In-Class Exercise 1

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Question 1 - 1.11 pts

As you create (i.e., assign) objects in an R session, the objects will appear in the

1. Console
2. *Environment*
3. Viewer
4. Object Page
5. None of the above

Question 2 - 1.11 pts

Suppose you are looking through some R code on the Internet for fun, and you come across this:

Running `abs(-5) == -5` returns `FALSE`.

You are confused by how this outcome was achieved, and you would like to know more about this abs function.

Then you would run _____ to look it up in the help window.

You'd run `?abs` or `help(abs)`.

Question 3 - 1.11 pts

If you execute the following code, R will return the output of 5.

True / False

```
a <- 3
b <- 2
elsa <- 2 * (a + b)
elsa / 2
```

```
5
```

Easy enough, just run it and see above that the result is 5, therefore it's True.

Question 4 - 1.11 pts

Suppose you are naming an object in R. Which of the following would result in an error? Select all that apply. (just run each one and see if it produces an error)

```
if_red <- 2
```

```
2
```

```
.205 <- "COMM 205"
```

(produces error)

```
Sauder_School.Of_Business <- "Sauder"
```

```
Sauder
```

```
TRUE <- "true"
```

(produces error)
Thus it's a) and d)

Question 5 - 1.11 pts

If you enter `typeof("TRUE")` into the Console and press enter, what will R return?

1. TRUE
2. FALSE
3. "logical"
4. "character"
5. "double"

Just run it!

```
typeof("TRUE")
```

```
character
```

Thus the answer is d.

Question 6 - 1.11 pts

Suppose you typed the following four lines of code in R console and executed them.

Ok let's do just that:

```
a <- 5
b <- 4
c <- TRUE
a + b - c
```

```
8
```

What will be displayed on the Console after the last line of code?

1. an error
2. 9
3. *8*
4. 7
5. there is not enough information in the question to determine the answer

This is due to "Implicit Conversion/Coercion/Casting" wherein `TRUE` can be interpreted as 1 and `FALSE` can be interpreted as 0, so you end up doing `9 - 1 = 8`

Question 7 - 1.11 pts

We want to run the following code:

`typeof("integer") ______ "character"`

so that we return a value of TRUE. What do we need to fill in?

So the idea here is that you fill in the blank such that the Boolean expression returns "TRUE" in the console. That means we need a boolean operator like `>`, `<`, `&`, etc. The `typeof()` function returns a character string that describes the type of the argument we pass to it. We want to check if its output is the same as `"character"` so we must therefore use the `==` operator.

```
typeof("integer") == "character"
```

```
TRUE
```

Question 8 - 1.11 pts

True or False: Suppose you enter the following in the console:

```
!FALSE
```

This will return the same result as if you typed in the following in the console:

```
TRUE & FALSE
```

1. True
2. False

Just run them both:

```
!FALSE
```

```
TRUE
```

That makes logical sense (pun intended) since "not false" must be "true". What about the second expression?

```
TRUE & FALSE
```

```
FALSE
```

The two expressions do not return the same value, thus the answer to the question is b, false.

Question 9 - 1.12 pts

They give you this code and ask what the result is, just run it:

```
my_courses <- c("BA 515", "BAAC 551", "BAFI 500")
my_courses[4:5] <- c("BA 520", "BAHR 550")
length(my_courses)
```

```
5
```

The above code will result in:

1. 2
2. 3
3. 4
4. *5*
5. An error