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The Virtual Learning Environment for Computer Programming

Barcodes P57443\_en

Nowadays, most companies use barcodes like the following one to distinguish their products



The most spread code which tends to become a standard is the EAN-13. This code is formed by 13 digits: the 12 first correspond to the code of the product, and the last one is a digit of control. The digit of control is a very important part of the EAN coding, because it makes possible the elimination of the reading errors.

The digit of control is computed in two steps:

- 1. We multiply by 3 the numbers which are in odd positions and we add up the result with the numbers which are in even position. (The digits are numbered from right to left.)
- 2. We substract to the result the nearest equal or greater tens.

For instance, the digit of control corresponding to code 544900000099 is computed like this:

1. 
$$9*3+9+0*3+0+0*3+0+0*3+0+9*3+4+4*3+5=84$$

$$2.90 - 84 = 6$$

Therefore, its digit of control is 6.

### Input

Input is a sequence of numbers with 12 digits each one corresponding to different codes of products.

## Output

For each product, print in a line the original code plus its digit of control.

Sample input	Sample output
544900000099	544900000996
438763762897	4387637628972
239872879478	2398728794782
009234464800	0092344648000

#### Observation

Warning: **int** type may not be enough to store numbers with 12 digits.

# **Problem information**

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