

Chapter 2 The Very Basics

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Chapter 2 dari buku **Hands-on Programming with R**. Catatan ini merupakan bagian dari proyek 1: **Weighted Dice**.

2.3 Functions

`round` function is used to round a number.

```
round(3.1415)
```

```
## [1] 3
```

`factorial` function is used to calculate the factorial of a number.

```
factorial(3)
```

```
## [1] 6
```

`mean` function is used to compute the mean of number(s).

```
mean(1:6)
```

```
## [1] 3.5
```

We can combine `round` and `mean` functions as follows:

```
round(mean(1:6))
```

```
## [1] 4
```

The `sample` function is used to sample.

```
die <- 1:6  
sample(x = die, size=1)
```

```
## [1] 4
```

`args` can be used to view the arguments of a function.

```
args(round)
```

```
## function (x, digits = 0)
```

```
## NULL
```

```
args(sample)
```

```
## function (x, size, replace = FALSE, prob = NULL)
```

```
## NULL
```

round method can be accompanied with `digits`, for example:

```
round(3.1415, digits = 2)
```

```
## [1] 3.14
```

By **default**, the `sample` function is *without replacement*.

```
sample(die, size=2)
```

```
## [1] 3 2
```

When we want to *sample with replacement*, we can set `replace=TRUE` as follows:

```
sample(die, size=2, replace = TRUE)
```

```
## [1] 6 5
```

If you want to add up the dice, you can feed your result straight into the `sum` function:

```
die <- sample(die, size=2, replace = TRUE)
dice
```

```
## [1] 4 4
```

```
sum(dice)
```

```
## [1] 8
```

```
die <- 1:6
```

2.4 Writing Your Own Functions

We are going to write a function which returns the sum of rolling two dice.

```
roll <- function(){
  die <- 1:6
  dice <- sample(die, size=2, replace = TRUE)
  sum(dice)
}
result <- roll()
result
```

```
## [1] 6
```

When you run a function in R, R will execute all of the code in the body and then return **the result of the last line of code**.