

Task 1: Send me the code

Description

- Your task is to decode a message sent by a friend of yours to help you cheat on the exam. Be aware that the Big Vik is watching and he could corrupt your message.
- The message arrives as a sequence of digits. You have the key to decode it.
- The KEY is:
 - You have to read the input from right to left.
 - Decode digit on **odd** position: $\text{digit} * \text{index}^2$
 - Decode digit on **even** position: $\text{digit}^2 * \text{index}$

indexes	3	2	1
array	5	6	9
odd/even	odd	even	odd
result	$5 * 3^2$	$6^2 * 2$	$9 * 1^2$

- The new sequence of digit is generated
 - result = $5 * 3^2 + 6^2 * 2 + 9 * 1^2 = 126$**
 - If the last digit is **0** your message is corrupted and Big Vik wins the game
 - Write on the console
 - 10**
 - Big Vik wins again!**
 - If the last digit is not **0** the length of the message is this digit (**6 in the example**)
 - You have to find the remainder of **result % 26** (26 is the number of letters in the alphabet)
 - s = $126 \% 26 = 22$**
 - Start of the message is at **s + 1**
 - s + 1 = 23**
 - The 23st letter in the alphabet is **W**
 - The length of the message is **6 => WXYZAB**
 - If the last letter ('Z') is reached you should continue from the beginning ('A')
 - Letters are always capital

Input

- The input data should be read from the console. The only input line contains an integer number N which is the encoded message. The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

- The output data should be printed on the console. The output consists of two lines. On the first output line you must print the **result** after decoding the key. On the second line you should print the message found or if the message is corrupted you should write **Big Vik wins again!**

Constraints

- The integer number **N** will have max 400 digits.
- **Time limit: 0.1 s**
- **Memory limit: 16 MB**

Sample Tests

Sample Input 1

569

Sample Output 1

126
WXYZAB

Sample Input 2

101

Sample Output 2

10
Big Vik wins again!

Sample Input 3

814

Sample Output 3

78

ABCDEFGH