



# Shape and Reshape ★

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## shape

The shape tool gives a tuple of array dimensions and can be used to change the dimensions of an array.

### (a). Using shape to get array dimensions

```
import numpy

my_1D_array = numpy.array([1, 2, 3, 4, 5])
print my_1D_array.shape    #(5,) -> 1 row and 5 columns

my_2D_array = numpy.array([[1, 2],[3, 4],[6,5]])
print my_2D_array.shape    #(3, 2) -> 3 rows and 2 columns
```

### (b). Using shape to change array dimensions

```
import numpy

change_array = numpy.array([1,2,3,4,5,6])
change_array.shape = (3, 2)
print change_array
```

```
#Output
[[1 2]
 [3 4]
 [5 6]]
```

## reshape

The reshape tool gives a new shape to an array without changing its data. It creates a new array and does not modify the original array itself.

```
import numpy

my_array = numpy.array([1,2,3,4,5,6])
print numpy.reshape(my_array, (3,2))
```

```
#Output
[[1 2]
 [3 4]
 [5 6]]
```

## Task

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

## Input Format

A single line of input containing **9** 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]]
```

[Change Theme](#)

Python 3



```
1 import numpy as np
2
3 if __name__ == '__main__':
4     lista_numeros = list(map(int, input().split()))
5
6     arreglo_numeros = np.array(lista_numeros)
7
8     arreglo_numeros.shape = (3, 3)
9     print(arreglo_numeros)
10
```

Line: 10 Col: 1

☒ Upload Code as File ☐ Test against custom input[Run Code](#)[Submit Code](#)

## Compilation Successful :)

Click the Submit Code button to run your code against all the test cases.

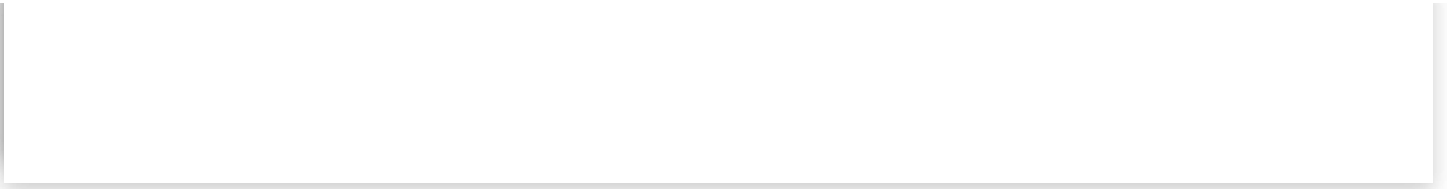
Input (stdin)

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```
1 1 2 3 4 5 6 7 8 9
```

Your Output (stdout)

```
1 [[1 2 3]
2  [4 5 6]
3  [7 8 9]]
```



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