



Level 2





We would like to identify recurring asteroids.

First, we would like to group asteroids by their *shapes*:

- › We disregard intensity values and just distinguish *presence* (positive intensity) and *non-presence* (zero intensity) pixels.
- › We disregard offsets within the image.



We would like to identify recurring asteroids.

We assume:

- › Images showing identical shape, stem from (are produced by) the same asteroid.
- › Images showing different shapes, stem from different asteroids.

Task for Level 2:

Output a result line for each asteroid in order of its first occurrence

Input format. Same as in Level 1.

Output format:

- > output ::= resultline*
- > resultline ::= first last count NL

The resultlines are **ordered by first occurrence**.

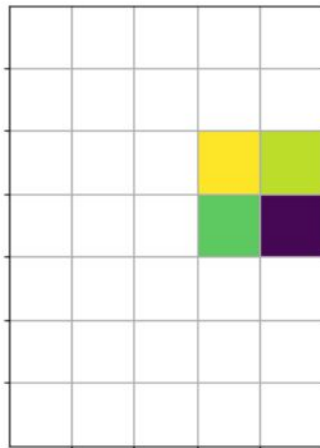
name	type	description
resultline		describes the occurrences of an asteriod
first	integer	timestamp of first occurrence
last	integer	timestamp of last occurrence
count	integer	number of occurrences
NL		new-line



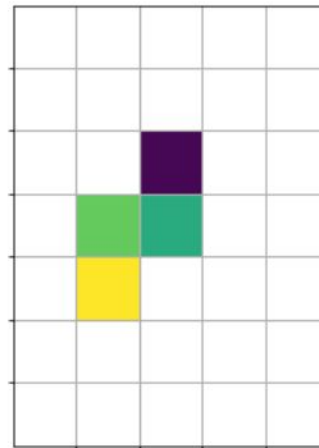
Sample input:



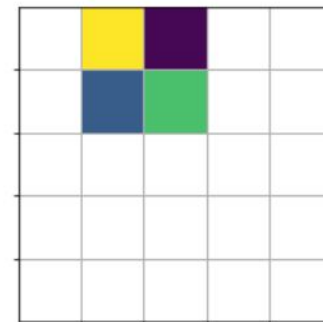
t=3736



t=4260



t=6547



t=7263

Sample output:

4260 7263 2

6547 6547 1



Sample input:

```
1000 9999 4
3736 7 6
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
4260 7 5
0 0 0 0 0
0 0 0 0 0
0 0 0 698 639
0 0 0 553 113
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
```

Sample input (cont):

```
6547 7 5
0 0 0 0 0
0 0 0 0 0
0 0 29 0 0
0 478 395 0 0
0 617 0 0 0
0 0 0 0 0
0 0 0 0 0
7263 5 5
0 843 2 0 0
0 250 602 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
```