Consider the [Fibonacci sequence](keyword://fibonacci-sequence): 0 1 1 2 3 5 8 13 21 ...

We can see that 7 is the smallest 0-based index k for which F(k) has exactly 2decimal digits.  
What is the smallest index k for which F(k)has exactly n decimal digits?

Example

* For n = 1, the output should be  
  fibonacciIndex(n) = 0;
* For n = 2, the output should be  
  fibonacciIndex(n) = 7.

Input/Output

* **[execution time limit] 3 seconds (cs)**
* **[input] integer n**

*Guaranteed constraints:*  
1 ≤ n ≤ 10.

<https://app.codesignal.com/challenge/F66Wq64Ne82betH2c>

using System;

using System.Collections.Generic;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static int fibonacciIndex(int n)

{

List<int> fib = new List<int>();

fib.Add(0);

fib.Add(1);

int len = 1;

if (n == 1) return 0;

int i = 2;

for ( ; ; i++)

{

fib.Add(fib[i - 1] + fib[i - 2]);

len = fib[i].ToString().Length;

if (len == n) return i;

}

return -1;

}

static void Main(string[] args)

{

Console.WriteLine( fibonacciIndex(2));

Console.ReadLine();

}

}

}