Problem 4. Chocolate (1 point)

Timelimit: 1 second

Problem Statement

There exist a chocolate which size is $n \times m$.
We want divide it into nm pieces of 1×1 chocolate by cutting the chocolate.
In each cutting, we can pick a chocolate and divide the chocolate into two pieces.
For example, at the beginning, we have a chocolate of size $n \times m$ and divide it into two chocolates $n' \times m$ and $(n - m') \times m$ (or $n \times m'$ and $n \times (m - m')$).
As follows we pick one of two chocolates, then divide it again until the size of all of pieces become 1×1.
Cutting takes long time, and chocolate can be melted over time, thus we want to minimize the number of cutting.
Finding the minimum number of cutting to make to 1×1 nm pieces.

Input Statement

First line contains t which is the number of test cases.
Each test case contains two integers n and m ($1 \leq n, m \leq 300$).
It means the size of input chocolate.

Output Statement

For each test case, print out the minimum number of cutting.

Input Example

2
2 2
3 3

Output Example

3 // divide 2x2 into two 1x2 then cut each 1x2 to 1x1.
8

Warning.

You must calculate minimum cutting at running time.
Do not put precomputed results in the code except some initial cases.
(ex) $h[20][15] = 1000000$)