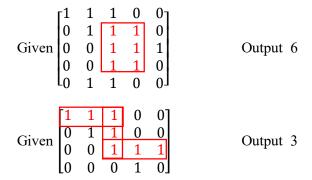# Problem D
Maximal Area
Time Limit: 3 seconds
Memory Limit: 512 Megabytes

Problem description

Given a binary matrix with size of m x n. Find the largest rectangle area filled with 1 and return its size. Consider below examples:

$$\text{Given} \begin{bmatrix} 1 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 1 & 0 \\ 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 1 & 0 \\ 0 & 1 & 1 & 0 & 0 \end{bmatrix} \qquad \text{Output } 6$$

$$\text{Given} \begin{bmatrix} 1 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 1 & 0 \end{bmatrix} \qquad \text{Output } 3$$

Input

The first line indicates the size of Matrix (row x column) where $0 \leqslant$ row, column < 1024,

The others are the cells of the matrixes.

Output

The size of the largest rectangle area filled with 1.

Example:

Input	Output
5 5 1 1 1 0 0 0 1 1 1 0 0 0 1 1 1 0 0 1 1 0 0 1 1 0 0	6

Input	Output
4 5 1 1 1 0 0 0 1 1 0 0	4

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0 0 1 1 1
0 0 0 1 0
```

Input	Output
1 1 0	0

Input	Output
10 10 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0 0 0 1 1 0 1 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0 0 0 1 1 1 1 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 0 0 0 0 0	8