

# UCF Local Contest (Qualifying Round) — August 24, 2024

## Rectangular Dry Land

*filename:* dryland

*Difficulty Level:* Medium

*Time Limit:* 7 seconds

There are a lot of wetlands in Florida and finding space for building houses is a challenge. This problem is even more serious when people insist their houses to be rectangular shapes.

### The Problem:

Let's assume our land is a two-dimensional (rectangular) grid and each grid cell is either wet or dry. We are interested in finding the largest rectangular dryland, i.e., we want to build the largest house (in area). Note that the house must be dryland in rectangular shape, i.e., the dry cells (area to build the house) must be rectangular and there can't be any wet cells in that rectangle.

### The Input:

The first input line contains two integers:  $r$  ( $1 \leq r \leq 200$ ), indicating the number of rows in our land and  $c$  ( $1 \leq c \leq 200$ ), indicating the number of columns in our land. Each of the next  $r$  input lines specifies a row in the land; each line contains  $c$  characters (starting in column 1), each character being either 1 (wetland) or 0 (dryland).

### The Output:

Print the area of the largest rectangular dryland.

### Sample Input

### Sample Output

4 5 10010 01111 11110 00001	6
3 2 10 11 11	4
2 2 10 01	1