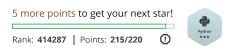


X



Power - Mod Power ★



You have successfully solved Power - Mod Power

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You are now 5 points away from the 4th star for your python badge.

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RATE THIS CHALLENGE

So far, we have only heard of Python's powers. Now, we will witness them!

Powers or exponents in Python can be calculated using the built-in power function. Call the power function a^b as shown below:

>>> pow(a,b)

or

>>> a**b

It's also possible to calculate $a^b \mod m$.

>>> pow(a,b,m)

This is very helpful in computations where you have to print the resultant % mod.

Note: Here, a and b can be floats or negatives, but, if a third argument is present, b cannot be negative.

Note: Python has a math module that has its own pow(). It takes two arguments and returns a float. It is uncommon to use math.pow().

Task

You are given three integers: $oldsymbol{a}$, $oldsymbol{b}$, and $oldsymbol{m}$. Print two lines.

On the first line, print the result of pow(a,b). On the second line, print the result of pow(a,b,m).

Input Format

The first line contains $m{a}$, the second line contains $m{b}$, and the third line contains $m{m}$.

Constraints

 $1 \le a \le 10$

 $1 \le b \le 10$

 $2 \le m \le 1000$

Sample Input

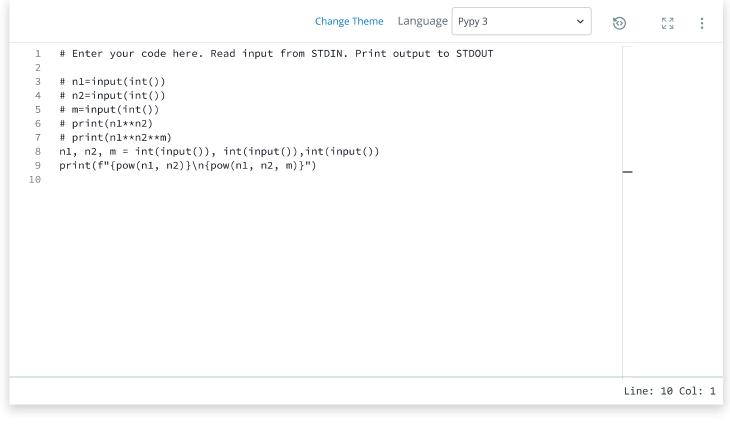
3

4

5

Sample Output

81 1



Run Code

Submit Code

Congratulations

You solved this challenge. Would you like to challenge your friends?

Test against custom input

Next Challenge

Compiler Message

Success

Input (stdin)

1 3
2 4
3 5

Expected Output

Download

81

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