Problem 800: Similar RGB Color

Problem Information

Difficulty: Easy
Acceptance Rate: 67.88%
Paid Only: Yes
Tags: Math, String, Enumeration

Problem Description

The red-green-blue color `"#AABBCC"` can be written as `"#ABC"` in shorthand.

* For example, `"#15c"` is shorthand for the color `"#1155cc"`.

The similarity between the two colors `"#ABCDEF"` and `"#UVWXYZ"` is $-(AB - UV)^2 - (CD - WX)^2 - (EF - YZ)^2$.

Given a string `color` that follows the format `"#ABCDEF"`, return a string represents the color that is most similar to the given color and has a shorthand (i.e., it can be represented as some `"#XYZ"`).

Any answer which has the same highest similarity as the best answer will be accepted.

Example 1:

Input: color = "#09f166" **Output:** "#11ee66" **Explanation:** The similarity is $-(0x09 - 0x11)^2 -(0xf1 - 0xee)^2 - (0x66 - 0x66)^2 = -64 -9 -0 = -73$. This is the highest among any shorthand color.

Example 2:

Input: color = "#4e3fe1" **Output:** "#5544dd"

Constraints:

* `color.length == 7` * `color[0] == '#'` * `color[i]` is either digit or character in the range `['a', 'f']` for `i > 0`.

Code Snippets

C++:

```cpp
class Solution {
public:
string similarRGB(string color) {


}
};
```

Java:

```java
class Solution {
public String similarRGB(String color) {


}
}
```

Python3:

```python
class Solution:
def similarRGB(self, color: str) -> str:
```