Problem C. Centenschraper

Input file:	*standard input*
Output file:	*standard output*
Time limit:	3 seconds
Memory limit:	1024 mebibytes

Dutchies are known for being stingy and like to save up money. That is why, when you explained to your Dutch friends a game about placing some euro cent coins on a chess board, you could see euro signs light up in their eyes.

The game takes place on an $n \times n$ grid. On some cells of the board, a euro cent coin is placed, while other cells are empty. You can win some money by playing the game: you choose a subrectangle* of the grid and make sure that this subrectangle contains an odd number of coins. You are then allowed to grab all the coins in this subrectangle. What is the largest number of euro cent coins your friend can win after taking one subrectangle? It is guaranteed that there is at least one coin in the grid.



Figure 3: Two traditional Dutch centenschrapers, used to save a few cents worth of yoghurt left in the cup.

Input

The first line contains one integer n ($1 \le n \le 3000$), the side length of the grid.

The next n lines each contain a string of length n consisting of 0s and 1s, denoting the rows of the board, where a 1 means a euro cent coin is placed in that cell, and a 0 means that cell is empty.

It is guaranteed that there is at least one 1 in the grid.

Output

Output the maximum number of euro cent coins of a subrectangle with an odd number of coins in it.

Examples

standard input	*standard output*
3 001 100 011	3
1 1	1
2 11 11	1

*A subrectangle of an $n \times n$ grid is characterized by four numbers l, r, a, b ($1 \le l \le r \le n$, $1 \le a \le b \le n$). The subrectangle then consists of all cells c_{ij} such that $l \le i \le r$ and $a \le j \le b$.