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Problem 2 - Symbol to Number

You are given a number (SECRET) and a text. The text must be encoded using the SECRET.

The encoding is done as follows:

* If the character is "@", stop the program
* If the character in the text is a letter, multiply its char code by the given SECRET and add 1000.
* If the character in the text is a digit, add to its char code SECRET and add 500
* If the character in the text is not a digit, letter or "@" (any other symbol), subtract from its char

code SECRET

* After performing the above operations on the character in the original text:

o If the character is on even position in the text - divide the encoded value by 100 and round the precision to 2 digits after the decimal point o Else if the character is on odd position in the original text - multiply its encoded value by 100

o The first character in the text is at position 0.

Your task is to encode a text, using the rules above.

Input

The input data is given at the standard input.

On the first line you will find an integer number - the SECRET number On the next line, you will find the text, ending with "@"

The input will be valid, in the specified format, within the constraints given below. There is no need to check the input data explicitly.

Output

Print the encoded text Constraints

* SECRET will always be between 1 and 10
* The count of the characters in the text will always be less than 10 000
* Allowed working time for your program: 0.1 seconds.
* Allowed memory: 16 MB.

Example

|  |  |
| --- | --- |
| Input | Output |
| 6" | 15.04 |
| Telerik Academy Rocks!@ | 160600 |
|  | 16.48 |
|  | 160600 |
|  | 16.84 |
|  | 163000 |
|  | 16.42 |
|  | 2600 |
|  | 13.90 |

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|  |  |
| --- | --- |
|  | 159400  15.82  160000  16.06  165400  17.26  2600  14.92  166600  15.94  164200  16.90  2700 |
| Input | Output |
| 10 | 16.70 |
| C#1 is pretty easy exam@ | 2500 |
|  | 5.59 |
|  | 2200 |
|  | 20.50 |
|  | 215000 |
|  | 0.22 |
|  | 212000 |
|  | 21.40 |
|  | 201000 |
|  | 21.60 |
|  | 216000 |
|  | 22.10 |
|  | 2200 |
|  | 20.10 |
|  | 197000 |
|  | 21.50 |
|  | 221000 |
|  | 0.22 |
|  | 201000 |
|  | 22.00 |
|  | 197000 |
|  | 20.90 |

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