# Arithmetic Expressions and Variables in R: Takeaways

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## **Syntax**

• Exponentiation: 3^5

• Integer Division: 17 %/%5

• Modulo: 17 %%5

#### **VARIABLE USES**

• Assigning a value to a variable:

```
value_1 <- 50
value_2 <- 5L</pre>
```

• Assigning the result of a calculation to a variable:

```
total <- 5 + 5
average <- (5 + 5 + 5) / 3
```

• Performing calculations using variable names:

```
value_1 + value_2
```

### **BUILT-IN FUNCTIONS**

• Data type of a variable:

```
class(vector_1)
```

## Concepts

• R uses the Operator Priority rules from mathematics when evaluating expressions: parentheses are calculated first, then exponentiation, then division and multiplication, and finally, addition and subtraction.

- R uses the <u>Data type transformation</u> rules to determine the data type of an expression.
  - Operations between values of the **same data type** yield **that same data type**.
  - Operations between values of **different data types** yield in **the highest data type**. From highest to lowest, the data types are ranked:

```
Numeric

Integer

and
Logical
```

• There are some rules you need to follow when naming variables in R:

## Resources

• Notes on naming variables in R



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