Problem 3

Given an undirected graph, find how many more edges have to be added to make it Eulerian. If the given graph cannot be made Eulerian, by adding edges, then print **-1**. Otherwise output the number of edges to be added.Assume the graph is a simple graph and it is connected. If the graph is on n vertices, the vertex set is from *{0,..,n-1}*.

The input graph is given in adjacency matrix format.The first line of the input specifies n, the number of vertices. The following n^2 entries of 0s and 1s denote the row major ordering of the adjacency matrix.

Sample Input

4 *#Number of vertices*
0 *#Entries of matrix in row-major order*
1
0
1
1
0
0
0
0
0
0
1
1
0
1
0
/*
An adjacency matrix (0-1 matrix) where, 1 corresponds to presence of an edge, and 0 - absence of the edge)
*/

Sample Output -

1