SUBCUBE EDGE LCM

My Friend Deepan Gupta gave me a problem on **3-D** and said put it on **SPOJ** to have some peop fun. You are given a **Cube M** with size **N*N*N**, find the subcube **S of M**, having dimention **E*E*E** such that **E is minimum** and sum of all the elements of this subcube is greater than or equal to **W**. But i found this problem easy and also there are similar problems that already exists on SPOJ. So i made it **twist**. Now If no such cube exists, **print -1**. Else if exists with size **E**, then find the smallest **k** such that - **n** divides **lcm (m,k) ; m** divides **lcm (n,k)**, where **n = E^4, m = E^4+1.**

Constraints : 0<=M[i][j][k]<=10^9, 1<=i,j,k<=N, 0<=W<=10^15, 1<=N<=100.

Input :
First line contains N,W, size of Cube and Cut-off weight respectively. Next lines contains N matrix. First N lines contains 1st bottom layer of Cube M, next N lines 2nd bottom layer of cube M and so on. Each layer has dimention N*N.

Output :
Print output as stated Above.

Examples :

Input :
3 15
1 2 3
2 3 4
3 4 5
2 3 4
3 4 5
4 5 6
5 6 7
6 7 8
7 8 9

Output :
272

Input :
3 1000
1 2 3
2 3 4
3 4 5
2 3 4
3 4 5
4 5 6
5 6 7
6 7 8
7 8 9

Output :

-1