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## Modular exponentiation

P29212\_en

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Write a program that, given  $n$ ,  $k$  and  $m$ , computes  $n^k \bmod m$ .

### Input

Input consists of several cases, each one with three natural numbers  $n$ ,  $k$  and  $m$ . Assume  $2 \leq n \leq 30000$  and  $2 \leq m \leq 30000$ .

### Output

For every case, print  $n^k \bmod m$ .

### Sample input

```
2 10 10000
2 10 2
7 1000000 29999
7 1000000 30000
30000 1000000000 29876
```

### Sample output

```
1024
0
7959
1
5336
```

### Problem information

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