**Problem B**  
**Number Sequence**  
**Input:** standard input  
**Output:** standard output  
**Time Limit:** 1 second

A single positive integer **i**is given. Write a program to find the digit located in the position **i**in the sequence of number groups **S1S2…Sk**. Each group **Sk**consists of a sequence of positive integer numbers ranging from **1** to **k**, written one after another. For example, the first **80** digits of the sequence are as follows:

11212312341234512345612345671234567812345678912345678910123456789101112345678910

Input

The first line of the input file contains a single integer **t (1 <=t <=25)**, the number of test cases, followed by one line for each test case. The line for a test case contains the single integer **i (1 <=i <=2147483647)**

**Output**

There should be one output line per test case containing the digit located in the position **i**.

**Sample Input Output for Sample Input**

|  |  |
| --- | --- |
| **2**  **8**  **3** | **2**  **2** |

**Problem source: Iranian Contest**

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