

Chapter 2 The Very Basics

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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] 3
```

`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] 1 4
```

When we want to `sample with replacement`, we can set `replace=TRUE`.

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

```
## [1] 5 3
```

2.4 Writing Your Own Functions

We have working R code that simulates rolling a pair of dice:

```
die <- 1:6
dice <- sample(die, size = 2, replace=TRUE)
sum(dice)
```

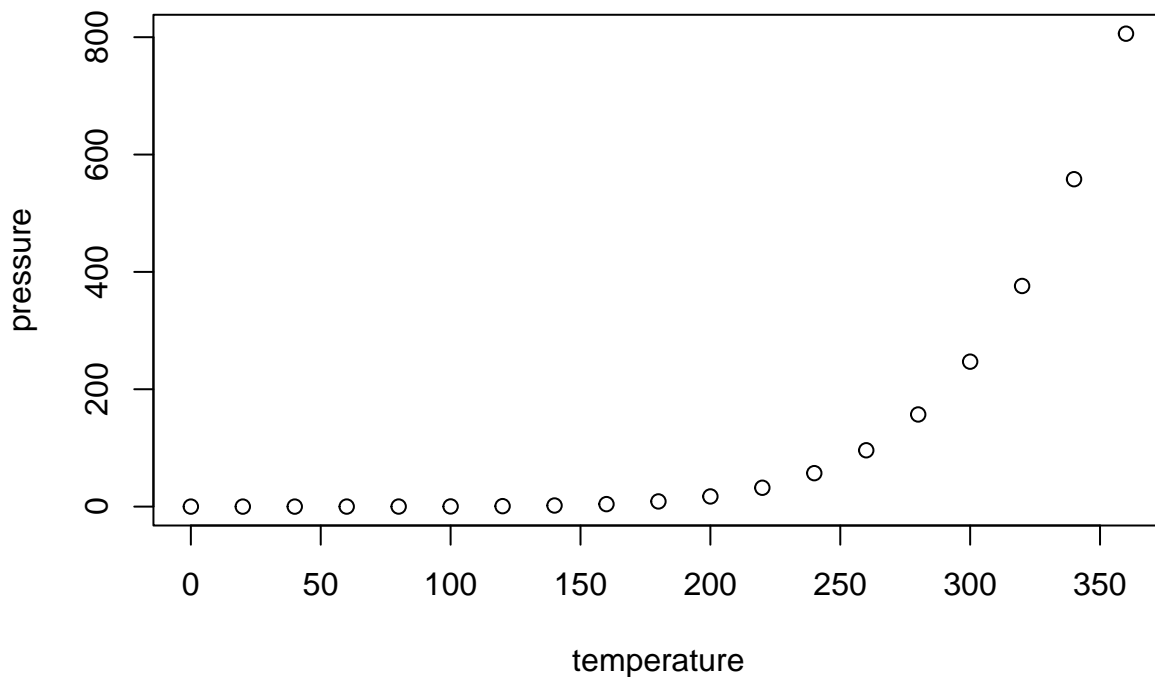
```
## [1] 10
```

```
summary(cars)
```

```
##      speed          dist
##  Min.   : 4.0      Min.   : 2.00
## 1st Qu.:12.0      1st Qu.: 26.00
##  Median :15.0      Median : 36.00
##   Mean  :15.4      Mean   : 42.98
## 3rd Qu.:19.0      3rd Qu.: 56.00
##   Max.  :25.0      Max.    :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.