

LOGIC

Mr.X has recently graduated from his university.He was called for an interview by a company Y.In the coding round the company asked from Mr.X to decrypt a set of 3 digit numbers using some algorithm.Mr.X does not have very good programming skills,but he knows you as a friend and a talented programmer.Help Mr.X to get selected for the job.

Input

Each line of input consists of a 3 digit number. Inputs are terminated when 0 is encountered.

Output

Output consists of a decrypted number for each input number.

Example

Input:

999
111
124
987
0

Output:

8181261
010120
0208100
7256821