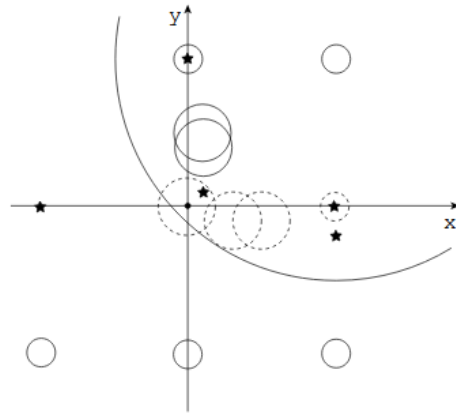


Vương quốc trà sữa

Example



Input:

```

12 5 4
0 10 0 1
1 5 0 2
1 4 0 2
0 0 0 2
10 0 0 1
3 -1 0 2
5 -1 0 2
10 10 0 15
0 -10 0 1
10 -10 0 1
-10 -10 0 1
10 10 0 1
0 10 0 240
10 0 0 200
10 -2 0 52
-10 0 0 100
1 1 0 2
0 0 0

```

Output:

254

Input:

```

1 2 0
0 0 0 1
-1 0 0 5
2 0 0 100
1 0 0

```

Output:

5