

Floor, Ceil and Rint

floor

The tool *floor* returns the floor of the input element-wise.
The floor of x is the largest integer i where $i \leq x$.

```
import numpy

my_array = numpy.array([1.1, 2.2, 3.3, 4.4, 5.5, 6.6, 7.7, 8.8, 9.9])
print numpy.floor(my_array)      #[ 1.  2.  3.  4.  5.  6.  7.  8.  9.]
```

ceil

The tool *ceil* returns the ceiling of the input element-wise.
The ceiling of x is the smallest integer i where $i \geq x$.

```
import numpy

my_array = numpy.array([1.1, 2.2, 3.3, 4.4, 5.5, 6.6, 7.7, 8.8, 9.9])
print numpy.ceil(my_array)      #[ 2.  3.  4.  5.  6.  7.  8.  9. 10.]
```

rint

The *rint* tool rounds to the nearest integer of input element-wise.

```
import numpy

my_array = numpy.array([1.1, 2.2, 3.3, 4.4, 5.5, 6.6, 7.7, 8.8, 9.9])
print numpy.rint(my_array)      #[ 1.  2.  3.  4.  6.  7.  8.  9. 10.]
```

Task

You are given a 1-D array, A . Your task is to print the *floor*, *ceil* and *rint* of all the elements of A .

Input Format

A single line of input containing the space separated elements of array A .

Output Format

On the first line, print the *floor* of A .
On the second line, print the *ceil* of A .
On the third line, print the *rint* of A .

Sample Input

```
1.1 2.2 3.3 4.4 5.5 6.6 7.7 8.8 9.9
```

Sample Output

```
[ 1.  2.  3.  4.  5.  6.  7.  8.  9.]
[ 2.  3.  4.  5.  6.  7.  8.  9. 10.]
[ 1.  2.  3.  4.  6.  7.  8.  9. 10.]
```