10

LIVE EVENTS

Codemania 3.0: Nunquam Soli Sumus

Mar 25, 2020, 04:00 PM IST - Mar 25, 2020, 10:00 PM IST

INSTRUCTIONS   PROBLEMS   SUBMISSIONS   LEADERBOARD   ANALYTICS   JUDGE

← Problems / Charlie and the Chocolate Factory

Charlie and the Chocolate Factory

Max. Marks: 100

> This problem is no longer available for practice. Apology for any inconvenience!

Charlie wants to order chocolates from Mr. Willy Wonka's Chocolate Factory but he's facing a dilemma here. One of the Oompa Loompas has informed Charlie that chocolates are shipped only in specific numbers that satisfy a certain special sequence.

This special sequence has the first n terms as digits of the number, and the next terms are calculated as the sum of the previous n terms.

Help Charlie find out whether he can order x number of chocolates.

INPUT

The first line of input contains an integer t, the number of test cases. Then t test cases follow with each line having an integer x.

OUTPUT

For each test case in a new line, print 1 if the number satisfies the sequence, else print 0

CONSTRAINTS

1 <= t <= 5000
1 <= x <= 10000

SAMPLE INPUT

?

```
3
197
10
14
```
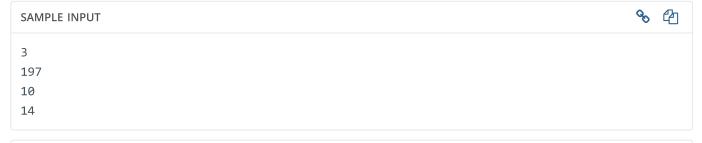
SAMPLE OUTPUT

```
1
0
1
```

EXPLANATION

(i) 197 -> (1, 9, 7, 17, 33, 57, 107, 197) -> Yes (1)

(ii) 10 -> (1, 0, 1, 1, 2, 3, 5, 8, 13, ...) -> No (0)

(iii) 14 -> (1, 4, 5, 9, 14) -> Yes (1)

SAMPLE INPUT		
3 197 10 14		

SAMPLE OUTPUT		
1 0 1		

Time Limit:	5.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded if any testcase passes.
Allowed Languages:	Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, TypeScript, Visual Basic

CODE EDITOR

Save   C (gcc 5.4.0)   ▼   ?

```
1    #include <stdio.h>
2    #include <math.h>
3    int check(int x);
4    int main()
5    {
6        int t,x;
7        scanf("%d",&t);
8        int arr[t];
9        for(int i=0;i<t;i++)
10           scanf("%d",&arr[i]);
11       for(int i=0;i<t;i++)
12           check(arr[i]);
13   }
14   int check(int x)
15   {
16       int N;
17       N=floor(log10((double)x)) + 1;
18       int seq[N],num,next,sum=0,i,can=0;
19       num=x;
20       for(i=N-1;i>=0;i--)
21       {
22           seq[i]=num%10;
23           sum+=seq[i];
24           num/=10;
25       }
26       do{
```

1:1 vscode

▼ Provide custom input

[COMPILE & TEST]   [SUBMIT]

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LIVE EVENTS

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