Problem E
Lucky Numbers
Time limit: 1 second
Memory: 1024 megabytes

Problem Description

In everyday life, arithmetic goes beyond performing basic calculations and opens up fascinating aspects of number analysis. One interesting concept is the lucky number, defined based on the sum of the digits of a positive integer. A lucky number is not just a number; it is the result of a repetitive calculation process that transforms an initial positive integer into a unique value. The lucky number of a positive integer M is determined as follows:

- If M has only one digit, its lucky number is M.
- If M has more than one digit, we need to calculate the sum of the digits of M. If the result is still a number with more than one digit, we continue calculating the sum of the digits until we obtain a single-digit result. The final number obtained is the lucky number of M.

We will perform this task for T positive integers, with T not exceeding 10. Each provided positive integer will be analyzed to find its corresponding lucky number.

Problem Requirement: Write a program that reads T positive integers and finds the corresponding lucky number for each of them. The results will be printed on the screen, each lucky number on a separate line.

Input Structure:

- The first line contains a positive integer T ($1 \le T \le 10$), representing the number of positive integers you will process.
- The subsequent lines (T lines) will each contain a positive integer M ($M \le 10^{30}$) .

Output Structure:

- The program will output T lines, each containing the lucky number corresponding to each given positive integer M.

Example:

INPUT	OUTPUT
2 5 12345	5 6