I - Find Terrorists

Time limit: 5 seconds

The Prime Minister and his Accumulated Council of Ministers (ACM) are trying hard to find all possible terrorist locations. In his dream, the Prime Minister gets a message from God suggesting that the answer to all terrorist problems are numbers (say one such number is X) such that the number of factors of X(including 1 and X) is prime. These numbers supposedly contain the encrypted locations of terrorists. Since the ACM has no programmer, the Prime Minister needs your help in finding out such numbers.

Note: 1 is not considered a prime number.

Input

The first line of input will contain an integer T <= 20 denoting the number of test cases.
T lines follow, one per test case.
Each test case will be a line formatted as "L H" where L and H are integers and 0<=H<=10000

Output

Output one line per case a space separated list of all integers(sorted ascending) lying between L and H (both inclusive) such that the number of factors of each integer is prime. In case no such integer exist output -1.

Sample Input

```
3
1 1
1 2
2 5
```

Sample Output

```
-1
2
2 3 4 5
```