R Vectors

Due Sep 24 at 9am **Points** 10 **Questions** 6
Available Sep 10 at 11:30am - Sep 24 at 10am 14 days **Time Limit** None
Allowed Attempts 2

Instructions

This quiz is designed to assess your understanding of **vectors** in R. Some of this material will be (or has been) covered in class.

Before completing this quiz, please read:

(1) Chapter 20 "Vectors" in Hadley Wickham's *R For Data Science* available online at: **http://r4ds.had.co.nz/vectors.html#introduction-13** **(http://r4ds.had.co.nz/vectors.html#introduction-13)** .

(2) Chapters 3 "Vectors" and 4 "Subsetting" in *Advanced R:*

https://adv-r.hadley.nz/vectors-chap.html ***(https://adv-r.hadley.nz/vectors-chap.html)***

https://adv-r.hadley.nz/subsetting.html ***(https://adv-r.hadley.nz/subsetting.html)***

Optionally you may also wish to refer to the following chapters in the (optional) course texts:

The Art of R Programming: Chapter 1, Section 4 and all of Chapter 2.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	19 minutes	9 out of 10

ⓘ Answers will be shown after your last attempt

Score for this attempt: **9** out of 10
Submitted Sep 17 at 11:05am
This attempt took 19 minutes.

Question 1	**1 / 1 pts**

The two key properties that define every vector in R are its type and length. (Hint: type the words exactly, without spaces, and in all lower case.)

Answer 1:

type

Answer 2:

length

Partial

Question 2

4 / 5 pts

Consider the following list:

my_list = list(slot1=4:10, slot2 = c("one","two","three"), slot3 = c(TRUE,FALSE,NA))

Fill in the appropriate **type** for each blank below:

typeof(my_list$slot1) integer

typeof(my_list[["slot2"]]) character

typeof(my_list[["slot3"]]) logical

typeof(my_list["slot1"]) list

typeof("my_list") list

Hint: input the named type exactly without spaces or quotes and entirely in lower case.

Answer 1:

integer

Answer 2:

character

Answer 3:

logical

Answer 4:

list

Answer 5:

list

Question 3

1 / 1 pts

When you attempt to include values of multiple types in a single vector, values of less complex types are coerced to more complex types (see 20.4.1 in the reading).

Experiment in R to determine the relative order from least complex to most complex of the following types (listed here alphabetically): character, double, integer, logical.

Least Complex = logical < integer < double < character = Most Complex

Hint: Input the types exactly without spaces or quotes and using each just once.

Answer 1:

logical

Answer 2:

integer

Answer 3:

double

Answer 4:

character

Question 4

1 / 1 pts

What value will be returned by the second command below:

x = c(7,11,13,19)

sum(x[-1][c(1,3)])

30

Correct: x[-1][c(1,3)] = c(11,19) which sum to 30.

Question 5

1 / 1 pts

When performing binary operations (+, - , * , /, etc.) with R vectors of different lengths, values are recycled. This can cause headaches if you are unaware of it. Keep this in mind while answering the question below.

In R, what is the value of:

{c(-1,1) * 1:10}[9]

-9

Question 6

1 / 1 pts

Which of the objects "key_val" created in each line below is not equivalent to the others?

I. key_val = c("constant" = 8L, "variable" = 9L)

II. key_val = 8:9; attr(key_val, "names") = c("constant", "variable")

III. constant = 8L; variable = 9L; key_val = c("constant", "variable")

IV. key_val = 8:9; names(key_val) = c("constant", "variable")

II

III

Correct! Can you correct this to make it equivalent?

I

IV

Quiz Score: **9** out of 10