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/*
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Division: Junior
Contest 4
*/
#include <iostream>

#include <sstream>

#include <string>

using namespace std;

bool sqr(int n)
{
    int square[]={9,16,25,36,49};

    for(int i=0;i<5;i++)
    {
        if(n==square[i])
        {
            return true;
        }
    }

    return false;
}

bool prm(int n)
{
    int prime[]={2,3,5,7,11,13,17,19,23,29,31,37,41,43,47};

    for(int i=0;i<15;i++)
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{  
    if(n==prime[i])  
    {  
        return true;  
    }  
}  
return false;  
  
}
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int main()  
{  
    string a[5];  
    int arr[53] = {0};  
    int player, A, B, C, tmp;  
    for (int q = 0; q < 5; q++) {  
        cin >> A >> B >> C >> player >> tmp;  
        arr[A] = 1;  
        arr[B] = 1;  
        arr[C] = 1;  
        int dice, x;  
        for (int i = 0; i < tmp; i++) {  
            cin >> dice;  
            x = player;
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if (arr[player + dice] != 1) {
    player += dice;
    if (prm(player) == true) {
        for (int n = 0; n < 6; n++) {
            player += 1;
            if (arr[player] == 1) {
                player -= 1;
                n = 7;
            }
        }
    } else if (sqr(player) == true) {
        for (int n = 0; n < 6; n++) {
            player -= 1;
            if (arr[player] == 1) {
                player += 1;
                n = 7;
            }
        }
    } else if (x <= 6 && player >= 8 || x <= 11 && player >= 13 || x <= 16 && player >= 18 || x <=
21 && player >= 23 || x <= 26 && player >= 28 || x <= 34 && player >= 36 || x <= 39 && player >=
41 || x <= 44 && player >= 46 || x <= 49 && player >= 51) {
        player += 1;
        for (int n = 0; n <= dice; n++) {
            player -= 1;
            if (arr[player] != 1 && player % dice == 0) {
                n = dice + 1;
            }
        }
    }
}

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        }
    }
}
}
if (player > 52) {
    player = x;
}
}
if (player == 52) {
    a[q] = "GAME OVER";
} else {
    ostringstream strg;
    strg << player;
    a[q] = strg.str();
}
arr[A] = 0;
arr[B] = 0;
arr[C] = 0;
}
for (int y = 0; y < 5; y++) {
    cout << a[y] << endl;
}
return 0;
}
```