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| **Number of numbers**    Problem code: PC05 | * [SUBMIT](https://www.codechef.com/submit/PC05) * [MY SUBMISSIONS](https://www.codechef.com/status/PC05,nacho0monllor) * [ALL SUBMISSIONS](https://www.codechef.com/status/PC05) |

**All submissions for this problem are available.**

Given a range of numbers (BOTH INCLUSIVE), print the number of numbers, sum of whose digits is a prime number.

**Note: 1 is NOT considered to be a prime number.**

**Input**

First line contains the number of test cases T.  
  
Each test case consists of two lines, each line containing one integer. First integer L gives the beginning of the range of values and the second integer U gives the end of range.

**Output**

One integer in a new line which gives the number of numbers that satisfy the given condition.

**Constraints**

1 ≤ T ≤ 100  
  
1 ≤ L ≤ U ≤ 10,000

**Example**

**Input:**

3

11

21

3

11

10

20

**Output:**

6

4

5

<https://www.codechef.com/problems/PC05>

#include <iostream>

#include <cstdio>

#include <vector>

#include <stack>

#include <queue>

#include <string>

#include <cstring>

#include <map>

#include <cstdlib>

#include <algorithm>

#include <list>

#include <deque>

#include <bitset>

#include <cmath>

#include <functional>

#include <set>

using namespace std;

bool esPrimo(int n)

{

    if (n < 2) return false;

    if (n == 2) return true;

    if (n % 2 == 0) return false;

    int sqr = (int)sqrt(n);

    for (int i = 3; i <= sqr; i += 2)

    {

        if (n % i == 0)

        {

            return false;

        }

    }

    return true;

}

int sumarDig(string n)

{

    int sum = 0;

    for (int i = 0; i < n.size(); i++)

    {

        sum +=  (n[i]-'0');

    }

    return sum;

}

char buffer[100];

std::string to\_string(int k){

    sprintf(buffer, "%d", k);

    return std::string(buffer);

}

int main()

{

    int t ;

    scanf("%d", &t);

    while (t--)

    {

        int L,U;

        scanf("%d", &L);

        scanf("%d", &U);

        int ans = 0;

        for (int i = L; i <= U; i++)

        {

            if (esPrimo(sumarDig(to\_string(i)  )))

            {

                ans++;

            }

        }

        printf("%d**\n**", ans);

    }

}