Wharton
UNIVERSITY of PENNSYLVANIA

Name_____

Section_____

DEPARTMENT OF STATISTICS
The Wharton School
University of Pennsylvania

Statistics 405/705   Spring 2019

QUIZ #1

Instructions

1. Place your name and section at the top of this page.

2. Keep this side up until you are told to begin.

3. This is a closed-book quiz. You may use a calculator.

4. Circle the single <u>best</u> answer to each question.

5. You will have exactly 10 minutes to complete the quiz.

Letters of the alphabet: `"a"` `"b"` `"c"` `"d"` `"e"` `"f"` `"g"` `"h"` `"i"` `"j"` `"k"` `"l"` `"m"` `"n"` `"o"` `"p"` `"q"` `"r"` `"s"` `"t"` `"u"` `"v"` `"w"` `"x"` `"y"` `"z"`

1. What is the result of applying the `sum` function to the vector `c(7,3,TRUE,FALSE,12)`?
   A. An error.
   B. 22.
   C. 23.
   D. 0.

2. What is the result of evaluating the following code: `c(2,4) + c(1,2,3,4)`?
   A. An error.
   B. `[1] 3,6`
   C. `[1] 3,6,3,4`
   D. `[1] 3,6,5,8`

3. The built in vector "letters" contains the 26 letters of the alphabet in lower case. What does the following code return: `letters[seq(25,5,-5)]`?
   A. `[1] "y" "t" "o" "j" "e"`
   B. `[1] "z" "u" "p" "k" "f"`
   C. `[1] "e" "j" "o" "t" "y"`
   D. None of the above.

4. Here is a list:
   ```
   my.list <- list(x = seq(1:5),
                   y = c("Hello", "Goodbye"),
                   z = list(mu = c(10,5),nu = c(TRUE,FALSE)))
   ```

   What is the result of the code: `max(my.list[[3]][[1]])`?

   A. An error.
   B. `[1] 1`
   C. `[1] 10`
   D. `[1] 5`

5. What is an essential difference between a list and a matrix in R?
   A. Matrices can only store numbers.
   B. Matrices can store more data than lists.
   C. Matrices, unlike lists, can only contain a single data type.
   D. They are effectively identical data containers.