Election

Description

Tomorrow is mayor election day in Wonderland.
There are n cities, and for each city i, there are m_i candidates for mayor.
Compute the number of possibilities for final result of election.

Input

Your program is to read from standard input. In first line you are given the number of cities n, $(1 \leq n \leq 18)$. In next line you are given n integers $m_1, m_2, \cdots, m_n$, $(1 \leq m_i \leq 10)$ separated by a space.

Output

Your program is to write to standard output. Print the number of possibilities for final result of election.

Sample

Input	Output
3 2 8 3	48