Assignment Case	
COMP6047 Algorithm and Programming	BINUS UNIVERSITY Software Laboratory Center
Computer Science	**<Case Code>**
***Valid on** Compact Semester Year 2019/2020*	**Revision 00**

Soal
Case

Identical Prime Factors

Today is another bad school day for Bibi. Her math teacher just announced that the class' exam results are horrible: more than half students don't even get a passing grade! After babbling and lecturing the class for almost an hour, the teacher finally calmed down and told the class that she is giving them a chance to fix their score. She will give a challenge, and two fastest students to answer correctly can have their exam score raised to secure zone. The challenge is simple: given two random numbers, the students are to find minimum and maximum identical prime factors between both numbers, and the fastest student who can multiply both prime factors will get their exam score raised.

Bibi, as one of the students who failed the exam, is terrified imagining her parents' reaction if they heard about her exam score this time. Therefore, she can't afford to miss this chance! She then asked you, one of the few students who passed the exam, to calculate it faster than anyone else in the class can. She also promised you that she will treat you some chocolate brownies if you can answer the question first among the other classmates, so of course, you can't let her down!

Format Input

The first line contains an integer T which represents the total cases you need to solve. Each test case contains P and Q, separated by space, represent the number you need to work on.

Format Output

Print the result which is calculated from the multiplication of P and Q's minimum factor and maximum prime factor.

Constraints

$1 \leq T \leq 100$

$$2 \leq P, Q \leq 1000000$$

Sample Input	Sample Output
2 210 84 6 12	Case #1: 14 Case #2: 6

Explanation:

Let's take an example from the first case. The numbers 210 and 84 have several identical prime factors which are 2, 3, and 7. Number '2' is the smallest identic prime factor both the numbers, meanwhile number '7' is the biggest identical prime factor. So, the result must be the multiplication of 2 and 7, which is 14.

Note:

Don't forget to add the newline character after printing the output.