Test Bank for Statistics for People Who Think They Hate Statistics Using R 1st Edition by Salkind

Statistics for People Who (Think They) Hate Statistics Using R

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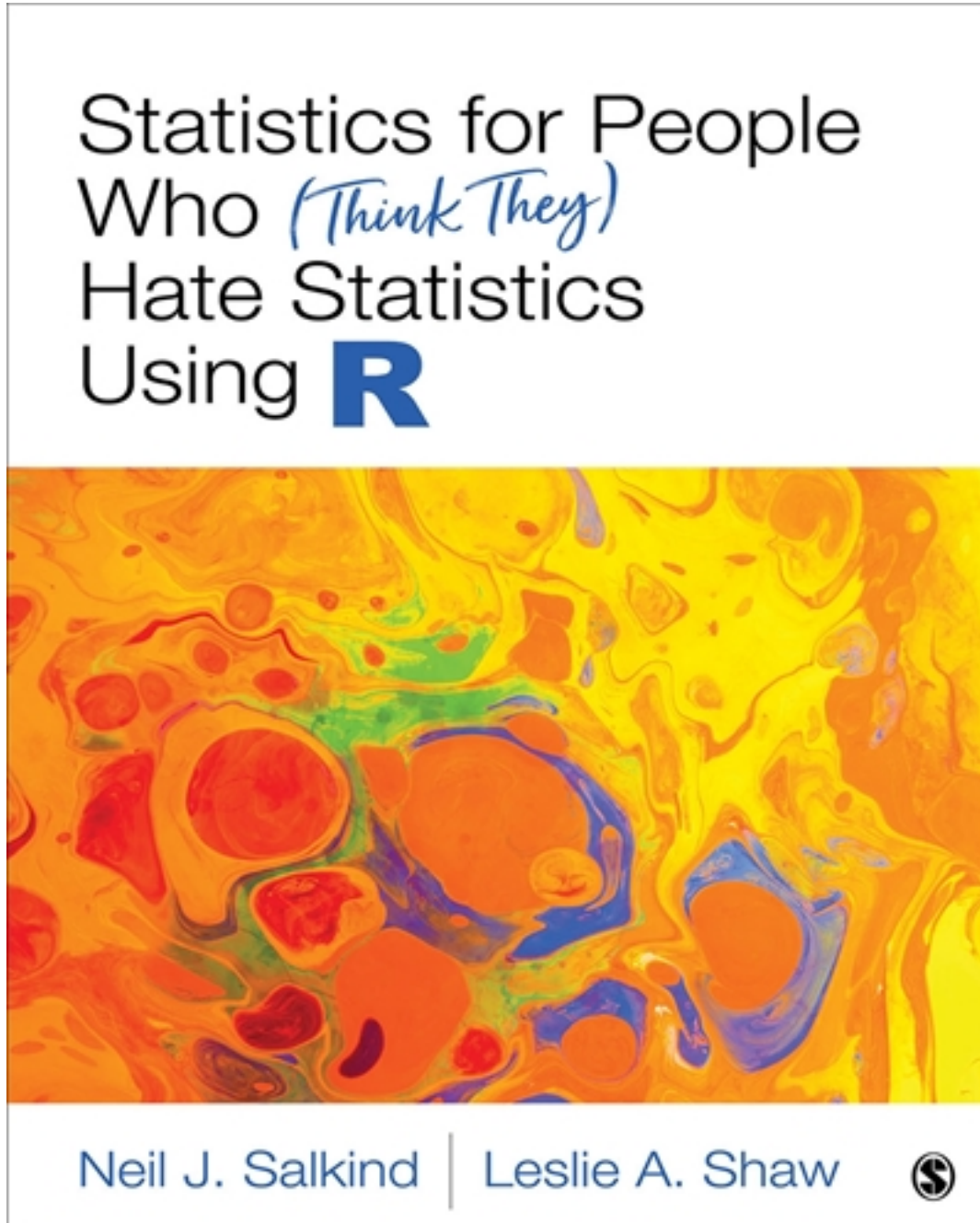
Test Bank

