# **Odd Numbers of Divisors**

Given a positive odd integer K and two positive integers low and high, determine how many integers between low and high contain exactly K divisors.

### Input

The first line of the input contains a positive integer C (0 < C < 100,000), the number of test cases to follow. Each case consists of a line containing three integers: K, low, and high (1 < K < 10000,  $0 < low \le high < 10^{10}$ ). K will always be an odd integer.

## Output

Output for each case consists of one line: the number of integers between low and high, inclusive, that contain exactly K divisors.

## Example

#### Input:

#### Output:

4

2

1