

Pondo Exponentiation

time limit per test: 5 seconds
memory limit per test: 976.6 megabytes
input: standard input
output: standard output

points: 100 · problem code: pondoexponentiation · author: jszqlew

Problem Statement

Pondo has two integers x and y , he asks you to help him calculate x^y , since this number may be large, make sure to give back the answer modulo $10^9 + 7$.

Input Format

Your first and only line will contain two space-separated integers x and y .

Output Format

Output x^y modulo $10^9 + 7$.

Constraints

- $1 \leq x, y \leq 10^9$

Sample Cases

Input 1

```
2 10
```

Output 1

```
1024
```

Input 2

```
1000000000
```

Output 2

```
312556845
```

Explanation 2

Make sure to modulo by $10^9 + 7$.