LEGOs

locked

by kevinsogo

Problem Submissions Leaderboard Discussions Editorial

Sarah has four different kinds of LEGO pieces of different counts. She gives two types of LEGO to her friend and keeps the other two. She is putting two pieces together by picking one from each of the two types that she has left.

More specifically, the counts for each of the LEGO pieces are $a, b, c,$ and d, respectively. The two types that Sarah gave her friend had p and q pieces, while the types that she kept have r and s pieces, respectively. Find $r \times s$ which would represent the number of two-piece LEGO combinations that Sarah can make.

Note that only $a, b, c, d, p,$ and q will be given as input.

Input Format

The first line of input contains a single integer t denoting the number of test cases.

The first line of each test case contains four space-separated integers a, b, c, d. The second line contains two space-separated integers p, q.

Constraints

- $1 \leq t \leq 40$
- $1 \leq a, b, c, d, p, q \leq 200$
- The input is guaranteed to be valid. So in particular, p and q will appear somewhere in $[a, b, c, d]$.

Output Format

For each test case, print a single line containing a single integer denoting $r \times s$.

Sample Input 0

```
2
20 10 40 30
10 30
5 5 10 10
5 10
```

Sample Output 0

```
800
50
```

Explanation 0

In the first case, the number of pieces of the four LEGO types are $a = 20$, $b = 10$, $c = 40$ and $d = 30$, and the ones she brought have $p = 10$ and $q = 30$ pieces. Thus, the missing types have $r = 20$ and $s = 40$ pieces, so the answer is $20 \times 40 = 800$.

In the second case, the number of pieces of the four LEGO types are $a = 5$, $b = 5$, $c = 10$ and $d = 10$, and the ones she brought have $p = 5$ and $q = 10$ pieces. Thus, the missing types have $r = 5$ and $s = 10$ pieces, so the answer is $5 \times 10 = 50$.

Submissions: 3388
Max Score: 15
Difficulty: Easy

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Current Buffer (saved locally, editable) C#

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
class Solution {

    static int productOfLegoTypes(int a, int b, int c, int d, int p, int q) {
        // Return the product of r and s
    }

    static void Main(String[] args) {
        int t = Convert.ToInt32(Console.ReadLine());
        for(int a0 = 0; a0 < t; a0++){
            string[] tokens_a = Console.ReadLine().Split(' ');
            int a = Convert.ToInt32(tokens_a[0]);
            int b = Convert.ToInt32(tokens_a[1]);
            int c = Convert.ToInt32(tokens_a[2]);
            int d = Convert.ToInt32(tokens_a[3]);
            string[] tokens_p = Console.ReadLine().Split(' ');
            int p = Convert.ToInt32(tokens_p[0]);
            int q = Convert.ToInt32(tokens_p[1]);
            int answer = productOfLegoTypes(a, b, c, d, p, q);
            Console.WriteLine(answer);
        }
    }
}

```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code