

# *Mathematical Operators*

Programming often manipulates numbers.

To do that, we use standard mathematical operators as well as some “special” operators.

Standard operators are addition, subtraction, multiplication and division.

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Remember **BIDMAS**

# *Simple Operators*

## **Addition:**

Simple addition:

```
myVar <- 2 + 4
```

```
myVar <- aVar + 2
```

To keep a running total:

```
myVar <- myVar + aValue
```

# *Simple Operators*

## **Subtraction:**

Simple subtraction:

```
myVar <- 2 - 4
```

```
myVar <- aVar - 2
```

To take one off each time through a loop:

```
myVar <- myVar - 1
```

# *Simple Operators*

## **Multiplication:**

Simple multiplication:

```
myVar <- 2 * 4
```

```
myVar <- aVar * 2
```

To square a value:

```
myVar <- myVar * myVar
```

# Simple Operators

## Division:

- Python **always** produces **float** (decimal) data types after any division ( $4 / 2 = 2.0$ )
- Computers struggle with **recurring** decimals

```
myVar <- 2 / 4
```

```
myVar <- aVar / 2
```

## Division by 0 causes an error:

```
myVar <- myVar / 0
```