Problem F - Space-time Vibrating Weapon D-WEAPON

Time Limit: 30 seconds

"..as the madness of the system grows!"

In the midst of these awesome displays of pure magical force, the enemy quitely deployed what will prove to be an extremely effective counter – a biological weapon.

A certain magically engineered mutant slime mold was silently released in the midst of the battle while our side was busy fighting back these highly sophisticated weapons of magictronics.

While they were first unnoticed, suddenly they started growing in an alarming speed and in no time at all, large circular mounds of mold were observed dotting the battlefield.

The mold grows, mutates and evolves at such a high speed that it was quickly becoming a major force of disruption. What makes it even worse is that it has already evolved resistance to fire, water, many types of poison, and electricity, rendering a large fraction of magical attacks useless.

Seeking to control the situation, high-ranking ACM magicians swiftly developed a modification to the MAELSTROM CANNON (henceforth called the D-WEAPON) that seems quite effective in blasting apart these circular blobs of nastiness. As usual, a single blast hits everything intersecting a chosen straight line.

Again, you are tasked with determing the best way to aim the weapon.

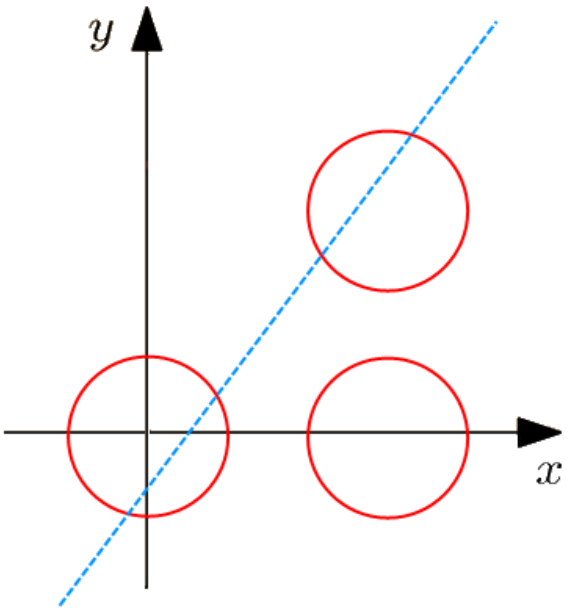

Figure 1: Illustration of the first sample test case. The red circles are the molds and the blue line is one of the optimal ways to aim the D-WEAPON as it destroys two blobs of mold, the maximum possible.

Input

The input begins with a line containing a single integer T, the number of test cases.

Each test case begins with a single integer $1 \leq N \leq 2000$ denoting the number of circular mold aggregates.

There will be at most one test case with $N \geq 1000$ in any test file.

Each of the N following lines contain 3 floating point numbers specified to two decimal places, x_i, y_i, r_i ($-10^6 \leq x_i, y_i \leq 10^6$, $1 \leq r_i \leq 100$) denoting, in order, the x- and y-coordinates of the center of the mold, and the radius of the mold.

No two circular blobs of mold would intersect each other. The input will be such that the answer will not change if the radii vary by 10^{-6} in either direction.

Output

For each test case, output in a single line a single integer: the maximum number of circular mold-blobs you can destroy with one blast of the D-WEAPON.

Sample Input

```
4
3
0.00 0.00 1.00
3.00 0.00 1.00
3.00 3.00 1.00
1
0.00 0.00 1.00
2
3.00 0.00 1.00
3.00 3.00 1.00
12
461.94 -518.93 64.10
100.87 195.09 33.99
-229.62 969.68 88.04
882.50 -450.09 13.76
-706.80 -953.52 55.13
928.97 -791.02 62.89
-178.41 552.62 99.08
634.59 677.78 53.14
798.67 -732.12 9.22
957.15 444.71 71.79
-713.56 -74.08 1.44
-857.00 -303.16 34.54
```

Sample Output

```
2
1
2
4
```