

Задача 1.

```
#include <iostream>

using namespace std;

int main() {

    int n;
    cin >> n;

    if (n - 10 > n / 2) {
        cout << n - 10 << endl;
    }
    else
    {
        cout << n / 2 << endl;
    }
}
```

Задача 2.

```
#include <iostream>
#include <map>
#include <set>
using namespace std;

int main() {
    long long h, d;
    cin >> h >> d;
    long long ans = 1;
    int k = 0;
    while (h - k * d > 1) {
        ans *= h - k * d;
        k++;
    }
    cout << ans;
}
```

Задача 3.

```
#include <iostream>
#include <vector>
using namespace std;

int main() {
    int n;
    cin >> n;
    vector<int> vec(86401, 0);
    for (int i = 0; i < n; ++i) {
        int l, r;
        cin >> l >> r;
        if (l > r)
            swap(l, r);
        for (int j = l; j <= r; ++j) {
            vec[j]++;
        }
    }
    int max = 0; int begin = 1, end = 1;
```

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for (int i = 0; i < vec.size(); i++) {
    if (vec[i] > max) {
        max = vec[i];
        begin = i;
        end = i;
    }
}
for (int i = begin + 1; i < vec.size(); ++i) {
    if (vec[i] == max) {
        end++;
    }
    else
    {
        break;
    }
}
cout << max << endl << begin << " " << end;
}

```

Задача 4.

```

#include <iostream>
#include <string>
#include <vector>
#include <map>
using namespace std;

```

```

int main() {
    string inp;

    map<char, int> d;
    getline(cin, inp);

    for (int i = -128; i <= -97; ++i) {
        d[(char)i] = i;
    }
    int n = -128;
    for (int i = -96; i <= -81; ++i) {
        d[(char)i] = n;
        n++;
    }
    n = -122;
    for (int i = -32; i <= -17; ++i) {
        d[(char)i] = n;
        n++;
    }

    string s;
    vector<int> vec;
    for (auto i = 0; i < inp.size(); ++i) {
        if (d[inp[i]] != 0) {
            s.push_back(inp[i]);
            vec.push_back(i);
        }
    }
    for (int i = 1; i < s.size(); ++i) {
        if (d[s[i]] < d[s[i - 1]])

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        {
            cout << vec[i] + 1 << " " << s[i];
            return 0;
        }
    }
    cout << "OK";
}

```

Задача 5.

```
#include <iostream>
```

```
#include <vector>
```

```
using namespace std;
```

```

int main() {
    int n;
    cin >> n;
    vector<vector<int> > vec(n, vector<int>(n));
    for (int i = 0; i < n; ++i) {
        for (int j = 0; j < n; ++j) {
            cin >> vec[i][j];
        }
    }
    int k;
    cin >> k;
    for (int i = 0; i < k; ++i) {
        int x, y;
        cin >> y >> x;
        if (vec[x][y] >= 8)
            vec[x][y] -= 8;
        else
            vec[x][y] = 0;
        if (x != n - 1) {
            if (vec[x + 1][y] >= 4)
                vec[x + 1][y] -= 4;
            else
                vec[x + 1][y] = 0;
        }
        if (y != n - 1) {
            if (vec[x][y + 1] >= 4)
                vec[x][y + 1] -= 4;
            else
                vec[x][y + 1] = 0;
        }
        if (x != 0) {
            if (vec[x - 1][y] >= 4)
                vec[x - 1][y] -= 4;
            else
                vec[x - 1][y] = 0;
        }
        if (y != 0) {
            if (vec[x][y - 1] >= 4)
                vec[x][y - 1] -= 4;
            else
                vec[x][y - 1] = 0;
        }
        if (x + 1 < n && y + 1 < n) {

