{% note info %} **摘要** Title: ABC228_e Integer Sequence Fair Tag: 欧拉定理、快速幂 Memory Limit: 64 MB Time Limit: 1000 ms {% endnote %}

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Link

@TOC

ABC228_e Integer Sequence Fair

- 题意

> 求 m^k^n

- 思路

欧拉定理:

一般的欧拉定理叙述为：对于$\forall a, m$，若$gcd(a, m) = 1$，则

$$\forall n, a^n \equiv a^{n \mod \phi(m)} (mod\ m)$$

首先要保证 gcd(m, MOD) = 1, 才能运用欧拉定理 因为MOD为质数，所以 **m和MOD互质 -> m不是MOD的倍数**

- 代码

```
'''
Author: NEFU AB-IN
Date: 2022-03-08 13:39:02
FilePath: \ACM\AtCoder\abc228\e.py
LastEditTime: 2022-03-08 15:43:01
'''
MOD = 998244353


def qpow(a, b, p):
    res = 1
    while b:
        if b & 1:
            res = res * a % p
        b >>= 1
        a = a * a % p
    return res


n, k, m = map(int, input().split())
```

```
# m ^ k ^ n
if m % MOD == 0:
    print(0)
    exit(0)

print(qpow(m, qpow(k, n, MOD - 1), MOD) % MOD)
```