

Ada and Party

Ada the Ladybug is already planning her birthday party. It is not an easy process since she have many friends but each of her friends likes just about half of her other friends. She wants to invite only such subset of friends that everyone likes each other.

Ada has barely some time and she wants big party so she asked you to find maximum such list in which each of her friends is friend with each of her other friends on the list.

Input

The first line contains an integer $1 \leq T \leq 100$, the number of test-cases.

The first line of each test-case begins with $1 \leq N \leq 130$, the number of her friends.

Each of next N lines contain N integers $A_{i,j}$ (either 0 or 1), where 1 means the i^{th} friend likes j^{th} (and 0 means the opposite)

Important note is, that as brain connections of insect are not so complicated as those of humans, so the process of making friends is slightly different. Two insects have exactly 50% chance of being friends, so also the adjancecy matrix will be generated (very)pseudo-randomly with 50% chance for each edge.

Also note, that the matrix will be symmetrical.

Each insect is friend with itself!

Output

For each test-case output the maximum number of Ada's friends, which can be invited.

Example Input

```
10
7
1 1 0 0 1 1 0
1 1 1 0 1 1 0
0 1 1 0 1 0 1
0 0 0 1 0 0 1
1 1 1 0 1 1 0
1 1 0 0 1 1 0
0 0 1 1 0 0 1
5
1 1 1 1 0
1 1 1 0 1
1 1 1 1 0
1 0 1 1 0
0 1 0 0 1
1
1
4
1 0 0 1
```

0101
0010
1101
1
1
10
1101010111
1101001000
0010000010
1101111010
0001100011
1001010100
0101001011
1000010111
1011101110
1000101101
7
1101100
1110100
0110010
1001100
1101101
0010010
0000101
3
110
111
011
8
10111100
01011111
10110101
11111011
11011101
11101111
01010111
01111111
6
101001
010001
101110
001101
001010
110101

Example Output

4
3
1
2
1
3
3
2
4
2