

Shortest Prime Path

You are given two four digit prime numbers **Num1** and **Num2**. Find the distance of the shortest path from Num1 to Num2 that can be attained by altering only single digit at a time such that every number that we get after changing a digit is a four digit prime number with no leading zeros.

Example 1:

Input:

Num1 = 1033

Num2 = 8179

Output: 6

Explanation:

1033 -> 1**7**33 -> **3**733 -> 37**3**9 -> 37**7**9 -> **8**779 -> 8**1**79.

There are only 6 steps required to reach Num2 from Num1. and all the intermediate numbers are 4 digit prime numbers.

Example 2:

Input:

Num1 = 1033

Num2 = 1033

Output:

0

Your Task:

You don't need to read input or print anything. Your task is to complete the function **solve()** which takes two integers Num1 and Num2 as input parameters and returns the distance of the shortest path from Num1 to Num2. If it is unreachable then return -1.

Expected Time Complexity: $O(1)$

Expected Auxiliary Space: $O(1)$

Constraints:

$1000 \leq \text{Num1}, \text{Num2} \leq 9999$

Num1 and Num2 are prime numbers.