# **Array Mathematics** ★

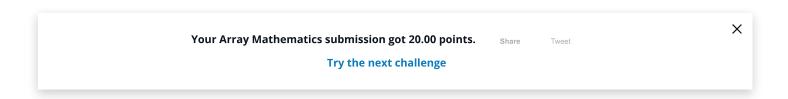
Submissions

Leaderboard

Problem



Û



Editorial 🖰

Basic mathematical functions operate element-wise on arrays. They are available both as operator overloads and as functions in the NumPy module. import numpy a = numpy.array([1,2,3,4], float)b = numpy.array([5,6,7,8], float)#[ 6. 8. 10. 12.] print a + b print numpy.add(a, b) #[ 6. 8. 10. 12.] print a - b #[-4. -4. -4. -4.] print numpy.subtract(a, b) #[-4. -4. -4. -4.] #[ 5. 12. 21. 32.] print a \* b print numpy.multiply(a, b) #[ 5. 12. 21. 32.] print a / b #[ 0.2 0.33333333 0.42857143 0.5 print numpy.divide(a, b) #[0.2 0.33333333 0.42857143 0.5 ] print a % b #[ 1. 2. 3. 4.] print numpy.mod(a, b) #[ 1. 2. 3. 4.] #[ 1.00000000e+00 6.40000000e+01 2.18700000e+03 6.55360000e+04] print a\*\*b #[ 1.00000000e+00 6.40000000e+01 2.18700000e+03 6.55360000e+04] print numpy.power(a, b)

#### Tack

You are given two integer arrays,  $m{A}$  and  $m{B}$  of dimensions  $m{N}\!\! imes\!\!m{M}$ .

Your task is to perform the following operations:

- 1. Add (**A** + **B**)
- 2. Subtract (**A B**)
- 3. Multiply (**A** \* **B**)
- 4. Integer Division ( $\boldsymbol{A} / \boldsymbol{B}$ )
- 5. Mod (**A** % **B**)
- 6. Power (**A** \*\* **B**)

#### Note

There is a method numpy.floor\_divide() that works like numpy.divide() except it performs a floor division.

## Input Format

The first line contains two space separated integers,  $m{N}$  and  $m{M}$ .

The next  $m{N}$  lines contains  $m{M}$  space separated integers of array  $m{A}$ .

The following  $m{N}$  lines contains  $m{M}$  space separated integers of array  $m{B}$ .

### **Output Format**

Print the result of each operation in the given order under Task.

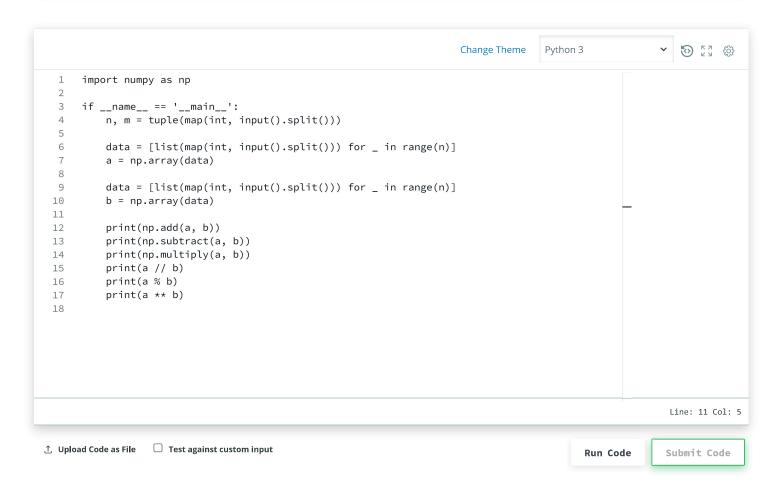
```
Sample Input

1 4
1 2 3 4
5 6 7 8

Sample Output

[[ 6 8 10 12]]
[[-4 -4 -4 -4]]
[[ 5 12 21 32]]
[[ 0 0 0 0]]
[[ 1 2 3 4]]
[[ 1 64 2187 65536]]

Use // for division in Python 3.
```



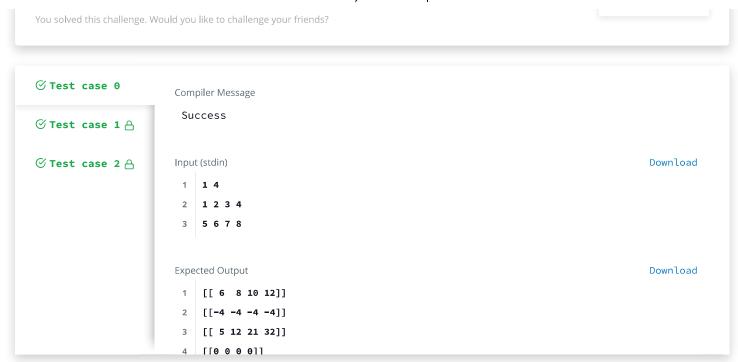
You have earned 20.00 points! 77/115 challenges solved.

67%



# Congratulations

Next Challenge



Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature