Class Chaos

Our protagonist, Karan is the most naughty child in the class. Today he has a plan not to allow any class go smoothly.
So during the first lecture of the day, he throws a piece of chalk to each of his special friends. Now, all of his classmates are enraged.

Now, for every next lecture the following things happen for every person:

1. If a person has been hit by odd number of chalks during the previous lecture, he will throw one chalk at each of his special friend.

2. Else, he will throw two chalks at each of his special friend.

Special friends relationships are defined by a matrix. All students have unique roll numbers from 1 to N. Karan has roll number 1.

You have to find the total number of chalks that will be thrown in P lectures. Assume each person has infinite supply of chalks.

Input
First line contains two integers N and P, the number of students in the class and the number of lectures.
Next N lines describes a N*N matrix. Each of the next N lines contains at string of length N, where each element will be 0 or 1. The jth character of ith line denotes students with roll number i and j are special friends. Given matrix will be symmetric.

Output
Print in one line, the total number of chalks that will be thrown at the end of P lectures.

Constraints
1 <= N <= 20
1 <= P <= 10^9

Time-limit:
2 secs

Sample
Input:
3 2
001
001
110

Output:
7

Explanation: In the first lecture Karan throws one chalk at his only special friend 3. During the second lecture, 3 throws single chalks to each of his special friends i.e 1 and 2. But 1 and 2 will throw two chalks to each of their special friends. Therefore, a total of 7 chalks.

Composer:
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