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# **Recursive Digit Sum** ★

# Your Recursive Digit Sum submission got 100.00 points.

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Problem Submissions Leaderboard Discussions Editorial  $\triangle$ We define super digit of an integer x using the following rules:

Given an integer, we need to find the super digit of the integer.

• If x has only 1 digit, then its super digit is x.

• Otherwise, the super digit of x is equal to the super digit of the sum of the digits of x.

super_digit(9875)	9+8+7+5 = 29
super_digit(29)	2 + 9 = 11
super_digit(11)	1 + 1 = 2
<pre>super_digit(2)</pre>	= 2

For example, the super digit of 9875 will be calculated as:

## Example

$$n = '9875'$$

$$k = 4$$

Author	wanbo
Difficulty	Medium
Max Score	100
Submitted By	10789
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The number p is created by concatenating the string n k times so the initial p = 9875987598759875.

All of the digits of p sum to 116. The digits of 116 sum to 8. 8 is only one digit, so it is the super digit.

### **Function Description**

Complete the function superDigit in the editor below. It must return the calculated super digit as an integer.

superDigit has the following parameter(s):

- string n: a string representation of an integer
- ullet int k: the times to concatenate n to make p

#### Returns

ullet int: the super digit of n repeated k times

### **Input Format**

The first line contains two space separated integers, n and k.

#### **Constraints**

- $1 \le n < 10^{100000}$
- $1 \le k \le 10^5$

Change Theme Language Python 3 

Then(n) == 1:

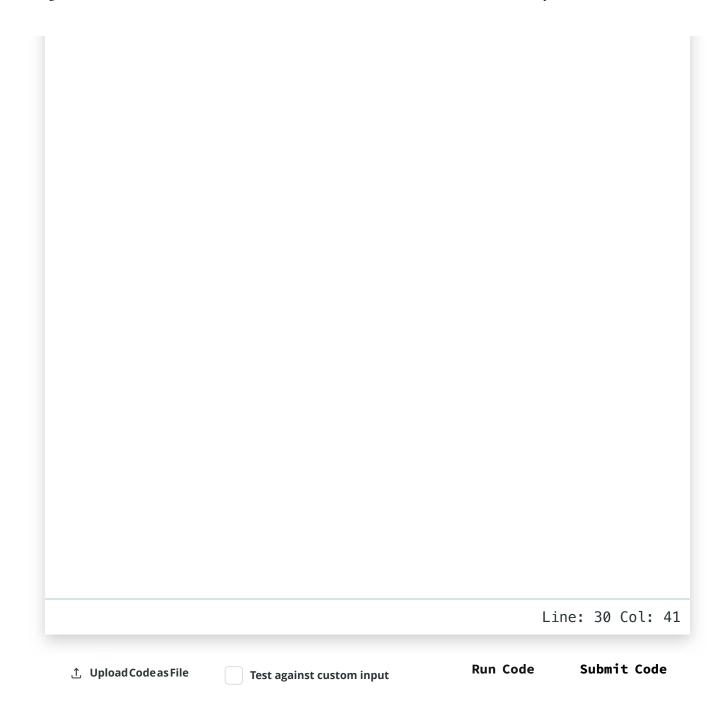
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<b>⊘</b> Test case 0	Compiler Message	
☑ Test case 1 🖰	Success	
♂ Test case 2 🖰	Input (stdin)  1 148 3	Download
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♂ Test case 4 🖰	1 3	Download
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