# Problem

# 

# Note

For those having difficulty understanding problem as I had, matrices multiplication is dot product of them.

# Solution

import numpy

n = int(input())

a=numpy.array([list(map(int,input().split())) for \_ in range(n)])

b=numpy.array([list(map(int,input().split())) for \_ in range(n,n+n)])

print(numpy.dot(a, b))