Hello ACM 2025 测试赛

ACM 社团出题组

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A. Algorithm Memories

Problem Statement

To perform better in the competition, you need to unlock your algorithm memories.

However, your memories are locked behind a password —a string of exactly 5 lowercase letters.

You have tried a guess password, and the system returned a response string consisting of digits `0`, `1` or `2`:

- `0` means the letter does not appear in the correct password.
- `1` means the letter exists in the correct password but not at this position.
- `2` means the letter is correct and in the correct position.

Your task is to determine how many possible passwords are consistent with the guess and the response.

Input Format

The first line contains a string with 5 lowercase letters, the password you guessed.

The second line contains a string with 5 digits, the response.

Output Format

One integer, the number of possible passwords.

Example

Input #1:

```
maidx
20212
```

Output #1:

```
24
```

B. Brute Force

Problem Statement

You are in the Hello ACM competition. But you found that you can only come up with a brute force.

Your brute force code is:

```
#include<bits/stdc++.h>
using namespace std;
int main(){
    unsigned long long ans=0;
    for(int x=1;x<=10000000;++x){
        ans+=x;
        for(int y=1;y<=x;++y){
            ans-=y;
            for(int z=1;z<=y;++z){
                ans+=z;
                for(int w=1;w<=z;++w){
                    ans-=w;
                    ++ans;
                }
            }
        }
    }
    printf("%llu\n", ans);
    return 0;
}
```

It is absolutely impossible to run out the answer. But you may calculate it by hand, and output it directedly. Only through this way can you accept this problem and get rk1.

Format

Only a single number. The output of the brute force code.

Example

The example is for illustration of the format only; it may be incorrect.

```
114514
```