

```

//Gabriel Stanciu-Tivlea

#include <bits/stdc++.h>
using namespace std;
string s;
vector<int> urmator = {
    0, 8, 8, 8, 8, 8, 8, // 0-6
    13, 13, 13, 13, 13, // 7-11
    18, 18, 18, 18, 18, // 12-16
    23, 23, 23, 23, 23, // 17-21
    28, 28, 28, 28, 28, // 22-26
    36, 36, 36, 36, 36, 36, 36, // 27-34
    41, 41, 41, 41, 41, // 35-39
    46, 46, 46, 46, 46, // 40-44
    51, 51, 51, 51, 51, // 45-49
    -1, -1, -1, // 50-52
};
vector<int> prime = {2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41,
43, 47, 53, 61};
vector<int> pp = {9, 16, 25, 36, 49, 64};

bool isOcupat(int newPoz, vector<int> op)
{
    if (newPoz > 52)
        return true;
    for (const auto &i : op)
        if (i == newPoz)
            return true;
    return false;
}

int main()
{
    while (!cin.eof())
    {
        vector<int> op(3);
        int n, oldPoz;
        cin >> op[0] >> op[1] >> op[2] >> oldPoz >> n;
        if (cin.eof())
            break;
        sort(op.begin(), op.end());
        for (int i = 0; i < n; i++)
        {
            int d;
            cin >> d;
            if (oldPoz == 52)
                continue;
            int newPoz = oldPoz + d;
            // 4
            int ok = 1;
            if (newPoz > 52)
                ok = 0;
            for (const auto &p : op)
                if (p == newPoz)
                    ok = 0;
            if (!ok)

```

```

        continue;
// all bullshit starts here
// 6
if (newPoz == 52)
{
    oldPoz = newPoz;
    continue;
}
// 7
if (binary_search(prime.begin(), prime.end(), newPoz)) // e
prim
{
    for (int i = 1; i <= 6; i++, newPoz++)
        if (isOcupat(newPoz + 1, op))
            break;
    if (newPoz == 52)
    {
        oldPoz = newPoz;
        continue;
    }
    oldPoz = newPoz;
    continue;
}
// 8
if (binary_search(pp.begin(), pp.end(), newPoz)) // e
patrat perfect
{
    for (int i = 1; i <= 6; i++, newPoz--)
        if (isOcupat(newPoz - 1, op))
            break;
    if (newPoz == 52)
    {
        oldPoz = newPoz;
        continue;
    }
    oldPoz = newPoz;
    continue;
}
// motherfucking 9
if (urmator[oldPoz] > newPoz) // daca nu e 9, nu continua
{
    oldPoz = newPoz;
    continue;
}
if (isOcupat(newPoz / d * d, op))
    continue;
newPoz = newPoz / d * d;
if (newPoz == 52)
{
    oldPoz = newPoz;
    continue;
}
oldPoz = newPoz;
// all bullshit ends here
}
if (oldPoz == 52)

```

```
    {
        cout << "GAME OVER\n";
    }
    else
    {
        cout << oldPoz << "\n";
    }
}
return 0;
}
```