Problem 1 – De-cat-coding

At long last scientist found out that the cats have an evil plan to enslave all of humanity. The sinister organization **Al cat-qaeda** have been targeting high profile programmers and taking them down (a.k.a brutally murdering them), because they are the only ones that can ruin their plans.

"But why programmers?" you would ask, because they are the only ones that can write a program to crack their communication codes. They are using a **21**-based numeral system in order to fool everyone that they are stupid and harmless beings. The digits go as following:

a	b	c	d	…	j	k	…	u
0	1	2	3	…	9	10	…	20

Your task is to help the global programmer community. You will receive a set on letter-numbers (strings) on one line separated with a single space ' '. You have to decode every word transferring it from **21-based** numeral system to **26-based** numeral system (the whole English alphabet). For example, if you have the word "**cb**" in decimal system that will be 2*21 + 1*1 = **43**. That in 26-based system is 43 % 26 = 17 = '**r**', 1 % 26 = 1 = '**b**'. So in 21-based "**cb**" is "**br**" in 26.based system.

Input

The input data should be read from the console.

The input data consists of a single string that needs to be split.

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.

Print out the decoded words separated by a single space.

Constraints

- The number of letters-numbers will be between 3 and 20, inclusive.
- All of the given letter-numbers will consist of small characters.
- None of the letter-numbers will start with an 'a'.
- The words in decimal system will always be between 0 and 18 446 744 073 709 551 615.
- Allowed working time for your program: 0.1 seconds.
- Allowed memory: 16 MB.

Examples

Example input	Example output	Explanation
miao miao miao	gnqo gnqo gnqo	miao = [12][8][0][14] = = 12*21*21*21 + 8*21*21 + 0*21 + 14*1 = = 111132 + 3528 + 0 + 14 = 114674 114674 % 26 = 14 => o 4410 % 26 = 16 => q 169 % 26 = 13 => n 6 % 26 = 6 => g miao => gnqo

sgfcg bdgaj fbo	human must die	sgfcg = … = human bdgaj = … = must fbo = … = die