



Dot and Cross ★

68/115 challenges solved

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Problem

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dot

The dot tool returns the dot product of two arrays.

```
import numpy

A = numpy.array([ 1, 2 ])
B = numpy.array([ 3, 4 ])

print numpy.dot(A, B)      #Output : 11
```

cross

The cross tool returns the cross product of two arrays.

```
import numpy

A = numpy.array([ 1, 2 ])
B = numpy.array([ 3, 4 ])

print numpy.cross(A, B)    #Output : -2
```

Task

You are given two arrays **A** and **B**. Both have dimensions of $N \times N$.

Your task is to compute their [matrix product](#).

Input Format

The first line contains the integer **N**.

The next **N** lines contains **N** space separated integers of array **A**.

The following **N** lines contains **N** space separated integers of array **B**.

Output Format

Print the matrix multiplication of **A** and **B**.

Sample Input

```
2
1 2
3 4
1 2
3 4
```

Sample Output

```
[[ 7 10]
 [15 22]]
```

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Python 3



```
1 import numpy
2
3 if __name__ == '__main__':
4     n = int(input())
5
6     data = [list(map(int, input().split())) for _ in range(n)]
7     a = numpy.array(data)
8
9     data = [list(map(int, input().split())) for _ in range(n)]
10    b = numpy.array(data)
11
12    result = numpy.matmul(a, b)
13
14    print(result)
15
```

Line: 1 Col: 1

[Upload Code as File](#)☐ Test against custom input[Run Code](#)[Submit Code](#)

You have earned 20.00 points!

68/115 challenges solved.

59%



Congratulations

You solved this challenge. Would you like to challenge your friends?

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✓ Test case 0

✓ Test case 1

✓ Test case 2

Compiler Message

Success

Input (stdin)

```
1 2
2 1 2
3 3 4
```

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4	1 2
5	3 4

Expected Output

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1	[[7 10]
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