It’s Not A Game Anymore!

“All work and no play makes Jack a dull boy.”

So yes we do a lot of awesome work at Red Hat and now it’s time to play. Now we believe in good teamwork and that’s what helps us in making amazing products. So one fine day we decided to play a team game. Since we are quite fond of numbers, we decided to play a number game with the following rules:

- You are given an initial number X.
- You have to reach a given number T.
- You can do any one of the following operations at each step:
  - You can change X to 4X+1.
  - You can change X to 5X+1.

The team that reaches T first wins. Can you help your team determine the minimum number of steps required to reach T? Also, if T cannot be reached from X by applying the above operations, you should be able to determine that at the earliest in order for your team to win. So can you help your team win?

Input Format

Two integers separated by space denoting X and T respectively.

Constraints

0 <= X,T <= 1,000,000

Output Format

If the solution exists, print the minimum number of steps required to reach from X to T else print -1.

Sample Input 0

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1 26
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Sample Output 0

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2
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Explanation 0

The answer is 2 since we can reach 26 in two steps. First step is to apply 4X + 1 and reach 5 and second step is to apply 5X + 1 and reach 26. To visualize,
1 -> 5 -> 26.