

Construction of your new science lab has just ended. In the floor you have deployed your newly invented equipment. If deployed beneath the floor, It displays the co-ordinates of points in the floor which are occupied by any material, even light-weighted ones. They are displayed in a computer which is located in control room.

You are entering the room and switching the equipment on. The under-floor lighting has revealed you that several mosquitoes are on the floor. Ha! You have discovered a real-time use for your newly invented equipment. Conical nets are available with the lab-incharge. You can place a net in the floor and all the mosquitoes inside the net will be caught. All the mosquitoes that are not caught will fly-off and escape. You have only one attempt. But you are greedy! You want to catch maximum mosquitoes. You are a brilliant guy. You are rushing to the control room for co-ordinates of mosquitoes. You decide to catch them so you are asking the lab-incharge for a net. He gives you a net(CONICAL) of base radius  $r$ . He is asking you how many you can catch with that net. Answer him.

Given the size of the room  $N * N$ , number of mosquitoes  $num$ , Base-radius of net  $r$ , which is a double and co-ordinates of the mosquitoes which are double values, print the maximum number of mosquitoes you can trap. The centre of the room is taken as the origin  $(0,0)$ . So, If size is  $N$ , rooms corners are  $(N/2, N/2)$ ,  $(-N/2, N/2)$ ,  $(N/2, -N/2)$  and  $(-N/2, -N/2)$ .

#### Note:

A mosquito at  $(x, y)$  is inside the conical net which is of radius  $r$  and at centre  $x_0, y_0$  iff  $(x - x_0)^2 + (y - y_0)^2 \leq r^2$ .

### Input

First line contains no. of test cases  $t$ .

First line of each test case contains size of room, base radius of net, number of mosquitoes in the format " $N r num$ ".

$$1 \leq N \leq 10000, \quad 0.1 \leq r \leq 10000.0, \quad 1 \leq num \leq 15$$

There are  $num$  lines following the first line of the test case, each representing a mosquitoes coordinate in the form ' $x_i y_i$ ' ( $-N/2 \leq x_i, y_i \leq N/2$ ). The Co-ordinates are floating point numbers.

No leading zeros. Floating point numbers are either in whole number format or in decimal point format.

Co-ordinates for a test case are non-repetitive. (No two  $x_i, y_i$  in a test case is same).

### Output

Each line should contain the maximum number of mosquitoes that can be trapped for the corresponding test case.

### Sample Input

```
4
10 0.9 4
0 1
1 0
-1 0
0 -1
10 1 4
0 1
1 0
-1 0
0 -1
10000 0.61 4
1.1 0.1
1.2 0.3
0.4 -2.0
1.1 -0.9
10000 4.7532 4
5 0
3 4
-4 3
2 2
```

### Sample Output

```
2
4
3
4
```