

Rook

Input file: **standard input**
Output file: **standard output**
Time limit: 6 seconds
Memory limit: 512 megabytes

There is an $N \times M$ chessboard.

You need to place K **distinct** rooks on this chessboard. The placement must satisfy all of the following conditions:

1. Each cell contains at most one rook.
2. Every row of the chessboard contains at least one rook.
3. Every column of the chessboard contains at least one rook.

Please find the total number of valid placements. Since the answer may be very large, you only need to output the result modulo 998244353.

Input

The input contains only one line.

This line contains three integers N, M, K in order ($1 \leq N, M, K \leq 10^5$), representing the number of rows and columns of the chessboard, and the number of rooks to place, respectively.

Output

Output one line containing an integer, the number of valid placements modulo 998244353.

Examples

| standard input | standard output |
|----------------|-----------------|
| 2 2 3 | 24 |
| 5 3 4 | 0 |
| 353 442 899 | 623104742 |