

16.08.24

HOME TASK MATRIX

QUESTION 1

```
n=int(input())
matrix=[]
for i in range(n):
    L=list(map(int,input().split()))
    matrix.append(L)
even=True
odd=True
for i in range(n):
    for j in range(n):
        if matrix[i][j]%2==0:
            even=False
        elif matrix[i][j]%2!=0:
            odd=False
if even or odd:
    print("Yes")
else:
    print("No")
```

QUESTION 2

```
n=int(input())
matrix=[]
count=0
total=0
for i in range(n):
    L=list(map(int,input().split()))
    matrix.append(L)
for i in range(n):
    for j in range(n):
        if i==j:
            count+=matrix[i][j]
for i in range(n):
    total+=matrix[i][n-i-1]
if count==total:
    print("Yes")
else:
    print("No")
```

QUESTION 3

```
num = int(input("Enter the dimension of the matrix (N x N): "))
matrix = []
for i in range(num):
    L = list(map(int, input().split()))
    matrix.append(L)
for i in range(num):
    for j in range(i, num):
        matrix[i][j], matrix[j][i] = matrix[j][i], matrix[i][j]
for i in range(num):
    matrix[i] = matrix[i][::-1]
print("Rotated matrix by 90 degrees clockwise:")
for r in matrix:
    print(" ".join(map(str, r)))
```