How Many Primes

Find out how many prime numbers are there between two numbers.

██ ███████ █████ ███████ ██████ ███████ ███ ███
████

Input

The first line of input file contains the number of test cases T(T ≤ 25). Each test case contains two positive integers A and B where 1≤A≤B≤1000.

█████ ██████ █████ █████ █████ █████ █████ ████ T (T≤██) ███████ █████ ████ ███ ███ ███████ ██████ █████ A ███ B, ██████ █≤A≤B≤████

Output

● For each case, print one line of output like "Case X: N", without the quotes, where X is the number of test case starting from 1 and N is number of prime numbers which are greater than or equal to A and less than or equal to B.

● Check the sample input and output for more details.

● █████ █████ █████ ██ ██████ ██████ ██████ ████ ███ "Case X: N " ██ ██ ███ ███████ █████ ████, ██████ X █████ █ ████ ████ ███ █████ █████ ██████ ███ N █████ A ████ ██ ██ ████ ███ B ████ ██████ ██ ████ ██ █████ ██████ ██████ ███ ███ ██████

● █████ ███████ ████ ██████████ █████ █████

Example

Input:

```
3
10 20
30 40
50 100
```

Output:

```
Case 1: 4
Case 2: 2
Case 3: 10
```