

Exponentiation

oj.dcs.upd.edu.ph/problem/exponentiation

Problem Statement

Given two nonnegative integers a and b , compute the last 1111 digits of aba^b .

Note that for this problem, $00=10^0 = 1$.

Task Details

Your task is to implement a function named `pow_digits`, which should look like this:

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```
def pow_digits(a, b):
    return ...
```

Here, you only need to replace the `...` part with a **Python expression**.

The function must return a string denoting the answer.

Your source code must have at most 200200 bytes.

Examples

Example 1 Function Call

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```
pow_digits(3, 2)
```

Example 1 Return Value

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```
"0000000009"
```

Constraints

- The function `pow_digits` will be called at most 10410^4 times.

- $0 \leq a \leq 10200 \leq a \leq 10^{20}$
- $0 \leq b \leq 10200 \leq b \leq 10^{20}$

Scoring

Note: New tests may be added and all submissions may be rejudged at a later time. (All future tests will satisfy the constraints.)

- You get 5050 ❤️ points if you solve all test cases where:
 - $b \leq 2b \leq 2$
- You get 5050 ❤️ points if you solve all test cases where:
 - There are no zero digits in aa .
 - $b=1b = 1$
- You get 5050 ❤️ points if you solve all test cases where:
 - $a \leq 104a \leq 10^4$
 - $b \leq 100b \leq 100$
- You get 5050 💔 points if you solve all test cases.

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Clarifications

No clarifications have been made at this time.