Chapter 2: Here's Why We Love R and How to Get Started

Test Bank

Multiple Choice

1. What is R according to the creators Ross Ihaka and Robert Gentleman?
a. proprietary software
b. a way to compute the mean
c. expensive software
d. a statistical computing language
Ans: D
Learning Objective: 2.1: R came from.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Easy

2. Why is R named R?
a. R is the first letter in each of the first names of the original authors of R.
b. The creators of R liked pirates.
c. R is based on S so they picked a letter near S in the alphabet.
d. The creators randomly chose the letter R.
Ans: A
Learning Objective: 2.1: Understanding what R is and a short history of where R came from.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Easy

3. What is not a plus of using R?
a. free
b. open source
c. can be installed on most any computer
d. help text can be cryptic
Ans: D
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: The Pluses of Using R
Difficulty Level: Easy

4. The R console is _____.
a. the first thing seen when opening R
b. where you can enter R commands

c. where you can find results
d. all of these
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: The Opening R Screen
Difficulty Level: Easy

5. What does GUI stand for?
a. general user intranet
b. general user interface
c. graphical user interface
d. graphic usable interface
Ans: C
Learning Objective: Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: What Is a GUI?
Difficulty Level: Easy

6. A(n) _____ contains a collection of functions and some data for practice.
a. application
b. function
c. package
d. vector
Ans: C
Learning Objective: Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Comprehension
Answer Location: Packages and Functions in R
Difficulty Level: Easy

7. A _____ is a collection of commands that do some work for you.
a. function
b. vector
c. package
d. list
Ans: A
Learning Objective: Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Easy

8. What symbol can you type before a function name to get help?
a. $
b. %
c. *
d. ?

Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Have a Question? Use ?
Difficulty Level: Easy

9. A(n)_____is anything created in R.
a. object
b. vector
c. list
d. data frame
Ans: A
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Easy

10. A(n) _____ is a collection of data that is the same type.
a. object
b. vector
c. list
d. data frame
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Easy

11. `mean()` and `plot()` are examples of_____.
a. objects
b. arguments
c. packages
d. functions
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Easy

12. A(n)_____is what a function acts on.
a. library
b. argument
c. package
d. help
Ans: B
Learning Objective: 2.5: Learn a new language, R

Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Medium

13. A _____ is a collection of information that is arranged in rows and columns.
a. function
b. list
c. vector
d. data frame
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Medium

14. A _____ can contain many different types of objects.
a. function
b. matrix
c. list
d. mean
Ans: C
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Easy

15. What is anything created in R?
a. object
b. vector
c. list
d. data frame
Ans: A
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Easy

16. What is a collection of data that is the same type?
a. object
b. matrix
c. list
d. data frame
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo

Difficulty Level: Easy

17. What are `mean()` and `plot()` are examples of?
a. objects
b. arguments
c. packages
d. functions
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Easy

18. What does a function act on?
a. library
b. argument
c. package
d. help
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Medium

19. What is a collection of information that is arranged in rows and columns?
a. function
b. list
c. vector
d. data frame
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Application
Answer Location: Some Important Lingo
Difficulty Level: Medium

20. What can contain many different types of objects?
a. function
b. matrix
c. list
d. mean
Ans: C
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Easy

21. A list _____.
a. is a collection of information that is arranged in rows and columns
b. is a collection of data that is the same type
c. can contain many different types of objects
d. is anything created in R
Ans: C
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

22. A data frame_____.
a. is a collection of information that is arranged in rows and columns
b. is a collection of data that is the same type
c. can contain many different types of objects
d. is anything created in R
Ans: A
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

23. An object _____.
a. is a collection of information that is arranged in rows and columns
b. is a collection of data that is the same type
c. can contain many different types of objects
d. is anything created in R
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

24. A matrix _____.
a. is a collection of information that is arranged in rows and columns
b. is a collection of data that is a single type
c. can contain many different types of objects
d. is anything created in R
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

25. A package is _____.
a. a collection of R commands to do a single task

b. a collection of functions and some data for practice
c. a help file
d. the output
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Comprehension
Answer Location: Packages and Functions in R
Difficulty Level: Easy

26. What is a function?
a. a collection of commands that do some work for you
b. a collection of help files and data sets
c. an argument
d. the output
Ans: A
Learning Objective: Learning how to use R.
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Easy

27. A '?' placed before a(n) _____ returns help information.
a. argument
b. file
c. object
d. function
Ans: D
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Have a Question? Use?
Difficulty Level: Easy

28. A '??' placed before a word allows you to do this type of search.
a. keyword
b. forward
c. backward
d. function
Ans: A
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Have a Question? Use?
Difficulty Level: Easy

29. What character(s) do you type to run a keyword search of the help files?
a. ?
b. ??
c. *

d. &&
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Have a Question? Use?
Difficulty Level: Medium

30. R as a name stands for what?
a. return
b. R in Ross and Robert
c. range
d. run-away
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Easy

31. R is a _____ computing language.
a. binary
b. interpretative
c. statistical
d. calculating
Ans: C
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Medium

32. R is also referred to as _____.
a. R base
b. range
c. S
d. functions
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Hard

33. What character(s) is the prompt in the R Console window?
a. #
b. ?
c. >
d. ??
Ans: C

Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Instant Startup
Difficulty Level: Medium

34. What are two pluses of using R?
a. free and open source
b. inexpensive and open source
c. free but confusing
d. open source and single platform
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Instant Startup
Difficulty Level: Easy

35. If someone says case matters in R, what do they mean?
a. If the command in an example is in lowercase, the command needs to be entered the same way.
b. If the command in an example is in lower case, it just needs to end in lowercase.
c. If the command in an example is in lowercase, it needs to be entered as uppercase.
d. If the command in an example is in lowercase, the first character should be uppercase and the rest is lowercase.
Ans: A
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: UPPERCASE Is Uppercase and lowercase is lowercase
Difficulty Level: Medium

36. After typing in a command, how do you get R to do something?
a. hold down Ctrl
b. hit Enter or Return, depending on your computer keyboard
c. hit the Shift key
d. hit the space bar
Ans: B
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Enter or Return or Nothing
Difficulty Level: Easy

37. If help text is cryptic, what is the easiest thing can you do to figure out what to do?
a. just start randomly entering commands
b. give up
c. keep reading the help text
d. look at the example
Ans: D

Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: The Minuses of Using R
Difficulty Level: Medium

38. What does open source mean?
a. the source code is locked and you cannot change anything
b. open is the function for reading in source files
c. that means to open R on your computer
d. anyone with an idea of how to improve open source material can do so
Ans: D
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: A Short Note to You (and to Your Instructor) About Open Source
Difficulty Level: Medium

39. What does it mean that R is open source?
a. it is an open programming environment
b. the version of R changes on a regular basis
c. R is free
d. all of these
Ans: D
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: A Short Note to You (and to Your Instructor) About Open Source
Difficulty Level: Medium

40. What is the first thing you see when you open R on your computer?
a. RGui and RConsole
b. RGui
c. R Console
d. a blank screen
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Application
Answer Location: Where to Find and Download R
Difficulty Level: Medium

41. What is the opening screen in the RGui called?
a. menu screen
b. R Console
c. text editor
d. command center
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Application

Answer Location: The Opening R Screen
Difficulty Level: Medium

42. If R returned '[1] 5' after you entered a command, what do 1 and 5 refer to?
a. 1 is the first result and 5 is the second result.
b. 1 is the result from our command and 5 is the line number.
c. 1 is the line number and 5 is the result from our command.
d. 1 is the start of the results and 5 is how many lines of results we should see.
Ans: C
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Application
Answer Location: The Opening R Screen
Difficulty Level: Medium

43. _____ is short-hand for graphical user interface.
a. Windows
b. GUI
c. iPad
d. Android
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: What is a GUI?
Difficulty Level: Medium

44. Assembly language, used in early computers, was represented by _____.
a. 1s or 0s
b. instruction manuals
c. hexadecimal numbers
d. Fortran
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: What is a GUI?
Difficulty Level: Medium

45. How many packages are available in R?
a. 10
b. 87
c. thousands and thousands
d. millions
Ans: C
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Medium

46. _____ contain functions and _____ contain commands.
a. Functions, packages
b. help, packages
c. Packages, functions
d. Functions, libraries
Ans: C
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Medium

47. Functions begin with a directive and _____.
a. ?
b. ()
c. *
d. $
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Application
Answer Location: Packages and Functions in R
Difficulty Level: Hard

48. If you are creating a data set that consists of 20 scores for one variable named time, what is time?
a. a package
b. a help file
c. a function
d. an object
Ans: D
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

49. If you compute the product of 3 times 4 and store the results, what have you created?
a. a function
b. an object
c. a help file
d. a library
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Easy

50. What will R do if you store both numbers and text in a vector?
a. everything will be stored as text
b. numbers will be stored as numbers and text will be stored as text
c. text will be omitted
d. R will return an error message
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

51. What is not an atomic vector type?
a. logical
b. binary
c. integer
d. character
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: ATOMIC Vectors
Difficulty Level: Medium

52. What does the function mean() return?
a. a graph
b. an average of a set of values
c. a count of objects
d. nothing
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

53. What does the function plot() return?
a. count of objects
b. an average of a set of values
c. another function
d. a graph
Ans: D
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

54. In the command mean(x), what is x?

a. an argument
b. a package
c. a file
d. just the letter x
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

55. A data frame is a collection of _____ and _____.
a. rows, columns
b. functions, packages
c. letters, numbers
d. libraries, rows
Ans: A
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

56. A data frames and a _____ can both organize data in rows and columns.
a. vector
b. matrix
c. package
d. function
Ans: B
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Data Frame or Matrix
Difficulty Level: Medium

57. When you download R you get _____.
a. packages and help files
b. data sets
c. data sets, packages, and extensive help
d. an empty working environment
Ans: C
Learning Objective: 2.1: Understanding what R is.
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

58. RStudio is referred to as an IDE, which stands for _____.
a. internet development environment
b. integrated development environment

c. integrated development examination
d. integrated dynamic environment
Ans: B
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Knowledge
Answer Location: RStudio
Difficulty Level: Hard

59. The file menu in RStudio can help _____.
a. save files
b. search your environment
c. get help
d. compile code
Ans: A
Learning Objective: 2.9: Understanding RStudio
Cognitive Domain: Application
Answer Location: File
Difficulty Level: Medium

60. You can do the usual Cut, Copy, and Paste on this RStudio menu: _____.
a. Help
b. File
c. Edit
d. Code
Ans: C
Learning Objective: 2.9: Understanding RStudio
Cognitive Domain: Application
Answer Location: Edit
Difficulty Level: Easy

True/False

1. R is free to install and use.
Ans: T
Learning Objective: 2.2: Understanding the pluses and minuses of using R.
Cognitive Domain: Knowledge
Answer Location: The Pluses of Using R
Difficulty Level: Easy

2. Use uppercase or lowercase letters when entering commands – it doesn't matter.
Ans: F
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: UPPERCASE Is Uppercase and lowercase is lowercase
Difficulty Level: Easy

3. The only way to access help in R is through the Help menu.
Ans: F
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Easy

4. Functions and packages refer to the same thing in R.
Ans: F
Learning Objective: 2.5: Learn a new language, R
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Easy

5. RStudio uses R already installed on the computer.
Ans: T
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Comprehension
Answer Location: RStudio
Difficulty Level: Medium

