

Largest Non-Coprime Submatrix



Given a matrix you need to find the submatrix with the largest number of elements, where the GCD (Greatest Common Divisor) of its elements is greater than one. A submatrix of the matrix is a sub-section composed of contiguous rows and columns of the original matrix.

Input Two numbers n, m in the first line. Followed by n lines with m numbers in each line.

Constraints

$1 \leq N, M \leq 200$

$1 \leq \text{numbers} \leq 10000$

Output Just a largest area where GCD is greater than 1.

Sample Input

```
3 3
2 6 8
4 8 3
6 9 4
```

Sample Output

```
4
```

If you observe the following submatrix:

```
2 6
4 8
```

The GCD is 2. There is no matrix larger than this with a $\text{GCD} > 1$.