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        if (vec[x + 1][y + 1] >= 4)
            vec[x + 1][y + 1] -= 4;
        else
            vec[x + 1][y + 1] = 0;
    }
    if (y + 1 < n && x - 1 > -1) {
        if (vec[x - 1][y + 1] >= 4)
            vec[x - 1][y + 1] -= 4;
        else
            vec[x - 1][y + 1] = 0;
    }
    if (x + 1 < n && y - 1 > -1) {
        if (vec[x + 1][y - 1] >= 4)
            vec[x + 1][y - 1] -= 4;
        else
            vec[x + 1][y - 1] = 0;
    }
    if (x - 1 > -1 && y - 1 > -1) {
        if (vec[x - 1][y - 1] >= 4)
            vec[x - 1][y - 1] -= 4;
        else
            vec[x - 1][y - 1] = 0;
    }
}
for (int i = 0; i < n; ++i) {
    for (int j = 0; j < n; ++j) {
        cout << vec[i][j] << " ";
    }
    cout << endl;
}
}

```

Задача 6.

```

#include <iostream>
#include <map>
#include <set>
using namespace std;

```

```

int main() {
    map<char, int> m;
    m['A'] = 1;
    m['B'] = 2;
    m['C'] = 3;
    m['D'] = 4;
    m['E'] = 5;
    m['F'] = 6;
    m['G'] = 7;
    m['H'] = 8;
    set<pair<int, int> > s;

    char fc, lc, kc;
    int fi, li, ki;
    pair<int, int> f, l, k;
    cin >> fc >> fi >> lc >> li >> kc >> ki;
    f.second = fi; f.first = m[fc];
    l.second = li; l.first = m[lc];
}

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k.second = ki; k.first = m[kc];

if (k.first + 2 < 8 && k.second + 1 < 8) {
    s.insert({ k.first + 2, k.second + 1 });
}
if (k.first + 2 < 8 && k.second - 1 > 0) {
    s.insert({ k.first + 2, k.second - 1 });
}
if (k.first - 2 > 0 && k.second + 1 < 8) {
    s.insert({ k.first - 2, k.second + 1 });
}
if (k.first - 2 > 0 && k.second - 1 > 0) {
    s.insert({ k.first - 2, k.second - 1 });
}
if (k.first + 1 < 8 && k.second + 2 < 8) {
    s.insert({ k.first + 1, k.second + 2 });
}
if (k.first - 1 > 0 && k.second + 2 < 8) {
    s.insert({ k.first - 1, k.second + 2 });
}
if (k.first + 1 < 8 && k.second - 2 > 0) {
    s.insert({ k.first + 1, k.second - 2 });
}
if (k.first - 1 < 8 && k.second - 2 > 0) {
    s.insert({ k.first - 1, k.second - 2 });
}

for (int i = l.first + 1; i <= 8; ++i) {
    s.insert({ i, l.second });
}
for (int i = l.first - 1; i > 0; --i) {
    s.insert({ i, l.second });
}
for (int i = l.second + 1; i <= 8; ++i) {
    s.insert({ l.first, i });
}
for (int i = l.second - 1; i > 0; --i) {
    s.insert({ l.first, i });
}

for (int i = f.first + 1; i <= 8; ++i) {
    s.insert({ i, f.second });
}
for (int i = f.first - 1; i > 0; --i) {
    s.insert({ i, f.second });
}
for (int i = f.second + 1; i <= 8; ++i) {
    s.insert({ f.first, i });
}
for (int i = f.second - 1; i > 0; --i) {
    s.insert({ f.first, i });
}
int i = f.first + 1; int j = f.second + 1;
while (i <= 8 && j <= 8) {
    s.insert({ i, j });
    i++;
}

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        j++;
    }
    i = f.first + 1; j = f.second - 1;
    while (i <= 8 && j > 0) {
        s.insert({ i, j });
        i++;
        j--;
    }
    i = f.first - 1; j = f.second + 1;
    while (i > 0 && j <= 8) {
        s.insert({ i, j });
        i--;
        j++;
    }
    i = f.first - 1; j = f.second - 1;
    while (i > 0 && j > 0) {
        s.insert({ i, j });
        i--;
        j--;
    }
    int ans = 64 - s.size();
    if (s.find({ f.first, f.second }) == s.end())
        ans--;
    if (s.find({ l.first, l.second }) == s.end())
        ans--;
    if (s.find({ k.first, k.second }) == s.end())
        ans--;
    cout << ans;
}

```