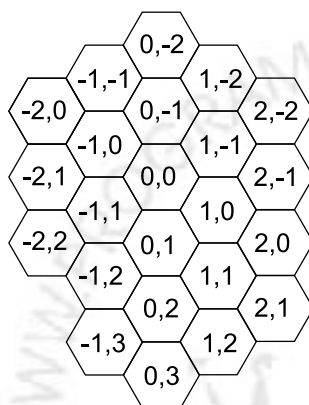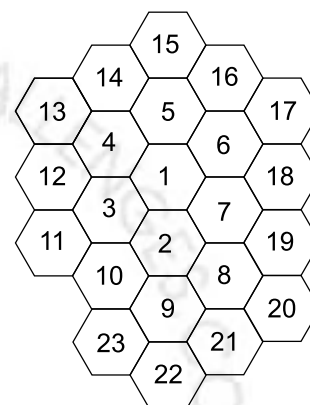## 111204    Bee Maja

Maja is a bee. She lives in a hive of hexagonal honeycombs with thousands of other bees. But Maja has a problem. Her friend Willi told her where she can meet him, but Willi (a male drone) and Maja (a female worker) have different coordinate systems:

- *Maja's Coordinate System* —   Maja (on left) flies directly to a special honeycomb using an advanced two-dimensional grid over the whole hive.

- *Willi's Coordinate System* —   Willi (on right) is less intelligent, and just walks around cells in clockwise order starting from 1 in the middle of the hive.



Maja's system                                Willi's system

Help Maja to convert Willi's system to hers. Write a program which for a given honeycomb number returns the coordinates in Maja's system.

### Input

The input file contains one or more integers each standing on its own line. All honeycomb numbers are less than 100,000.

### Output

Output the corresponding Maja coordinates for Willi's numbers, with each coordinate pair on a separate line.

### Sample Input

```
1
2
3
4
5
```

### Sample Output

```
0 0
0 1
-1 1
-1 0
0 -1
```