Dot and Cross

112/115 challenges solved

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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]]
```

Change Theme Language Python 3

```
1  import numpy as np
2
3  n = int(input())
4  A = np.array([input().split() for _ in range(n)], int)
5  B = np.array([input().split() for _ in range(n)], int)
6
7  print(np.dot(A, B))
8
```

EMACS Line: 8 Col: 1

Upload Code as File | Test against custom input | Run Code | Submit Code

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112/115 challenges solved.

97%

Congratulations

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

Next Challenge

- Test case 0
- Test case 1
- Test case 2

Compiler Message

```
Success
```

Input (stdin) Download

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

Expected Output Download

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