6. R was the first statistical programming package.
Ans: F
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Easy

7. There is only one way to perform every task in R.
Ans: F
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Knowledge
Answer Location: A Short Note to You (and to Your Instructor) About Open Source
(Again!)
Difficulty Level: Medium

8. R is open source.
Ans: T
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Knowledge
Answer Location: The Pluses of Using R
Difficulty Level: Easy

9. R can work on Windows, Mac, and Linux.
Ans: T
Learning Objective: 2.9: Understanding RStudio.

Cognitive Domain: Comprehension
Answer Location: Other reasons to use R
Difficulty Level: Medium

10. A function is a collection of commands to perform a task.
Ans: T
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Comprehension
Answer Location: Packages and Functions in R
Difficulty Level: Medium

Short Answer

1. Name three of the benefits of using R.
Ans: R is free, produces great graphics, and works on Windows, Mac, and Linux.
Learning Objective: 2.9: Understanding RStudio.
Cognitive Domain: Knowledge
Answer Location: The Pluses of R; Other reasons to use R
Difficulty Level: Medium

2. What is R?
Ans: R is a statistical computing language.
Learning Objective: 2.1: Understanding what R is and a short history of where R came from.
Cognitive Domain: Knowledge
Answer Location: A Very Short History of R
Difficulty Level: Medium

3. When someone says R is open source, what are they referring to?
Ans: Open source means that R is open to change from anyone who wants to change or improve it for future users.
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: A Short Note to You (and to Your Instructor) About Open Source (Again!)
Difficulty Level: Medium

4. What does it mean to say that case matters in R?
Ans: R commands are case sensitive. For example, if a function is called mean, then you need to enter it as mean. Mean, MEAN, or any other variation will return an error message from R.
Learning Objective: 2.2: Understanding the pluses and minuses of using R Cognitive Domain: Knowledge
Answer Location: UPPERCASE Is Uppercase and lowercase is lowercase
Difficulty Level: Medium

5. What does GUI stand for and why is it useful?
Ans: GUI stands for graphical user interface, and GUIs allow users to more easily understand what needs to be done and how.
Learning Objective: 2.1: Understanding what R is and a short history of where R came from.
Cognitive Domain: Knowledge
Answer Location: What is a GUI?
Difficulty Level: Medium

6. What are functions and packages in R?
Ans: Functions are a collection of commands that perform a task. A package is a collection of functions.
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: Packages and Functions in R
Difficulty Level: Hard

7. What are three types of R objects that can store data?
Ans: The simplest object that can store data is a vector, which is typically a collection of letters or numbers. A data frame contains data in columns and rows. A matrix is like a data frame, in that it stores information in rows and columns but they all need to be the same type, like all numbers, all text fields, or all TRUE/FALSE.
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

8. What are R objects and what are 3 different types of objects?
Ans: An R object is anything that is created in R. Three common objects are vectors, data frames, and lists. You can also create objects by storing analysis results, multiplying two numbers and save the result, or storing scores in a variable.
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: Some Important Lingo
Difficulty Level: Medium

9. How can a user of R get help on a function?
Ans: The simplest way to get help is to type '?' before a function name. If you don't know the name of a function, you can type '??' before a word to do a keyword search. You can also go to the Help menu, which gives options such as help on the R Console, a FAQ on R, Manuals, R Functions, and several other help topics. You can also use the function help().
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Knowledge
Answer Location: Using R Help; Getting Help on Help; Have a Question? Use?
Difficulty Level: Medium

10. Describe the elements of the following R commands and output.
> 2 + 3
[1] 5
Ans: The > is the prompt that is always present in the R Console when R is ready to process a new command. The command in this example is compute 2 + 3. The result from that command is shown on the next line. [1] is the line number of result, in this example 1, and 5 is the answer.
Learning Objective: 2.2: Understanding the pluses and minuses of using R
Cognitive Domain: Comprehension
Answer Location: The Opening R Screen
Difficulty Level: Medium