Approach 1: Dynamic Programming

**Intuition and Algorithm**

This is a tricky problem that is hard to build an intuition about.

First, lets try to find the number of columns to keep, instead of the number to delete. At the end, we can subtract to find the desired answer.

首先，我们尝试找出哪些列保留，而不是删掉哪些列。最后可通过减法得出结果。

Now, let's say we must keep the first column C. The next column D we keep must have all rows lexicographically sorted (ie. C[i] <= D[i]), and we can say that we have deleted all columns between C and D.

Now, we can use dynamic programming to solve the problem in this manner. Let dp[k] be the number of columns that are kept in answering the question for input [row[k:] for row in A]. The above gives a simple recursion for dp[k].

dp[k]代表在输入为row[k:](k列及k列之后)结果可保留的列数