Find the cross

Given a black-and-white graphic encoded with 0 for black and 1 for white find the coordinates of the center of a white cross within. This means the intersection of a horizontal and vertical line of 1s. Each line reachs from border to border. There's at most one such cross. If there isn't a cross the output should be '0 0'.

Input

The number n of testcases (n<=50) in the first line.
Then for each testcase one line with the width w and heigth h (3<=w,h<=20) of the graphic separated by a space. After this h rows of each graphic.

Output

The space-separated coordinates x and y of the center of the white cross or '0 0'.

Example

Input:
2
4 3
0010
1111
0010
3 3
010
101
010

Output:
3 2
0 0