Tickets

Time Limit: 1 Second
Memory Limit: 2048 MB

A ticket machine operates with exact change rules. Initially, the machine holds k five-dollar bills. There are n people in line with ten-dollar bills and m people with five-dollar bills.

Determine the number of ways (modulo 998244353) for the people to queue such that each person must receive correct change when purchasing a ticket and the machine never runs out of five-dollar bills. On counting, different persons holding a ten-dollar bill or five-dollar bill are considered different person.

Input

The input consists of multiple test cases. The first line contains an integer T, the number of test cases, it is guaranteed that $T \leq 100,000$.

Each test case consists of a single line with three integers k, n, and m.

Constraints: $0 \leq k, n, m \leq 1 \times 10^6$

Output

For each test case, output an integer representing the number of valid queueing sequences modulo 998244353.

Sample Inputs

```
2
0 2 2
1 1 1
```

Sample Outputs

```
8
2
```