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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]