



AMERICAN COMPUTER SCIENCE LEAGUE

2019-2020

Contest #1

Intermediate Division - Number Transformation

PROBLEM: Given a positive integer (call it N) and a position in that integer (call it P) transform N . To transform N , find the P^{th} digit of N from the right. Replace each of the digits to the left of the P^{th} digit by the sum of that digit and the P^{th} digit. If the sum is greater than 9, use just the units digits (see the second example below). Replace each of the digits to the right of the P^{th} digit by the absolute value of the difference between it and the P^{th} digit. Do not change the P^{th} digit.

Example 1: $N=102439$, $P=3$. Answer is: $(1+4)(0+4)(2+4)4(|3-4|)(|9-4|) \Rightarrow 546415$

Example 2: $N=4329$, $P=1$. Answer is: $(4+9)(3+9)(2+9)9 \Rightarrow (13)(12)(11)9 \Rightarrow 3219$

INPUT: There will be 5 sets of data. Each set contains two positive integers: N and P . N will be less than 10^{15} , and P will be valid. No input will cause an output to have a leading digit of 0.

OUTPUT: The transformed value of each input set. The printed number may not have any spaces between the digits.

SAMPLE INPUT:

```
296351 5
762184 3
45873216 7
19750418 6
386257914 5
```

SAMPLE OUTPUT:

1. 193648
2. 873173
3. 95322341
4. 86727361
5. 831752441



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TEST DATA

TEST INPUT:

4318672 4
35197545 1
975318642 9
9876543210 5
314159265358 10



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PROBLEM (问题): 给定一个正整数 (记作N) 和该整数中一个的位置 (记作P) 来对N进行变换。从整数N右边开始数, 找到第P个位置上的数字。将第P个数字左边的各个数字依次与第P个位置上的数字相加, 然后用它们的和替换原位置上的数字。若和大于9, 那么用和的个位数替换 (请参考示例2)。将第P个数字右边的各个数字依次与第P个数字相减, 然后用它们的差的绝对值替换原位置上的数字。注意: 位置P上的数字不变。

Example 1 (示例1): $N=102439, P=3$ 。答案: $(1+4)(0+4)(2+4)4(|3-4|)(|9-4|) \Rightarrow 546415$

Example 2 (示例2): $N=4329, P=1$ 。答案: $(4+9)(3+9)(2+9)9 \Rightarrow (13)(12)(11)9 \Rightarrow 3219$

INPUT (输入): 一共有5组数据, 每一组数据包括两个正整数: N和P。N将会小于 10^{15} , P将会是有效的输入值。输入值不会导致输出值产生前导0。

OUTPUT (输出): 对于每组输入值, 输出的是变换后的值。输出的每组整数的各个数字之间不允许有空格。

SAMPLE INPUT (示例输入):

```
296351    5
762184    3
45873216  7
19750418  6
386257914 5
```

SAMPLE OUTPUT (示例输出):

1. 193648
2. 873173
3. 95322341
4. 86727361
5. 831752441



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TEST DATA

测试数据

TEST INPUT: (测试输入):

4318672 4
35197545 1
975318642 9
9876543210 5
314159265358 10