

beecrowd | 1514

Contest

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Most of the programmers who come to write contests with programming exercises agree in four characteristics that every contest should achieve. Although not all of them are always achieved, more is better. The characteristics are the following:

1. Nobody solved all the problems.
2. Every problem was solved by at least one person (not necessarily the same).
3. There is no problem solved by everyone.
4. Everyone solved at least one problem (not necessarily the same).

Rafael organized a contest a few days ago, and is worried about how many of these characteristics he got to achieve with his contest.

Given the information about the contest, with the number of contestants, the number of problems, and which contestant solved which problem, find out the number of characteristics that were achieved on this contest.

Input

There will be several tests cases. Each test case starts with two integers **N** and **M** ($3 \leq N, M \leq 100$).

Then, there will be **N** lines with **M** integers each, where the integer on the **i**-th line and on the **j**-th column is 1 if the **i**-th contestant solved the **j**-th problem, or 0 otherwise.

The last test case is indicated when **N = M = 0**, which should not be processed.

Output

For each test case, print one line with one integer, representing the amount of characteristics achieved by the given contest.

Sample Input	Sample Output
3 3 1 1 0 0 1 0 0 0 0 3 3 1 1 0 0 1 0 0 0 1 0 0	2 4

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