Python Basics

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Operators

Comparison Operators

- ==

- !=

- \>

- \<

- \>=

- \<=

Int Operators

- +
- -
- /
- //
- *
- %
- **

```python
# int operators

# addition
1 + 2

# multiplication
2 * 4

# power
2 ** 2

# modulo
10 % 2

# division
10/3
10//3
```

Floats and Ints

Usually when you Mix Floats and Ints, you get floats.

Why? Because float → int lose information

Normal division ALWAYS makes floats (use // for ints)

Precedence

( )

**

+ - (pos, neg)

* / % //

+ -

Left → Right


```
1  # order of operations
2  2 + 3 * 5
3  (2 + 3) * 5
4  2 + 3 * 5 ** 2
```

Instead of opaque PEMDAS "brain teasers" how about you break out a dang parenthesis or two and VALUE CLARITY OVER INSTANTANEOUS **PRECEDENCE** KNOWLEDGE

GIF

Shortcuts

- a += 1
- a -= 1
- a /= 1
- a *= 1

- a += a

Math Module

Math Module

```python
1   # imports
2   import math
3
4   # using it
5   print(math.sqrt(100))
6
7   x = math.sin(0)
8
9   y = math.log(10)
10
```