



Points

You and your friends have invented an interesting game called “Trivial Points”. It’s played between 2 players and involves placing points in a 3D space in a special way respecting a certain set of rules. Being very excited about this game, you, together with your friends, have decided to create a computer version in which one of the players is a human and the other is computer.

For the purposes of the development of this game you are responsible to write a program that receives a set of points in a 3D space and computes how many different lines are there so that each contains at least 3 of the given points.

Input. Text file `points.in` contains on the first line a single integer number n , which is the number of given points. Then n lines follow, each containing the 3 integer coordinates of a point, more specifically the i -th of these n lines contains the integer coordinates x_i, y_i, z_i , separated by single spaces, of the i -th point.

Output. Text file `points.out` will contain on the first line a single integer number that is the number of lines asked in problem’s statement.

Example.

`points.in`

```
7
1 0 -1
3 4 5
2 2 2
3 3 3
-5 -5 -5
1 1 1
-3 4 0
```

`points.out`

```
2
```

Comments: The first line contains points $(-5; -5; -5)$, $(1; 1; 1)$, $(2; 2; 2)$, and $(3; 3; 3)$, and the second line contains points $(1; 0; -1)$, $(2; 2; 2)$, $(3; 4; 5)$.

Constraints.

$4 \leq n \leq 1000$. Coordinates x_i, y_i, z_i are integers. $-10\,000 \leq x_i, y_i, z_i \leq 10\,000$, $i = 1, 2, 3, \dots, n$.