

# Exercises-1: Intro to R - indexing

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*07/09/2019*

1. If `x <- c("ww", "ee", "ff", "uu", "kk")`, what will be the output for `x[c(2,3)]`?
  - a. "ee", "ff"
  - b. "ee"
  - c. "ff"
2. If `x <- c("ss", "aa", "ff", "kk", "bb")`, what will be the third value in the index vector operation `x[c(2, 4, 4)]`?
  - a. "uu"
  - b. NA
  - c. "kk"
3. If `x <- c("pp", "aa", "gg", "kk", "bb")`, what will be the fourth value in the index vector operation `x[-2]`?
  - a. "aa"
  - b. "gg"
  - c. "bb"
4. Let `a <- c(2, 4, 6, 8)` and `b <- c(TRUE, FALSE, TRUE, FALSE)`, what will be the output for the R expression `max(a[b])`?
5. Let `a <- c(3, 4, 7, 8)` and `b <- c(TRUE, TRUE, FALSE, FALSE)`, what will be the output for the R expression `sum(a[b])`?
6. Write an R expression that will return the sum value of 10 for the vector `x <- c(2, 1, 4, 2, 1, NA)`.
7. If `x <- c(1, 3, 5, 7, NA)` write an R expression that will return the output 1, 3, 5, 7.
8. Consider the data frame `s <- data.frame(first= as.factor(c("x", "y", "a", "b", "x", "z")), second=c(2, 4, 6, 8, 10, 12))`. Write an R statement that will return the output 2, 4, 10, by using the variable first as an index vector.
9. What will be the output for the R expression `(c(FALSE, TRUE)) || (c(TRUE, TRUE))`?
10. Write an R expression that will return the positions of 3 and 7 in the vector `x <- c(1, 3, 6, 7, 3, 7, 8, 9, 3, 7, 2)`.

[<https://www.r-exercises.com/2015/11/25/logical-vectors-and-operators/>]