时间限制：C/C++/Rust/Pascal 1秒，其他语言2秒
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M
64bit IO Format: %lld

题目描述

赛后数据加强，已经通过的代码不再重测

There are n levels, the i-th level allows one traveling from point $i-1$ to point i ; you start at point 0 , and want to pass through each level sequentially to reach point n. Each time you attempt a level, you have a probability p of passing and a probability $(1-p)$ of failing.

Initially you have some number of coins, if you fail and have at least one coin, you will stay at the current level and retry by consuming one coin (you won't leave it unused even if you are at point 0); and if you fail and have no coins left, you will be kicked back to the starting point (point 0) .

Given m, calculate the expected number of steps to reach the endpoint for every possible initial number of coins from 0 to m, modulo 998244353.

输入描述：

> The first line contains three integers n, m, and p ($1 \le n \le 10^9$, $1 \le m \le 2 \times 10^5$, $0 < p < 998244353$), representing the number of levels, the maximum number of coins, and the probability of passing a level.

输出描述：

> A single line containing $m+1$ integers, where the i-th number represents the expected number of steps to reach the endpoint when starting with $i-1$ coins.

示例1

输入 复制

```
2 2 499122177
```

输出 复制

```
6 499122182 5
```

说明

C++ clang++18

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ACM模
请通过代
式请参考
境详情

运行结果 自测输入