**Task 1**

You are given a space separated list of numbers.  
Your task is to print a reversed Numpy array with the element type float.

**Input Format**

A single line of input containing space separated numbers.

**Output Format**

Print the reverse *NumPy* array with type float.

**Sample Input**

1 2 3 4 -8 -10

**Sample Output**

[-10. -8. 4. 3. 2. 1.]

**Task 2**

You are given a space separated list of nine integers. Your task is to convert this list into 3x3 numpy array.

**Input Format**

A single line of input containing space separated integers.

**Output Format**

Print the 3x3 numpy array.

**Sample Input**

1 2 3 4 5 6 7 8 9

**Sample Output**

[[1 2 3]

[4 5 6]

[7 8 9]]

**Task 3**

Your task is to print an array of size NxM with its main diagonal elements as 1’s and 0’s everywhere else.

**Input Format**

A single line containing the space separated values of  N and M.  
 N denotes the rows.  
 M denotes the columns.

**Output Format**

Print the desired NxM array.

**Sample Input**

3 3

**Sample Output**

[[ 1. 0. 0.]

[ 0. 1. 0.]

[ 0. 0. 1.]]

**Task 4**

You are given two integer arrays, A and B of dimensions NxM.  
Your task is to perform the following operations:

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

**Input Format**

The first line contains two space separated integers, N and M.  
The next N lines contains M space separated integers of array A.  
The following N lines contains M space separated integers of array 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]]

**Task 5**

You are given a NxM integer array matrix with space separated elements (N = rows and M = columns).  
Your task is to print the *transpose* and *flatten* results.

**Input Format**

The first line contains the space separated values of N and M.  
The next N lines contains the space separated elements of M columns.

**Output Format**

First, print the *transpose* array and then print the *flatten*.

**Sample Input**

2 2

1 2

3 4

**Sample Output**

[[1 3]

[2 4]]

[1 2 3 4]