

# Problem 299: Bulls and Cows

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 51.92%

**Paid Only:** No

**Tags:** Hash Table, String, Counting

## Problem Description

You are playing the **[Bulls and Cows]**([https://en.wikipedia.org/wiki/Bulls\\_and\\_Cows](https://en.wikipedia.org/wiki/Bulls_and_Cows)) game with your friend.

You write down a secret number and ask your friend to guess what the number is. When your friend makes a guess, you provide a hint with the following info:

\* The number of "bulls", which are digits in the guess that are in the correct position. \* The number of "cows", which are digits in the guess that are in your secret number but are located in the wrong position. Specifically, the non-bull digits in the guess that could be rearranged such that they become bulls.

Given the secret number `secret`` and your friend's guess `guess``, return `_`the hint for your friend's guess`_`.

The hint should be formatted as `"xAyB"`, where `x`` is the number of bulls and `y`` is the number of cows. Note that both `secret`` and `guess`` may contain duplicate digits.

**Example 1:**

**Input:** `secret = "1807"`, `guess = "7810"` **Output:** `"1A3B"` **Explanation:** Bulls are connected with a `|` and cows are underlined: `"1807" | "_7_ 8 _10_"`

**Example 2:**

**Input:** `secret = "1123"`, `guess = "0111"` **Output:** `"1A1B"` **Explanation:** Bulls are connected with a `|` and cows are underlined: `"1123" "1123" | or | "01 _1_ 1" "011 _1_"` Note

that only one of the two unmatched 1s is counted as a cow since the non-bull digits can only be rearranged to allow one 1 to be a bull.

**\*\*Constraints:\*\***

\* `1 <= secret.length, guess.length <= 1000` \* `secret.length == guess.length` \* `secret` and `guess` consist of digits only.

## Code Snippets

**C++:**

```
class Solution {
public:
    string getHint(string secret, string guess) {

    }
};
```

**Java:**

```
class Solution {
    public String getHint(String secret, String guess) {

    }
}
```

**Python3:**

```
class Solution:
    def getHint(self, secret: str, guess: str) -> str:
```