Coin flipping easy game

Tom is playing the coin flipping game. In the game, there is a rectangular grid of coins, with heads =1 and tails = 0.

The game has one simple rule: the player cannot flip a single coin, instead, the player can choose one row (or one column) and flip all the coins in that row (or that column) simultaneously.

The objective of the game is to find out a strategy to flip the coins so that the number of head coins is maximized.

Can you write a program to help Tom to win this game?

Here is an example:

0010 1101 0110 0110 1011	1101 1101 1001 1001 1011	1011 1011 1111 1111 1101
Flip the first third and fourth rows	Flip the second and third columns	Total = 17 heads

The grid has 5 rows and 4 columns with 20 coins in total. The best strategy is to flip the first third and fourth rows, and then flip the second and third columns, and finally there are 17 head coins.

Input

The input contains multiple cases.

Each test case begins with two integers n and m, indicating that the grid has n rows and m columns, where $1 \leq n \leq 100$, $1 \leq m \leq 10$.

The following n lines give the information of the coins, where the i-th line contains a binary string (containing '0' and '1') of m characters, indicating the coin information in the i-th row.

Output

For each test case print the maximum number of head coins that Tom could get by choosing the best strategy in a separate line.

Sample Input	Sample Output
5 4 1010 0101 1010 1010 1010 5 4 0010 1101 0110 0110 1011	20 17