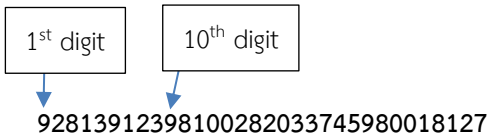
Decoding Secret Code

Mr. A sends a code to Mr. B. The code is a 32-digit integer (the first, or left most digit, is digit 1).

Let the data be:



Mr. B can decode using the following algorithm:

a) Pick the 4th, 11th, 18th, 25th, 32nd digits and create a number from them. This is starting from the 4th digit and jumping to the next 7 digit.	92813912398100282033745980018127 → 18087
b) Pick the 8th, 13th, 18th, 23th, 28th digits and create a number from them. This is starting from the 8th digit and jumping to the next 5 digit.	92813912398100282033745980018127 → 20051
c) Combine the numbers from a) and b) then add it with 10000.	18087 + 20051 + 10000 = 48138
d) Pick the thousands, hundreds and tens digit from the result of c) and concatenate them.	48138 → 813
e) Sum each digit from d), then pick the least significant digit and add it with 1.	813 → 8 + 1 + 3 = 12 12 → 2 2 +1 = 3
f) Convert the number from e) to the capital letter of alphabets with the rule: 1 equals A, 2 equals B, 3 equals C, ..., 9 equals I and 10 equals J.	3 → C
g) The decoded data is the number from d) concatenated by the letter from f).	813C

Input

A 32-digit integer.

Output

Decoded data, using the above algorithm.

Example

Input (From keyboard)	Output (On screen)
92813912398100282033745980018127	813C
00000000000000000000000000000000	000A
99999999999999999999999999999999	999H