Problem K. Justice Rains From Above

```
Input file:     Standard Input
Output file:    Standard Ouptut
Time limit:     10 seconds
```

If you have ever played the game Overwatch, you may know the hero Pharah, an offense hero that is capable of flight.

Pharah has a powerful ultimate ability called "Barrage" which is one of the most devastating abilities in the game. By casting it, Pharah will direct a continuous salvo of mini-rockets to destroy groups of enemies.

Let's look at how it works. The map of this game can be regarded as a three-dimensional space, all players are points in this space. For Barrage, the rockets cover a large area which contains all points where the angle between each point's direction to Pharah and the direction of Pharah's crosshair is not larger than α. And Pharah must remain stationary while the ability is active, include her crosshair.



Now you have came to the map Numbani and chosen Pharah as your hero. There are N enemies on the ground (i.e. $z = 0$), with unique positions. By using Pharah's ability "Jump Jet", you have flown to a vantage point (i.e. $z > 0$), and the ultimate ability is ready. If you want to make the "Play of the Game", you must kill as many enemies as possible.

Here comes a "Simple Geometry" problem, what's the largest number of enemies can be killed by using your ultimate ability if you choose the best crosshair direction?

Input

The first line of the input gives the number of test cases, T. T test cases follow.

Each test case begins with two integers N and α, the number of enemies and the angle range of Barrage.

Next line has three integers x, y and z, indicating the coordinates of Pharah's position.

Next N lines, each line has two integers x, y, indicating the coordinates of each enemy's position on the ground.

Output

For each test case, output one line containing "`Case #x: y`", where `x` is the test case number (starting from `1`) and `y` is the largest number of enemies that can be killed by casting Barrage.

Limits

- $1 \leq T \leq 100$.
- $1 \leq N \leq 1000$.
- $0 < \alpha < 90$.
- $|x|, |y| \leq 1000$.
- $0 < z \leq 1000$.
- For 90% of the test cases, $N \leq 6$ holds.

Sample input and output

Sample Input	Sample Output
2 2 45 0 0 3 1 -2 -5 2 4 89 1 1 1 30 0 0 50 -70 0 0 -90	Case #1: 2 Case #2: 3