Count Solutions

Eric has four integers a, b, c, and d.

Instantly, he wondered how many pairs of *integers*, (x, y), satisfy the following equation:

$$x^2 + y^2 = (x \times a) + (y \times b)$$

where $1 \leq x \leq c$ and $1 \leq y \leq d$.

Find and print the number of pairs that satisfy the above equation.

Input Format

The first line contains an integer q, the number of queries.
q lines follow, each containing four integers, a, b, c, and d, in that order.

Constraints

- $1 \leq q \leq 10$
- $1 \leq a, b, c, d \leq 10^5$

Output Format

For each test case, print one line, the number of pairs (x, y) that are valid solutions to Eric's equation.

Sample Input 0

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1
1 1 1 1
```

Sample Output 0

```
1
```

Explanation 0

The solution to $x^2 + y^2 = x + y$, where $1 \leq x \leq 1$ and $1 \leq y \leq 1$ is $x = 1$, $y = 1$.