**Unlock Cricket landmarks**

Unlock Cricket Landmarks

Consider a cricket match where a team is chasing a target and 2 batsmen are playing. It is a given that these 2 batsmen chase the target to win the match, without loss of any more wickets.

Example, Target is 230 runs. Current score of the team is 190. So, there is 40 more runs to be taken.

The 2 batsmen are A and B. A has currently scored and is batting at 60. B has currently scored and is batting at 40. The above given A’s and B’s score are when the team score is 190 and 40 more runs to be chased.

Our objective is to split the remaining runs to be scored (in this case 40) between the batsmen so that their personal landmarks are reached. Landmarks are 50,100,150,200... etc.,

So, in this case, A needs 40 runs to get to his next landmark (100) and B needs 10 runs to reach his next landmark (50). Since B needs lesser runs to achieve his landmark, precedence is given to him, and he gets 10 runs to his name. Of the remaining 30 runs, neither A nor B can reach their landmarks, so the remaining runs are equally split between them.

So, the output would be the final scores of the batsmen, in this case: A – 75 (60+ 15) and B – 65 (40 + 10 + 15).

If the remaining number of runs left was an odd number, then after the equal split, one run would be added to the batsman having the higher score. So, in the above example, A would now have 76 runs (60+16) and B would have 65 runs (40+10+15). If both batsman have the same score, then the 1 extra run will be given to the first batsman (A).

If, for example A’s score was 70 initially (instead of 60), then after 10 runs was allocated to B and 30 more runs were required to achieve the target, those 30 runs should be allocated to A so that he reaches his landmark of 100.

So, the output would be the final scores of the batsmen, in this case: A – 100 (70+ 30) and B – 50 (40+10).

If, in case, equal number of runs need to be split between both, like the below example.  
Target:200  
Current Score:160  
Remaining:40  
A:60  
B:10  
In this case, both need all the remaining 40 runs to achieve their landmarks, but since A’s landmark is higher, he gets the score.  
A:100 (60+40)  
B:10

If, in case both need same amount of score to reach the same landmark, A gets precedence.  
Target:200  
Current Score:190  
Remaining:10  
A:40  
B:40  
Now, both need 10 runs to achieve the same landmark. In this case, the 10 runs are allocated to A  
A:50  
B:40

If in case, the target is large enough to span multiple landmarks for the batsmen, then after the initial allocation to the next possible landmark as explained above, 50 runs are allocated as sets to the batsmen based on the higher landmark and precedence of A (as explained above)  
Example  
Target:300  
Current Score:120  
Remaining:180  
A:90  
B:30  
In this case, initially A gets 10 runs and then B gets 20 runs. Of the remaining 150 runs, 1st 50 is given to A because of his higher landmark (150). Next 50 to B. The remaining 50 is allocated back to A for his higher landmark (200)  
So, the final scores would be  
A: 200 (90+10+50+50)  
B: 100(30+20+50)

Sample Input - 4 positive non-decimal integers line by line. 1 -> target, 2-> current score, 3-> Batsman A score, 4-> Batman B score  
250  
130  
40  
20  
Sample Output - 2 positive non-decimal integers line by line. 1-> A score, 2-> B score  
100  
80

**Sample Input**

250

130

40

20

**Sample Output**

100

80

**Question**

**20**

**Array of Integers - 2018**

System expects a specific sequence in an array of integers (from 1 to 100). The second element in the array should be either 2 digits before or after the first element. The third element in the array should be either 2 digits before or after the second element. The same logic to be followed until the last element traversal. If the sequence is expected, system to display “1”, else “0”. Invalid number in the sequence to display “-1”. System not be validate the first element in the array.

Example:  
Input array: {2, 4, 3, 1, 99}  
Here the first element is 2. This element will not be validated.  
System expects second element either to be (100,1)-2 digits before- or (3,4)-2 digits after.  
System expects third element either to be (1,2)-2 digits before- or (4,5)-2 digits after.

**Sample Input**

5

23

25

24

22

20

**Sample Output**

1

**Explanation**

Sample Input:  
5 (Total count of numbers to be provided)  
23  
25  
24  
22  
20

Sample Output:  
1

**Note:**Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 5.0 sec(s) for each input file

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes

Allowed Languages: C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, Visual Basic

**Strings - 2018**

Call the first string as A and the second string as B. Let S be the set of all different substrings of A, and T be the set of all different substrings of B. We then define another set P which consists of all the strings that belongs to S or T, but not both. According to the Professor L.P.C. method, the size of P is a good indicator to measure the difference between A and B.

For example, let A = aacd and B = cdaa. We can see that:  
S = {a, aa, aac, aacd, ac, acd, c, cd, d},  
T = {c, cd, cda, cdaa, d, da, daa, a, aa},  
P = {aac, aacd, ac, acd, cda, cdaa, da, daa}.  
Size of P is 8 and we can say the level of difference between A and B is 8.

Your task is to find this indicator.

**Sample Input**

aacd

cdaa

**Sample Output**

8

**Explanation**

Input  
The first line of the input contains the string A. The second line contains the string B.

Output  
Output a single line containing the level of difference between strings A and B according to definition above.

Constraints  
Both A and B consist only of lowercase English letters (from 'a' to 'z')

Example  
Input:  
aacd  
cdaa

Output:  
8

**Note:**Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.