```
import math
import numpy as np
import matplotlib.pyplot as plt

def premier(atester):
    k = 2
    if atester in [0, 1]: return False
    if atester in [2, 3, 5, 7]: return True
    while True:
        if k * k > atester: return True
        else:
            if atester % k == 0: return False
            else: k = k + 1

for n in [40, 98]:
    P = [0]
    for k in range(3,n-2,2):
        #if premier(k):
        if True:
            P.append(k)
    P.append(n)
    print(P)
    L = np.hstack(P)
    print(L)
    D = np.diff(L)
    print(D)
    E = np.repeat(D, 2)
    print(E)
    F = E.copy()
    longueur = len(F)
    G = np.eye(longueur)
    for i in range(1, longueur//2):
        s = 0
        for j in range(i, longueur - i, 2):
            F[j:j+2] = F[j:j+2][::-1]
            s += F[j+1] - F[j]
        print(F)
        p = np.sum(F[0:i])
        print('p = ',p)
        M_i = np.eye(longueur, dtype='int')
        for j in range(i, longueur - i, 2):
            if j + 1 < longueur:
                M_i[[j, j+1]] = M_i[[j+1, j]]
        G = np.dot(M_i, G)
        #print('G = ')
        #print(G.astype(int))
        plt.figure(figsize=(8, 8))
        plt.imshow(G, cmap='binary', origin='upper')
        #plt.show()
        nomfic ='operattousimpairs'+str(n)+'-'+str(p)
        plt.savefig(nomfic)
        plt.close
```