George Challenges the Dragon

Input file:	`standard input`
Output file:	`standard output`
Time limit:	0.5 seconds
Memory limit:	64 megabytes

Evil George has kidnapped the princess. Now Drogo the dragon comes to rescue her. George prefers challenging the dragon intellectually rather than fighting him, so he tells Drogo:

> *"I will free the princess if you can solve the following puzzle. I tell you two positive numbers N and D, and you have to tell me two different positive N-digit numbers A and B so that their greatest common divisor is D."*

Can you help the dragon to solve this challenge and save the princess? Beware, George might be so evil that there is no possible answer!

Note: the greatest common divisor of two positive integer numbers A and B is the greatest integer k such that both A and B are multiples of k.

Input

The input has two lines, both of them contain a single integer. The first line contains N ($1 \leq N \leq 18$), the second line contains D ($1 \leq D \leq 10^9$).

For test cases worth 8 points, ($1 \leq N \leq 3$).

For test cases worth 16 more points, ($1 \leq N \leq 7$).

For test cases worth 7 more points, ($D = 1$).

For test cases worth 11 more points, ($D \leq 100$).

Output

You need to write two different positive integers A and B separated by a space. Both A and B must have N digits and their greatest common divisor must be D. If there are no such numbers, you should write `0 0` to the output. If there are multiple possible solutions, you can print any of them.

Examples

standard input	standard output
3 9	180 729
6 666666	0 0

Note

In the **first sample case**, Drogo has to tell two different 3-digit numbers whose greatest common divisor is 9. There are many possible solutions, e.g. 180 and 729.

In the **second sample case**, there is only one 6-digit number which is divisible by 666666, it is 666666 itself, which means that it is not possible to give two different 6-digit numbers whose greatest common divisor is 666666.