I/O Speed Test (Monthly Format)

Time Limit: 2.0s
Memory Limit: 256MB
Input: stdin
Output: stdout

The input consists of two integers M $(0 \le M \le 1)$ and N $(1 \le N \le 10^6)$, followed by a sequence of N non-negative integers each less than $10^9 + 7$.

- If $M = 0$, output the sum of the input sequence modulo $10^9 + 7$.

- If $M = 1$, output the sum of each prefix of the input sequence modulo $10^9 + 7$.

INPUT FORMAT (pipe stdin):

The first line contains M and N.

The next N lines each contain an integer of the input sequence.

OUTPUT FORMAT (pipe stdout):

As described in the statement. Print all integers separated by newlines.

Input	Output
0 6 1 2 3 4 5 1000000000	8

Input	Output
1 6 1 2 3 4 5 1000000000	1 3 6 10 15 8

SCORING:

- Inputs 3-7: $M = 0$

- Inputs 8-12: $M = 1$