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PPATH - Prime Path

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Problem

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Submitted a few seconds ago • Score: 1.00

Status: **Accepted**

Test Case #0



Test Case #1



Test Case #2



Test Case #3

Submitted Code

Language: C++

Open in editor

```
1 #include<bits/stdc++.h>
2 using namespace std;
3 typedef pair<int,int> pp;
```

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```
4 bool flag[10000];
5 vector<int> adj[10000];
6
7 void make_graph()
8 {
9     for(int i=1001;i<10000;i++)
10    {
11        if(flag[i])
12            continue;
13        for(int j=0;j<4;j++)
14        {
15            int tt=pow(10,j);
16            // int temp=i;
17            int prev,dig,next;
18            prev=i/tt;
19            dig=prev%10;
20            prev/=10;
21            next=i%tt;
22            for(int k=0;k<=9;k++)
23            {
24                if(k==dig)
25                    continue;
26                int num=prev*tt*10+tt*k+next;
27                if(!flag[num]){
28                    adj[i].push_back(num);
29                }
30            }
31        }
32    }
33 }
34
35 void compute()
36 {
37     for(int i=2;i<=100;i++)
38     {
```

```
39         if(!flag[i])
40         {
41             for(int j=i+i;j<10000;j+=i)
42                 flag[j]=true;
43         }
44     }
45     make_graph();
46 }
47
48 int bfs(int x,int y)
49 {
50     if(x==y) return 0;
51     queue<pp> q;
52     bool check[10000];
53     for(int i=0;i<10000;i++) check[i]=false;
54     check[x]=true;
55     q.push(make_pair(x,0));
56     while(!q.empty())
57     {
58         pp tt=q.front();
59         q.pop();
60         vector<int>::iterator ii;
61         for(ii=adj[tt.first].begin();ii!=adj[tt.first].end();ii++){
62             if(!check[*ii])
63             {
64                 check[*ii]=true;
65                 if(*ii==y)
66                     return tt.second+1;
67                 q.push(make_pair(*ii,tt.second+1));
68             }
69         }
70     }
71     return -1;
72 }
73
```

```
74 int main()
75 {
76     compute();
77     int t;
78     cin>>t;
79     while(t-->0)
80     {
81         int x,y;
82         cin>>x>>y;
83         int val=bfs(x,y);
84         if(val!=-1)
85             cout<<"Impossible"<<"\n";
86         else
87             cout<<val<<"\n";
88     }
89 }
```

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