

## D. Triangles

time limit per test: 2 seconds  
 memory limit per test: 64 megabytes

Little Petya likes to draw. He drew  $N$  red and  $M$  blue points on the plane in such a way that no three points lie on the same line. Now he wonders what is the number of distinct triangles with vertices in red points which do not contain any blue point inside.

### Input

The first line contains two non-negative integer numbers  $N$  and  $M$  ( $0 \leq N \leq 500$ ,  $0 \leq M \leq 500$ ) — the number of red and blue points respectively. The following  $N$  lines contain two integer numbers each — coordinates of red points. The following  $M$  lines contain two integer numbers each — coordinates of blue points. All coordinates do not exceed  $10^9$  by absolute value.

### Output

Output one integer — the number of distinct triangles with vertices in red points which do not contain any blue point inside.

### Examples

input	Copy
<pre>4 1 0 0 10 0 10 10 5 4 2 1</pre>	
output	Copy
<pre>2</pre>	

  

input	Copy
<pre>5 5 5 10 6 1 8 6 -6 -7 7 -1 5 -1 10 -4 -10 -8 -10 5 -2 -8</pre>	
output	Copy
<pre>7</pre>	

### → Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

### Codeforces Beta Round 13

Finished

Practice



### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

### → Submit?

Language: GNU G++23 14.2 (64 bit, ms) ▼

Choose file:  No file chosen

Submit

### → Last submissions

Submission	Time	Verdict
<a href="#">326026974</a>	Jun/25/2025 18:18	Accepted

→ Problem tags

dp geometry \*2600

No tag edit access

→ Contest materials

• Announcement

×

• Tutorial

×

---

[Codeforces](#) (c) Copyright 2010-2025 Mike Mirzayanov  
The only programming contests Web 2.0 platform  
Server time: Jun/25/2025 22:18:31<sup>UTC+7</sup> (k1).  
Desktop version, switch to [mobile version](#).  
[Privacy Policy](#) | [Terms and Conditions](#)

Supported by

