

Question 1:

The screenshot shows a web browser window with the HackerRank website. The page title is "Deeppti's Lottery". The submission status is "Submitted a few seconds ago • Score: 20.00". The status is "Wrong Answer". The test cases are: Test Case #0 (Pass), Test Case #1 (Fail), Test Case #2 (Pass), Test Case #3 (Pass), and Test Case #4 (Pass). The submitted code is in C++14 and contains a comment block with the author's information.

Language: C++14 [Open in editor](#)

```
1 /*
2  *
3  * Author : Ajay Panchal
4  * B.TECH CSE STUDENT
```

```
/*
 *
 * Author : Ajay Panchal
 * B.TECH CSE STUDENT
 * LOVELY PROFESSIONAL UNIVERSITY
 * BATCH : 2018-2022
 * GITHUB LINK : https://github.com/ajay-panchal-099
 * PROBLEM STATEMENT :
 */

#include<bits/stdc++.h>
using namespace std;

typedef pair<int,int> ii;
typedef vector<int> vi;
typedef vector<bool> vb;
typedef vector<vi> vvi;
typedef vector<ii> vp;
typedef unordered_map<int,int> umap_ii;
typedef unordered_map<char,int> umap_ci;
typedef unordered_map<string,int> umap_si;
typedef unsigned long long int ull;
typedef pair<int,int> ii;
```

```

#define int long long
#define fi first
#define se second
#define INF 0x3f3f3f3f
#define PI 3.1415926535897932384626
#define MOD 1000000007
#define pb push_back
#define uset unordered_set
#define pq_max priority_queue<int>
#define pq_min
priority_queue<int,vector<int>,greater<int>>
#define mp make_pair //Better use {}
#define size5 100010

//LOOPS
#define For(i,b) for(int i=0;i<b;i++)
#define FoR(i,a,b) for(int i=a;i>=b;i--)
#define FOR(i,a,b) for(int i=a;i<b;i++)
#define foreach(v, c) for(auto v:c)
#define nested(i,a,b,j,c,d) for(int i=a;i<b;i++){ for(int
j=c;j<d;j++)
//#define foreach(v, c) for( auto v = (c).begin(); v !=
(c).end(); ++v)
#define min3(a,b,c) min(a,min(b,c))
#define min4(a,b,c,d) min(min(a,b),min(c,d))
#define maxall(v) *max_element(all(v))
#define minall(v) *min_element(all(v))
#define all(a) a.begin(), a.end()
#define MS0(X) memset((X), 0, sizeof((X)))
#define MS1(X) memset((X), -1, sizeof((X)))
#define whileNE(x) while(!x.empty())
#define present(c,x) ((c).find(x) != (c).end())
#define TCase int __T, case_n = 1; cin>>__T;
while (__T-- > 0)

// directions
const int fx[4][2] = {{0,1}, {0,-1}, {1,0}, {-1,0}};
const int fxx[8][2] = {{0,1}, {0,-1}, {1,0}, {-1,0},
{1,1}, {1,-1}, {-1,1}, {-1,-1}};

// Some common useful functions
#define maX INF
#define miN INT_MIN
#define checkbit(n,b) ((n >> b) & 1)
#define INDEX(arr,ind) (lower_bound(all(arr),ind)-
arr.begin())
#define REMAX(a,b) (a)=max((a),(b)) // set a to the
maximum of a and b
#define REMIN(a,b) (a)=min((a),(b));
#define sz(a) (int)(a.size())
#define len(a) (int)(a.length())
#define UB(x,a) (upper_bound(all(a),x)-a.begin())
#define LB(a,x) (lower_bound(all(a),x)-a.begin())
#define NP(a) next_permutation(all(a))

#define print(x) cout<<x;
#define print2(x,y) cout<<x<<" "<<y;
#define println(x) cout<<x<<'\n';
#define accept_arr(N,arr) int N; cin>>N; int arr[N]; For(i,N)
cin>>arr[i];
#define printld(arr,length) for(int i=0;i<length;i++)

```

```

cout<<arr[i]<<" "; cout<<'\n';
#define print1D(arr,start,length)      for(int i=start;i<length;i++)
cout<<arr[i]<<" "; cout<<'\n';
#define print2d(arr,n)                 For(i,n){For(j,n){cout<<arr[i][j]<<"
";}cout<<endl;}
#define print2D(arr,m,n)               For(i,m){For(j,n){cout<<arr[i][j]<<"
";}cout<<endl;}
#define gets(n)                         getline(cin,n); cin.ignore();
#define debug(x)                        cerr << #x << ": " << x << endl;
#define debug2(x, y)                   cerr << #x << ": " << x << " | " <<
#y << ": " << y << endl;

#define fast_io
ios_base::sync_with_stdio(false);cin.tie(NULL);
#define sublimeProblem                  freopen("input.txt", "r", stdin);
freopen("output.txt", "w", stdout);
const int Max = 1e5;
vector<int> sieve(int n){
    bool prime[n];
    memset(prime, true, sizeof(prime));
    prime[0]=prime[1]=false;
    for(int i=2; i*i<=n; i++){// marking all non primes
        if(prime[i]) { for(int j= i*2; j<n; j+=i) prime[j]=false; }
    }
    vector<int> p;

    for(int i=2;i<n;i++){ if(prime[i]) p.push_back(i);}
    return p;
}

int32_t main()
{
    fast_io;
    // IO Problem;
    vector<int> v=sieve(Max);
    int t;
    cin>>t;
    while(t--){
        int n;
        cin>>n;
        cout<<(v[n-1]*v[n-1])+1<<"\n";
    }

    return 0;
}

