1183. Maximum Number of Ones

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Consider a matrix M with dimensions width * height, such that every cell has value 0 or 1, and any **square** sub-matrix of M of size sideLength * sideLength has at most maxOnes ones.

Return the maximum possible number of ones that the matrix M can have

User Accepted:	61
User Tried:	188
Total Accepted:	67
Total Submissions:	379
Difficulty:	Hard

Example 1:

```
Input: width = 3, height = 3, sideLength = 2, maxOnes = 1
Output: 4
Explanation:
In a 3*3 matrix, no 2*2 sub-matrix can have more than 1 one.
The best solution that has 4 ones is:
[1,0,1]
[0,0,0]
[1,0,1]
```

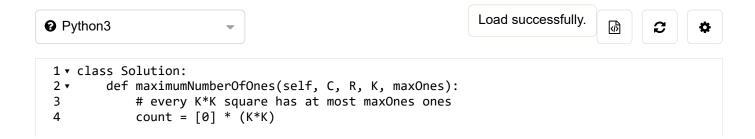
Example 2:

```
Input: width = 3, height = 3, sideLength = 2, maxOnes = 2
Output: 6
Explanation:
[1,0,1]
[1,0,1]
```

Constraints:

- 1 <= width, height <= 100
- 1 <= sideLength <= width, height
- 0 <= maxOnes <= sideLength * sideLength

Discuss (https://leetcode.com/problems/maximum-number-of-ones/discuss)



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Run Code

△ Submit

□ Custom Testcase

```
5 ▼
            for r in range(R):
 6 ▼
                for c in range(C):
 7
                    # calculate index to transform from 2D to 1D
                    index = (r\%K) * K + c\%K
 8
 9
                     count[index] += 1
            print(count)
10
            count.sort()
11
12
            ans = 0
            for _ in range(maxOnes):
13 ▼
                ans += count.pop()
14
15
            return ans
```

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