import queue  
  
f = open("numere.in")  
  
pq = queue.PriorityQueue()  
  
for linie in f:  
 L = [int(x) for x in linie.split()]  
 pq.put((len(L),L))  
  
f.close()  
  
def interclasare(a, b):  
 i = j = 0  
 L = []  
 while i < len(a) and j < len(b):  
 if a[i] < b[j]:  
 L.append(a[i])  
 i += 1  
 else:  
 L.append(b[j])  
 j += 1  
 L.extend(a[i:])  
 L.extend(b[j:])  
  
 return L  
  
complx = 0  
  
while pq.qsize() > 1:  
 A = pq.get()  
 B = pq.get()  
 C = interclasare(A[1], B[1])  
 complx = complx + len(C)  
 pq.put((len(C), C))  
  
print(pq.get()[1])  
print(complx)