

1. Magic numbers

REGEX resenje

```
#include<bits/stdc++.h>
using namespace std;
string a;
int main()
{
    cin>>a;
    regex b("((1)|(14)|(144))*");
    cout<<(regex_match(a,b)?"YES":"NO");
}
```

Resenje upotrebom stringova

```
#include <string>
#include <iostream>;
using namespace std;
int main()
{
    string n;
    cin>>n;
    if(n[0]=='1')
    {
        int cnt=0;
        for(int i=0; i<n.size(); i++)
        {
            if(n[i]=='4')
                cnt++;
            if(n[i]=='1')
                cnt=0;
            if(cnt>2||((n[i]!='1'&& n[i]!='4'))
            {
                cout<<"NO\n";
                return 0;
            }
        }
        cout<<"YES\n";
    }
    else
        cout<<"NO\n";
}
```

Resenje bez regularnog izraza sa rekurzijom

```
#include <iostream>
#include <cstdio>

using namespace std;
```

```

bool prover1(int n)
{
    if (n == 1 || n == 14 || n == 144) return 1;
    if (n % 10 == 1 && prover1(n / 10)) return 1;
    if (n % 100 == 14 && prover1(n / 100)) return 1;
    if (n % 1000 == 144 && prover1(n / 1000)) return 1;
    return 0;
}

int main()
{
    int n;
    cin >> n;
    if (proveri(n)) cout << "YES" << endl; else cout << "NO" << endl;
    return 0;
}

```

2. Chat Room

Resenje sa regularnim izrazom

```

#include<bits/stdc++.h>
using namespace std;
string a;
int main()
{
    cin>>a;
    regex b("[^h]*[h][^e]*[e][^l]*[l][^o]*[o][a-z]*");
    cout<<(regex_match(a,b)?"YES":"NO");
}

```

Resenje bez regularnog izraza

```

#include <iostream>
#include<string>

using namespace std;

int main()
{
    string str;
    cin>>str;
    string s="hello";
    int t=0;
    for(int i=0; i<str.length(); i++){
        if(str[i]==s[t]){
            t++;
            if(t==5){
                cout<<"YES";
                return 0;
            }
        }
    }
}

```

```
cout<<"NO";  
return 0;  
}
```

3. Football

Resenje sa regularnim izrazom

```
"([0-1]*[0][0][0][0][0][0][0-1]*)|([0-1]*[1][1][1][1][1][1][1][0-1]*)"
```