Sum and Prod

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HackerRank

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 NXM.
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
```

1/2

```
3 4
```

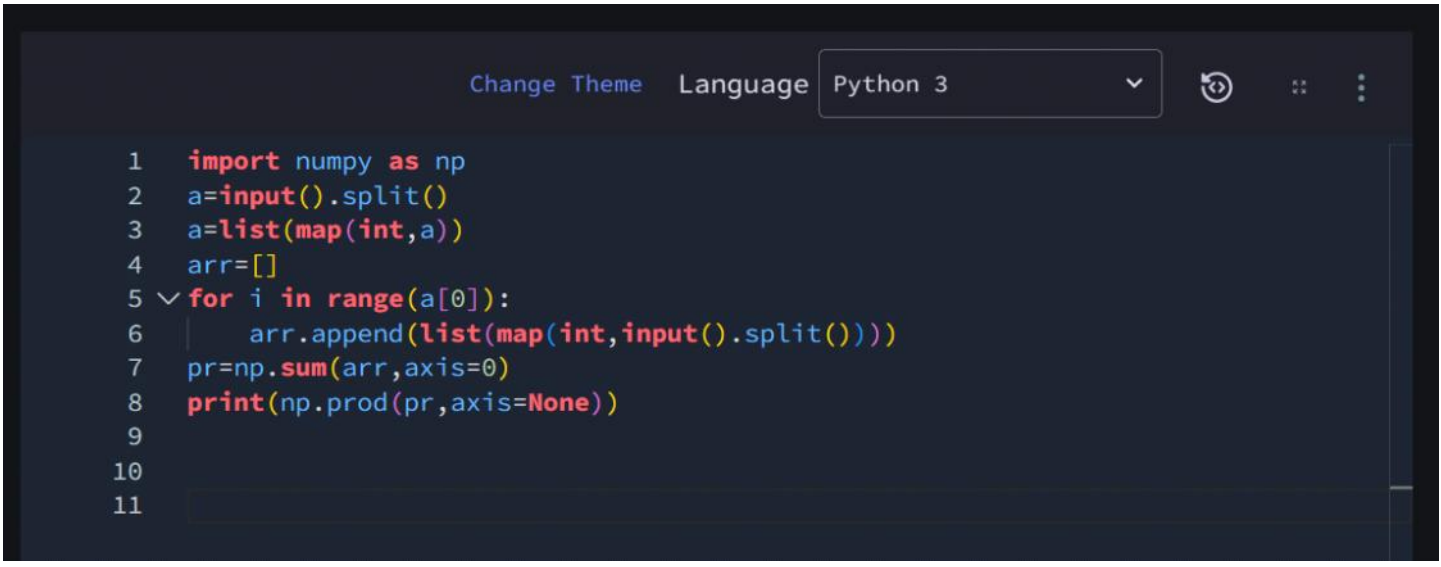
Sample Output

```
24
```

Explanation

The sum along axis 0 = $[4\ 6]$
The product of this sum = 24

2/2




```python
import numpy as np
a=input().split()
a=list(map(int,a))
arr=[]
for i in range(a[0]):
    arr.append(list(map(int,input().split())))
pr=np.sum(arr,axis=0)
print(np.prod(pr,axis=None))
```