

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
```

- 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, division, multiplication, addition, and finally subtraction.
- R uses the [Data type transformation](#) 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 **the highest data type**. From highest to lowest, the data types rank as follows:

```
Numeric
```

,

```
Integer
```

, and

```
Logical
```

.

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

Variable Name	Valid?
variable_name1	
variable_name!	 <i>contains a special character</i>
1variable_name	 <i>starts with a number</i>
variable_name1	
1variable_name	 <i>starts with a number</i>
_variable_name	 <i>starts with an underscore</i>

Resources

- [Notes on naming variables in R](#)