İlke is an agile statistics student.

One day, a professor of hers conducts an oral exam. The turn comes to İlke and she goes up to the board. The professor flips a biased coin at least twice and at most \( k \) times and writes \([H]\) on the board each time he gets heads and \([T]\) on the board each time he gets tails. Afterwards, he asks İlke to calculate the experimental probability of changeover (which occurs whenever the outcome of a coin flip is different than the one before) for the biased coin, and İlke says that the answer is \( a/b \).

It's known that İlke has answered correctly and raised the curve.

You are asked to calculate the number of strings the professor may have written. Since this number can be very large, print it modulo 998244353.

**Input**

The only line respectively contains three integers \( k \), \( a \), and \( b \) — the maximum number of coin flips, the numerator, and the denominator of the probability fraction.

- \( 2 \leq k \leq 10^6 \)
- \( 1 \leq b < k \)
- \( 0 \leq a \leq b \)

**Output**

Print one integer — the number of strings that the professor may have written modulo 998244353.

**Example**

Input 1:

```
4 1 3
```

Output 1:

```
6
```
Output 2:

688512150

**Explanation**

**Input 1:** The professor may have written HTTT, HHTT, HHHT, TTTH, TTHH, or THHH on the board.