Lab 1

Student

Questions that you need to answer are in **bold**. Add your answers in the spaces provided, you may delete any blanks, _____, but do not delete the question text.

The sections of this lab match those in the Programming Basics primer on Rstudio Cloud, so you might like to tackle them as you work through the primer.

Functions

Use the `exp()` function, to find the exponential of 10.

```
exp(10)
```

```
## [1] 22026.47
```

How would you open the help page for the `exp()` function?

```
?exp
```

Arguments

Consider the code in the following chunk:

```
round(3.141593, digits = 2)
```

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

How many arguments are being passed to `round()`?

Two:

- the value `3.141593` is being passed as the first argument, and
- the value `2` is being passed to the `digits` argument.

What is the name of the argument that is being passed the value 3.141593?

This is asking what is the name of the first argument to `round()`. Either try looking at:

```
args(round)
```

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

Or the help page:

```
?round # Or look at the "Usage" section
```

The answer is: the first argument to `round()` is called `x`.

Objects

This code generates a sequence of values from 0 to 1 in steps of 0.05.

```
steps <- seq(0, 1, 0.05)
length(steps)
```

```
## [1] 21
```

Edit the chunk above to: save the values to an object called `steps`, then use the `length()` function to find the length of `steps`.

Vectors

Consider the vector `catfood_servings`:

```
catfood_servings <- c(Scylla = 3, Dexter = 5, Underfloor = 4)
```

Extract the 2nd element of `catfood_servings`.

```
catfood_servings[2]
```

```
## Dexter
##      5
```

Extract the element with the name `Dexter`

```
catfood_servings["Dexter"]
```

```
## Dexter
##      5
```

Types

```
heights <- c("172", "167", "96", "202", "150")
names <- c("Luke Skywalker", "C-3PO", "R2-D2", "Darth Vader", "Leia Organa")
humans <- c(TRUE, FALSE, FALSE, TRUE, TRUE)
```

What type of object is `heights`? Character. *Whoops, I accidently made this a trick question — while these look like numeric data, the quotes around the number mean R will interpret these as character strings*

What type of object is `names`? Character

What type of object is `humans`? Logical (a.k.a boolean).