Name_____

Section_____

DEPARTMENT OF STATISTICS
The Wharton School
University of Pennsylvania

Statistics 405/705 Spring 2019

QUIZ #3

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 best answer to each question.
5. You will have exactly 10 minutes to complete the quiz.

1. What is the role of the ellipsis argument (…) in a function's definintion?

   A. To allow a list structure to be returned by the function.
   B. To allow the function to be evaluated in parallel on many different computers.
   C. To allow arguments to be passed down to other functions, that the function itself calls.
   D. To encourage good coding practice, by forcing all arguments to be named.

2. Note that the following simple function does not have a standard `return` statement. What will the function output, when called as `simple.fun(15)`?

```
simple.fun <- function(x = 10){
                  2 * x}
```

   A. 20.
   B. 30.
   C. NA, because there is no return statement.
   D. NA, because the argument value "15" does not match the default value of "10".

3. Which of the following is **not** a standard part of every function in R?

   A. The argument(s).
   B. The environment.
   C. The body.
   D. The sanity checking of argument values.

4. Here is a function. What does the call `my.summary(x = c(1:10))[[2]]` return?

```
my.summary <- function(x){
 the.min <- min(x)
 the.median <- median(x)
 the.max <- max(x)
 return(list(MIN = the.min, MAX = the.max, MED = the.median))
            }
```

   A. NA.
   B. 10.
   C. 5.5.
   D. A list containing a single numeric element, 10.

5. What is the result of the final line of the following R code, in a session in which no other variables or functions have been defined?

```
a <- 10
f1 <- function(x){
    x + a
}

var1 <- f1(x = 5)

a <- 20
var2 <- f1(x = 5) # The same exact code as used to define var1
var1 == var2
```

A. NA.
B. “NO”
C. FALSE
D. TRUE