Code : HCFLCM Problem 3 Score : 100

What The Number ?

Problem :

Sarthak and Siddharth are good friends. One day Sarthak found two interesting positive integers: A and B. On the next day, he met Siddarth and wanted to tell him the two integers. However, he managed to forget their values. All he could remember was their highest common factor H and their least common multiple L.

You are given two longs: H and L. Find the original integers A and B, and return the value of A+B. If there are multiple pairs of A and B that correspond to H and L, pick the one that minimizes A+B. If it is impossible to find such A and B (i.e., Sarthak made a mistake somewhere), return -1.

Input :

The first line of the input contains an integer T denoting the number of test cases. The description of T test cases follows. The input will include the two spaced integers, first denotes the HCF, H and the next one denotes the LCM, L.

Output :

For the output,

- You are required to find the value of sum of the actual numbers.
- If there are several combinations possible then print the one that minimises the value of sum (see Sample)
- If there are no pairs possible, print -1.

Sample :

Input :

1 //Number Of Test Cases

2 20

Output :

14

Explanation :

The possible pairs of A and B are {2, 20} and {4, 10}. We need to pick {4, 10} since 4+10 is the smallest sum of A and B.

Scoring :

There will be 2 test cases, each valued 50 points.