Problem D. Problemset

Input file: standard input
Output file: standard output
Time limit: 2 seconds

Obytes is hiring creative software engineers to support the R&D team at Casablanca, and decided to host a competitive programming contest for this.

Obytes R&D team wants to prepare a problemset for the hiring contest. They have k problems, each one of difficulty d_i $(1 \leq i \leq k)$.

The problemset must respect certain rules:

- The sum of problem difficulties must be in $[a, b]$ (i.e., greater than or equal a, and less than or equal b)
- The number of problems must be greater than 2
- The difficulty of the hardest problem must exceed the difficulty of the easiest one by at least m

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Help the team find how many problemsets are valid for their contest.

Input

The first line contains four integers k, a, b, m $(1 \leq k \leq 15,\ 1 \leq a \leq b \leq 10^9,$ $1 \leq m \leq 10^6)$.
The second line contains k integers $d_1, d_2, \ldots\ldots, d_k$ $(1 \leq d_i \leq 10^6)$, the difficulties of the problems.

Output

Print the number of valid problemsets for the contest.

Example

Standard input	Standard output
4 8 9 1 1 2 3 4	2