

Problem E. Game

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 256 mebibytes

All Yandex developers have their favorite way to relax between working hours. Usually they play kicker, table tennis or board games, but Yasha's group has invented their own card game to spend their leisure time.

At the start of the game, there are n cards with some positive integers on the table, and some positive integer M (starting number) is written on the whiteboard. Two players take turns to make their moves. For each move, player picks up a card on the table, wipes the number off the whiteboard and writes down the quotient of integer division of the last number from the board by the number from the card. After the move, the card that has been played is put away from the table. If after a player's turn the number on the whiteboard is 0, he loses.

Yasha is the youngest member of his group, so his turn is always second, and he thinks that it might be unfair. In order to test his hypothesis, he studied the game in detail, and he now knows all numbers a_1, a_2, \dots, a_n on the cards and the boundaries L and R such that the starting number M is always picked between them.

Help Yasha to count all the numbers M such that $L \leq M \leq R$ and, if the game started with M written on the board, Yasha would win, provided that he and his opponent played in the optimal way.

Input

The input consists of three lines.

On the first line of the input, there is a single integer n : the number of cards on the table at the start of the game ($2 \leq n \leq 10$).

On the second line, there are n space-separated integers a_1, a_2, \dots, a_n : the numbers written on the cards ($1 \leq a_i \leq 1000$).

On the third line, there are two integers L and R : the boundaries for the starting number M ($1 \leq L \leq R \leq 10^{18}$, $R < a_1 \cdot a_2 \cdot \dots \cdot a_n$).

Output

Output a single integer: the number of winning M s from $[L, R]$ for Yasha.

Examples

standard input	standard output
3 1 2 1 1 1	1
3 2 3 5 1 10	2