

## 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 12]
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

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**