**PRIME VISITS**

PMO gives two random numbers a & b to the Prime Minister. PM Modi wants to visit all countries between a and b (inclusive) , However due to shortage of time he can't visit each and every country , So PM Modi decides to visit only those countries,for which country number has two divisors. So your task is to find number of countries Mr. Modi will visit.



**Input Format:**

The first line contains N , no of test cases. The next N lines contain two integers a and b denoting the range of country numbers.

**Constraints:**

a<=1000000 & b<=1000000.  
N<=1000

**Output Format**

Output contains N lines each containing an answer for the test case.

**Sample Input**

2

1 10

11 20

**Sample Output**

4

4

**Program-**

#include <bits/stdc++.h>

using namespace std;

int SieveOfEratosthenes(int m)

{ int k=0;

bool prime[m+1];

memset(prime, true, sizeof(prime));

for (int p=2; p\*p<=m; p++)

{

if (prime[p] == true)

{

for (int i=p\*p; i<=m; i += p)

prime[i] = false;

}

}

for (int p=2; p<=m; p++)

if (prime[p])

k++;

return k;

}

int main()

{

int n,m,t;

cin>>t;

while(t--)

{

cin>>n>>m;

int p=SieveOfEratosthenes(m);

int q=SieveOfEratosthenes(n-1);

cout<<p-q<<endl;

}

return 0;

}

Sieve Of Eratosthenes-

<https://www.geeksforgeeks.org/sieve-of-eratosthenes/>