



Practice &gt; Python &gt; Numpy &gt; Sum and Prod

# Sum and Prod ☆

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## Problem

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### sum

The sum tool returns the sum of array elements over a given axis.

```
import numpy

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

print numpy.sum(my_array, axis = 0)      #Output : [4 6]
print numpy.sum(my_array, axis = 1)      #Output : [3 7]
print numpy.sum(my_array, axis = None)    #Output : 10
print numpy.sum(my_array)                 #Output : 10
```

By default, the axis value is None. Therefore, it performs a sum over all the dimensions of the input array.

### prod

The prod tool returns the product of array elements over a given axis.

```
import numpy

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

print numpy.prod(my_array, axis = 0)      #Output : [3 8]
print numpy.prod(my_array, axis = 1)      #Output : [ 2]
print numpy.prod(my_array, axis = None)    #Output : 24
print numpy.prod(my_array)                 #Output : 24
```

By default, the axis value is None. Therefore, it performs the product over all the dimensions of the input array.

### Task

You are given a 2-D array with dimensions  $N \times M$ .

Your task is to perform the **sum** tool over axis **0** and then find the **product** of that result.

### Input Format

Author

DOSHI

Difficulty

Easy

Max Score

20

Submitted By

9197

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The first line of input contains space separated values of  $N$  and  $M$ .

The next  $N$  lines contains  $M$  space separated integers.

### Output Format

Compute the sum along axis  $0$ . Then, print the product of that sum.

### Sample Input

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

### Sample Output

```
24
```

### Explanation

The sum along axis  $0$  =  $[4\ 6]$

The product of this sum =  $24$

Current Buffer (saved locally, editable)



Python 3



```
1 import numpy
2 n,m=[int(i) for i in input().split()]
3 array1=numpy.array([list(map(int,input().split()))
4 for i in range(n)])
5 array2=numpy.sum(array1,axis=0)
6 print(numpy.prod(array2))
7
8
9
```

Line: 1 Col: 1

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