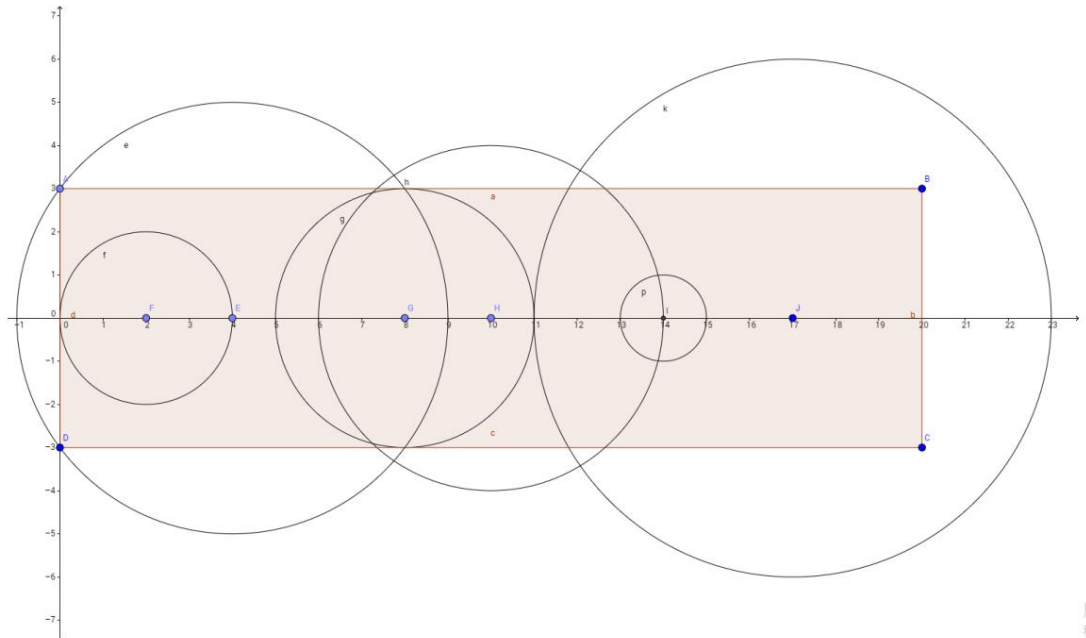


Homework 8

Minimal Cover

(Due: 2022/1/14)



There is a rectangle l long and w wide. And we have n circles put at horizontal center line of the rectangle. For each circle, its position p as the distance from left end of the center line and its radius r are given. Find the minimal number of circles to cover the rectangle.

Input.txt

Input contains 936 testcases on the CodeSensor. The first line for each case contains three integers n , l , w . The next n lines consist of two integers position p and radius r

Output.txt

For each testcase, output the minimal number of circles to cover the rectangle. If the circles can't cover the rectangle, output -1.

Sample Input

```
6 20 6
4 5
2 2
8 3
10 4
17 6
14 1
10 6 37
20 4
19 20
19 2
8 4
7 19
7 14
3 17
1 19
18 1
15 19
1 1000000001 100
1000000000 1000000000
```

Sample Output

```
3
2
-1
```

Constrains

```
n ≤ 10000
l ≤ 20000
w ≤ 2000
p ≤ 20000
r ≤ 3000
```

Preload Input Data

```
struct singleTestCase{
    int n;
    int l;
    int w;
    int p[10000];
    int r[10000];
};
struct tTestData {
    struct singleTestCase data[936];
};
```