```

Question 2:

The screenshot shows a web browser window with multiple tabs. The active tab is 'Return Gift 1 Submission #13261'. The browser address bar shows the URL: `hackerrank.com/contests/ca1-cse330-odd/challenges/return-gift-1/submissions/code/1326145896`. The HackerRank navigation bar is visible with links for PRACTICE, CERTIFICATION, COMPETE (highlighted), JOBS, and LEADERBOARD. The user profile 'ajaykhiladi02' is in the top right. The page content shows the contest 'Return Gift 1' with tabs for Problem, Submissions, and Leaderboard. A message states 'Submitted a few seconds ago • Score: 25.00' and 'Status: Accepted'. Below this, a table of test cases shows all four cases passed with green checkmarks. The 'Submitted Code' section shows the language as C++14 and a code editor with the following content:

```
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typedef vector<bool> vb;
typedef vector<vi> vvi;
typedef vector<ii> vpi;
typedef unordered_map<int,int> umap_ii;
typedef unordered_map<char,int> umap_ci;
```

```

typedef unordered_map<string,int> umap_si;
typedef unsigned long long int ull;
typedef pair<int,int> ii;

#define int long long
#define fi first
#define se second
#define INF 0x3f3f3f3f
#define PI 3.1415926535897932384626
#define MOD 1000000007
#define pb push_back
#define uset unordered_set
#define pq_max priority_queue<int>
#define pq_min

priority_queue<int,vector<int>,greater<int>>
#define mp make_pair //Better use {}
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//LOOPS
#define For(i,b) for(int i=0;i<b;i++)
#define FoR(i,a,b) for(int i=a;i>=b;i--)
#define FOR(i,a,b) for(int i=a;i<b;i++)
#define foreach(v, c) for(auto v:c)
#define nested(i,a,b,j,c,d) for(int i=a;i<b;i++){ for(int
j=c;j<d;j++)
//#define foreach(v, c) for( auto v = (c).begin(); v !=
(c).end(); ++v)
#define min3(a,b,c) min(a,min(b,c))
#define min4(a,b,c,d) min(min(a,b),min(c,d))
#define maxall(v) *max_element(all(v))
#define minall(v) *min_element(all(v))
#define all(a) a.begin(), a.end()
#define MS0(X) memset((X), 0, sizeof((X)))
#define MS1(X) memset((X), -1, sizeof((X)))
#define whileNE(x) while(!x.empty())
#define present(c,x) ((c).find(x) != (c).end())
#define TCase int __T, case_n = 1; cin>>__T;
while (__T-- > 0)

// directions
const int fx[4][2] = {{0,1},{0,-1},{1,0},{-1,0}};
const int fxx[8][2] = {{0,1},{0,-1},{1,0},{-1,0},
{1,1},{1,-1},{-1,1},{-1,-1}};

// Some common useful functions
#define maX INF
#define miN INT_MIN
#define checkbit(n,b) ((n >> b) & 1)
#define INDEX(arr,ind) (lower_bound(all(arr),ind)-
arr.begin())
#define REMAX(a,b) (a)=max((a),(b)) // set a to the
maximum of a and b
#define REMIN(a,b) (a)=min((a),(b));
#define sz(a) (int)(a.size())
#define len(a) (int)(a.length())
#define UB(x,a) (upper_bound(all(a),x)-a.begin())
#define LB(a,x) (lower_bound(all(a),x)-a.begin())
#define NP(a) next_permutation(all(a))

#define print(x) cout<<x;
#define print2(x,y) cout<<x<<" "<<y;

```

```

#define println(x)                cout<<x<<'\\n';
#define accept_arr(N,arr)        int N; cin>>N; int arr[N]; For(i,N)
cin>>arr[i];
#define print1d(arr,length)      for(int i=0;i<length;i++)
cout<<arr[i]<<" "; cout<<'\\n';
#define print1D(arr,start,length) for(int i=start;i<length;i++)
cout<<arr[i]<<" "; cout<<'\\n';
#define print2d(arr,n)          For(i,n){For(j,n){cout<<arr[i][j]<<"
";}cout<<endl;}
#define print2D(arr,m,n)        For(i,m){For(j,n){cout<<arr[i][j]<<"
";}cout<<endl;}
#define gets(n)                  getline(cin,n); cin.ignore();
#define debug(x)                 cerr << #x << ": " << x << endl;
#define debug2(x, y)             cerr << #x << ": " << x << " | " <<
#y << ": " << y << endl;

#define fast_io
ios_base::sync_with_stdio(false);cin.tie(NULL);
#define sublimeProblem           freopen("input.txt", "r", stdin);
freopen("output.txt", "w", stdout);
const int N = 10000000;
int lp[N+1];
vector<int> pr;

void solve(){
    for (int i=2; i<=N; ++i) {
        if (lp[i] == 0) {
            lp[i] = i;
            pr.push_back (i);
        }
        for (int j=0; j<(int)pr.size() && pr[j]<=lp[i] && i*pr[j]<=N; ++j)
            lp[i * pr[j]] = pr[j];
    }
}

int32_t main()
{
    fast_io;
    // IO Problem;

    solve();

    int t;
    cin>>t;

    while(t--){
        int a, b;
        cin>>a>>b;

        int sum = a + b;

        int i = 0;
        while(pr[i] <= sum){
            i++;
        }

        cout<<pr[i]-sum<<endl;
    }
}

```

```
    return 0;  
}
```