537. Complex Number Multiplication

A complex number can be represented as a string on the form "real+imaginaryi" where:

- real is the real part and is an integer in the range [-100, 100].
- imaginary is the imaginary part and is an integer in the range [-100, 100].
- $i^2 == -1$.

Given two complex numbers num1 and num2 as strings, return a string of the complex number that represents their multiplications.

Example 1:

- **Input:** num1 = "1+1i", num2 = "1+1i"
- **Output:** "0+2i"
- **Explanation:** (1 + i) * (1 + i) = 1 + i2 + 2 * i = 2i, and you need convert it to the form of 0+2i.

Example 2:

- **Input:** num1 = "1+-1i", num2 = "1+-1i"
- **Output:** "0+-2i"
- **Explanation:** (1 - i) * (1 - i) = 1 + i2 - 2 * i = -2i, and you need convert it to the form of 0+-2i.

Constraints:

- num1 and num2 are valid complex numbers.