# Rectangles

| | |
|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 0.3 seconds |
| Memory limit: | 64 megabytes |

You are given a matrix with $n$ rows and $m$ columns. Its entries are consecutive starting from 0 left to right, top to bottom like below:

```
0    1    2    3    4
5    6    7    8    9
10   11   12   13   14
15   16   17   18   19
```

There are $q$ operations which modify the matrix in the following way: a submatrix is chosen inside the matrix and it will be inverted horizontally and vertically. For example if the submatrix with the top-left coordinate $(1, 3)$ and bottom-right coordinate $(3, 5)$ is inverted on the one above it will look like this:

```
0    1    14   13   12
5    6    9    8    7
10   11   4    3    2
15   16   17   18   19
```

You are also given the coordinates $(x, y)$ of a cell, type the value of that cell after all $q$ operations.

## Input

The first line will contain 5 integers, $n$, $m$, $q$, $x$ and $y$ $(1 \leq n, m \leq 10^9)$, $(1 \leq q \leq 3 * 10^5)$, $(1 \leq x, y \leq n)$.

The following $q$ lines will contain $x1$, $y1$, $x2$ and $y2$ which describe the top-left, bottom-right coordinates of the submatrix $(1 \leq x1 \leq x2 \leq n)$, $(1 \leq y1 \leq y2 \leq n)$.

For tests worth 20 points it is guaranteed that $(1 \leq n, m \leq 100)$, $(1 \leq q \leq 100)$

## Example

| standard input | standard output |
|---|---|
| 4 5 1 1 3 <br> 1 3 3 5 | 14 |