6487 Star Simulations

In massive simulations of star systems, we don't want to have to model the gravitational effects of pairs of bodies that are too far away from each other, because that will take excess computing power (and their effects on each other are negligible). We want to only consider the effects two objects have on each other if the Euclidean distance between them is less than k.

Given a list of n points in space, how many have a distance of less than k from each other?

Input

There will be several test cases in the input. Each test case will begin with a line with two integers, n ($2 \leq n \leq 100,000$) and k ($1 \leq k \leq 10^9$), where n is the number of points, and k is the desired maximum distance. On each of the following n lines will be three integers x, y and z ($-10^9 \leq x, y, z \leq 10^9$) which are the (x, y, z) coordinates of one point. Within a test case, there will be no duplicate points. Since star systems are generally sparse, it is guaranteed that no more than 100,000 pairs of points will be within k of each other. The input will end with a line with two 0s.

Output

For each test case, output a single integer indicating the number of unique pairs of points that are less than k apart from each other. Output no spaces, and do not separate answers with blank lines.

Sample Input

```
7 2
0 0 0
1 0 0
1 2 0
1 2 3
1000 1000 1000
1001 1001 1000
1001 999 1001
7 3
0 0 0
1 0 0
1 2 0
1 2 3
-1000 1000 -1000
-1001 1001 -1000
-1001 999 -1001
7 4
0 0 0
1 0 0
1 2 0
1 2 3
1000 -1000 1000
1001 -1001 1000
1001 -999 1001
```

```
0 0
```

Sample Output

```
3
6
9
```