__int128 x)
```

```

20 {
21     if(x<0)
22     {
23         putchar('-');
24         x=-x;
25     }
26     if(x>9)
27         write(x/10);
28     putchar(x%10+'0');
29 }

```

### 3 对拍

```

1 //-----data.cpp-----
2 int main()
3 {
4     freopen("in","w",stdout);
5     srand(time(0));
6     int n,m,q;
7     n = rand()%100000;
8     m = rand()%100000;
9     q = rand()%100000;
10    printf("%d %d %d\n",n,m,q);
11    for(int i = 1;i <= q;i++){
12        int a = rand()%n+1;
13        int b = rand()%n+1;
14        int c = rand()%2;
15        printf("%d %d %d\n",a,b,c);
16    }
17    return 0;
18 }
19
20 //-----1.cpp&&2.cpp-----
21 int main()
22 {
23     freopen("in","r",stdin);
24     freopen("1.out","w",stdout);
25     //freopen("2.out","w",stdout);
26     .....
27 }
28
29 //-----duipai.cpp-----
30 int main()//Windows
31 {
32     int cases = 0;
33     do{
34         if(cases) printf("#%d AC\n",cases);

```

```

35     cases++;
36     system("data.exe > data.txt");
37     system("1.exe < data.txt > 1.txt");
38     system("2.exe < data.txt > 2.txt");
39 }while(!system("fc 1.txt 2.txt"));
40 printf("#%d WA",cases);
41 return 0;
42 }
43 int main()//Linux
44 {
45     int i;
46     for (i=1;i<=1000;i++)
47     {
48         system("./data");
49         system("./1");
50         system("./2");
51         printf("%d : ",i);
52         if (system("diff 1.out 2.out"))
53         {
54             printf("WA\n");
55             return 0;
56         }
57         else printf("AC\n");
58     }
59     return 0;
60 }

```

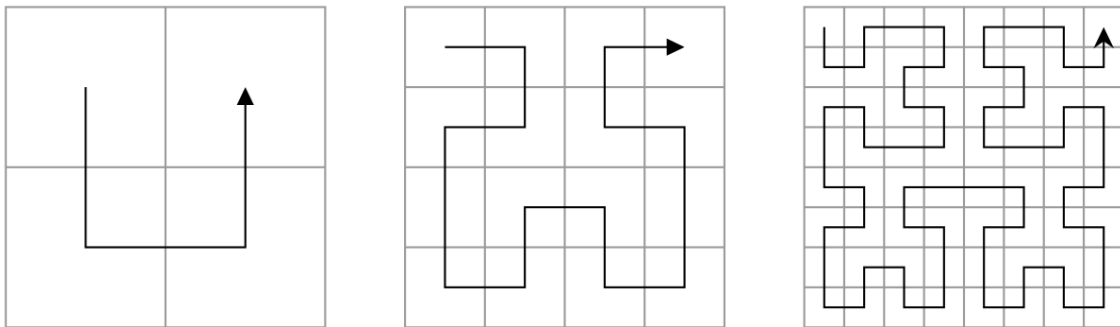
## 4 华容道

```

1 //判断是否有解
2 int map[16],ans=0;
3 for(int i=0;i<16;i++){
4     scanf("%d",&map[i]);
5     if(!map[i])
6         ans+=6-i%4-i/4;
7     for(int j=0;j<i;j++)
8         if(map[j]>map[i])
9             ans++;
10 }
11 if(ans&1)
12     printf("Yes\n");
13 else
14     printf("No\n");

```

## 5 希尔伯特曲线



```
1 #define ll long long
2 int two[50]; //2的次方
3 ll f(int n, int x, int y) { //返回第几位
4     if (n == 0) return 1;
5     int m = two[n-1]; //1 << (n - 1); //2的n-1次方
6     if (x <= m && y <= m) {
7         return f(n - 1, y, x);
8     }
9     if (x > m && y <= m) {
10        return 3LL * m * m + f(n - 1, m - y + 1, m * 2 - x + 1); // 3LL表示ll 类型的3
11    }
12    if (x <= m && y > m) {
13        return 1LL * m * m + f(n - 1, x, y - m);
14    }
15    if (x > m && y > m) {
16        return 2LL * m * m + f(n - 1, x - m, y - m);
17    }
18 }
19 const int SIZE=1e6+50;
20 struct node{ //用于存点
21     int x,y;
22     ll no;
23 }p[SIZE];
24 int main() {
25     int n;int k;
26     scanf("%d%d",&n,&k);
27     two[0]=1; //two[1]=2;
28     for(int i=1;i<=32;i++){
29         two[i]=2*two[i-1];
30     }
31     for(int i=1;i<=n;i++){
32         scanf("%d%d",&p[i].y,&p[i].x); //注意y,x的读入顺序!
33         p[i].no=f(k,p[i].x,p[i].y); //用于存点的编号
34     }
35 }
```

## 6 约瑟夫环

### 6.1 一般方法

```
1  /* * n个 人(编号 1...n),先去掉第m个数,然后从m+1个开始报1, *
2  报到k的退出,剩下的人继续从1开始报数.求胜利者的编号. */
3  int main(int argc, const char *argv[])
4  {
5      int n, k, m;
6      while (cin >> n >> k >> m, n || k || m)
7      {
8          int i, d, s = 0;
9          for (i = 2; i <= n; i++)
10             {
11                 s = (s + k) % i;
12             }
13             k = k % n;
14             if (k == 0)
15             {
16                 k = n;
17             }
18             d = (s + 1) + (m - k);
19             if (d >= 1 && d <= n)
20             {
21                 cout << d << '\n';
22             }
23             else if (d < 1)
24             {
25                 cout << n + d << '\n';
26             }
27             else if (d > n)
28             {
29                 cout << d % n << '\n';
30             }
31         }
32         return 0;
33     }
```

### 6.2 函数图像解

```
1  /* * n个 人数到 k 出列,后剩下的人编号 */
2  unsigned long long n, k;
3  int main()
4  {
5      cin >> n >> k;
6      long long y = k % 2;
7      long long x = 2, t = 0;
```

```

8      long long z1 = y, z2 = x;
9      while (x <= n)
10     {
11         z1 = y;
12         z2 = x;
13         t = (x - y) / (k - 1);
14         if (t == 0)
15         {
16             t++;
17         }
18         y = y + t * k - ((y + t * k) / (x + t)) * (x + t);
19         x += t;
20     }
21     cout << (z1 + (n - z2) * k) % n + 1 << endl;
22     return 0;
23 }

```