massiv1 = input().split(' ')

n1 = int(massiv1[0])

massiv1.pop(0)

for i in range(len(massiv1)):

massiv1[i] = int(massiv1[i])

l1 = input().split(' ')

for i in range(len(l1)):

l1[i] = int(l1[i])

massiv2 = input().split(' ')

n2 = int(massiv2[0])

massiv2.pop(0)

for i in range(len(massiv2)):

massiv2[i] = int(massiv2[i])

l2 = input().split(' ')

for i in range(len(l2)):

l2[i] = int(l2[i])

l1.pop(0)

l2.pop(0)

l1.sort()

l2.sort()

money = input().split(' ')

for i in range(len(money)):

money[i] = int(money[i])

for i in range(len(money)):

k = 0

for j in range(len(l1)):

if money[i] >= l1[j]:

k += 1

money[i] -= k

for i in range(len(money) - 1):

money[i + 1] = money[i] \* massiv1[i] + money[i + 1]

money = [money[-1]]

for i in range(n2 - 1):

money.append(money[i] //

massiv2[len(massiv2) - i - 1])

money[i] %= massiv2[len(massiv2) - 1 - i]

money = money[::-1]

for i in range(len(money)):

k = 0

for j in range(len(l2)):

if money[i] >= l2[j]:

money[i] += 1

money[i] = str(money[i])

print(" ".join(money))