Challenge 3 - Favourite primes

As you may have already heard, archeologists working on Samos have made a fascinating discovery. It seems that Pythagoreans had a very intriguing daily ceremony: each of them selected one of the first 25 prime numbers, they multiplied those primes that were chosen and wrote down the result on a rock. They repeated this same routine for almost 100 years! We have scanned the rock and you can find the numbers here.

The archeologists heading this research have put out an international call to analyze these numbers, as they believe that extremely valuable historical information can be extracted from those numbers. Specifically, they want to know which prime numbers were most popular in different time periods. Please help us to make this discovery!

Input

The first line contains the number of cases.
The rest of the file contains 1 line per case, containing 2 numbers: the 0-indexed beginning (inclusive) and end (exclusive) of the time period to be checked.

Output

N lines each containing the number of repetitions of the most popular prime followed by the most popular prime. If there is more than one number with the same number of repetitions, all of them should appear, in ascending order, separated by spaces.

Sample Input

```
2
0 1
0 2
```

Sample Output

```
11 7 11 41 71
21 11
```

Test & submit your code

We provide a form to test and submit your code. You need to pass the test phase before attempting the submit phase.

Test your program

Download test input

Program output:

Choose File no file selected

Submit test output

A nice output will tell you if your program got the right solution or not. You can try as many times as you need.

Submit your program to the challenge

You have not solved the test phase yet!

Note that you first need to solve the test phase before submitting the code. During the submit phase, in some problems, we might give your program harder questions, so try to make your program failsafe.

Important: In this phase, you must provide the source code used to solve the challenge and, if necessary, a brief explanation of how you solved it.

Remember **you can only submit once!** Once your solution is submitted you won't be able to amend it to fix issues or make it faster, so please be sure your solution is finished before submitting it.

If you have any doubts, please check the info section.

Go ahead

I'm done! :)

Once you have submitted your code, the page should be automatically refreshed so you can continue to next challenge.

I'm stuck! :(

Be sure you follow the Tuenti Engineering twitter for updates and possible hints during the contest.

If this challenge is too hard and you are blocked, you will be able to skip it after two hours. Note that **you won't be able to complete it later**, and you have a limited number of challenges to skip.

Finally, if you run out of skips but are still really stuck with one problem, you will be able to skip it after 24 hours.

Challenge status:

Test case	Not done
Solution submitted	Not done
Skip	You still have to wait 0h, 30m and 0s to be able to skip this challenge

Refresh status

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