SPOJ Problem | Tutorial

SUBSUMS - Subset Sums

(binary-search,bitmasks)

Given a sequence of N (1 ≤ N ≤ 34) numbers S1, ..., SN (-20,000,000 ≤ Si ≤ 20,000,000), determine how many subsets of S (including the empty one) have a sum between A and B (-500,000,000 ≤ A ≤ B ≤ 500,000,000), inclusive.

Input

The first line of standard input contains the three integers N, A, and B. The following N lines contain S1 through SN, in order.
Output

Print a single integer to standard output representing the number of subsets satisfying the above property. Note that the answer may overflow a 32-bit integer.

Example

Input:
3 -1 2
1
-2
3

Output:
5

Submit on Spoj (https://www.spoj.com/problems/SUBSUMS/)

See Tutorial (https://www.youtube.com/watch?v=ogqFsBE_Qws&t=4560s)