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DataCamp Intro to R Assignment
Analysis of Environmental Data
9/23/2022

Variables

Q1 (1 pt.): What type of data is contained in the variable a?

Character data in R.

Q2 (1 pt.): What type of data is contained in the variable b1?

Numeric data in R.

Q3 (1 pt.): What type of data is contained in the variable b2?

Character data in R.

Q4 (2 pts.): Explain what happens when you try to add b1 and b2 and why.

You cannot add b1 and b2 because one of the variables is character data, not numeric or integer data which is required to do addition.

Q5 (1 pt.): Are the variables b1 and c1 the same type? Why or why not?

Yes, b1 and c1 are the same data type as they are both numeric data.

Q6 (3 pts.): Explain what happens when you add b1 and c1. Consider both the number of elements in each variable and the data types.

The value contained in b1, 45.6, would be added to each of the values in the sequence of numbers from 0 to 3 in variable c1. The result would be 45.6, 46.6, 47.6, 48.6.

Vectors

Q7 (1 pt.): Show the R code you used to create v1.

```
v1 <- c(-2:2)
```

Q8 (1 pt.): Show the R code you used to create v2.

```
v2 <- v1 * 3
```

Q9 (1 pt.): Show the R code you used to calculate the sum of elements in v2.

```
sum(v2)
```

Matrices

Q10 (1 pt.): Show the code you used to create mat_1.

mat_1 <- matrix(data=vec_4, nrow = 3, ncol = 4, byrow = TRUE)

Q11 (1 pt.): Show the code you used to create mat_2.

mat_2 <- matrix(data=vec_4, nrow = 3, ncol = 4, byrow = FALSE)

Lists

Q12 (2 pts.): Show the R code you used to create my_list_1.

my_list_1 <- list(5.2, "five point two", 0:5)

names(my_list_1) <- c("one", "two", "three")

Q13 (1 pt.): Show valid R code that selects the third element of the list.

my_list_1[3]

Q14 (1 pt.): Show the R code that selects the list element with the name "one". Note: there are at least two ways to do this!

my_list_1$"one"

Logical Tests and Subsetting

Q15 (3 pts.): Show the R code that you used to create my_bool_vec.

my_bool_vec <- my_vec ==3

Q16 (2 pts.): Show the R code that you used to subset my_vec using my_bool_vec.

my_vec[my_bool_vec == TRUE]