



Rounding Decimals

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Rounding Decimals

There are primarily five ways of rounding off decimals in NumPy:

- truncation
- fix
- rounding
- floor
- ceil

Truncation

Remove the decimals, and return the float number closest to zero. Use the `trunc()` and `fix()` functions.

Example

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Truncate elements of following array:

```
import numpy as np

arr = np.trunc([-3.1666, 3.6667])
```



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Example

Same example, using `fix()` :

```
import numpy as np

arr = np.fix([-3.1666, 3.6667])

print(arr)
```

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Rounding

The `round()` function increments preceding digit or decimal by 1 if ≥ 5 else do nothing.

E.g. round off to 1 decimal point, 3.16666 is 3.2

Example

Round off 3.1666 to 2 decimal places:

```
import numpy as np

arr = np.around(3.1666, 2)

print(arr)
```

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Floor

The floor() function rounds off decimal to nearest lower integer.

E.g. floor of 3.166 is 3.

Example

Floor the elements of following array:

```
import numpy as np

arr = np.floor([-3.1666, 3.6667])

print(arr)
```

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E.g. ceil of 3.166 is 4.

Example

Ceil the elements of following array:

```
import numpy as np

arr = np.ceil([-3.1666, 3.6667])

print(arr)
```

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Exercise ?

Consider the following code:

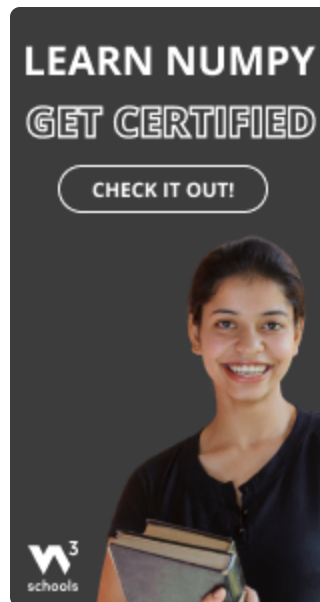
```
import numpy as np
arr = np.trunc([5.998, 1.455])
print(arr)
```

What will be the result of arr ?

- ☐ [6. 1.]
- ☐ [5. 1.]
- ☐ [6. 2.]

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