Back

Week 1 Quiz

Quiz, 20 questions

Question 1

1  
point

**1. Question 1**

R was developed by statisticians working at



The University of New South Wales



The University of Auckland



Harvard University



Bell Labs

Question 2

1  
point

**2. Question 2**

The definition of free software consists of four freedoms (freedoms 0 through 3). Which of the following is NOT one of the freedoms that are part of the definition? Select all that apply.



The freedom to sell the software for any price.



The freedom to run the program, for any purpose.



The freedom to redistribute copies so you can help your neighbor.



The freedom to improve the program, and release your improvements to the public, so that the whole community benefits.



The freedom to prevent users from using the software for undesirable purposes.



The freedom to restrict access to the source code for the software.



The freedom to study how the program works, and adapt it to your needs.

Question 3

1  
point

**3. Question 3**

In R the following are all atomic data types EXCEPT: (Select all that apply)



integer



character



array



complex



matrix



table



list



logical



data frame



numeric

Question 4

1  
point

**4. Question 4**

If I execute the expression x <- 4 in R, what is the class of the object `x' as determined by the `class()' function?



complex



numeric



list



integer



real



matrix



vector

Question 5

1  
point

**5. Question 5**

What is the class of the object defined by the expression x <- c(4, "a", TRUE)?



mixed



character



integer



numeric



logical

Question 6

1  
point

**6. Question 6**

If I have two vectors x <- c(1,3, 5) and y <- c(3, 2, 10), what is produced by the expression rbind(x, y)?



a vector of length 3



a 2 by 2 matrix



a 3 by 3 matrix



a 3 by 2 matrix



a matrix with two rows and three columns



a vector of length 2

Question 7

1  
point

**7. Question 7**

A key property of vectors in R is that



a vector cannot have have attributes like dimensions



elements of a vector can only be character or numeric



elements of a vector all must be of the same class



elements of a vector can be of different classes



the length of a vector must be less than 32,768

Question 8

1  
point

**8. Question 8**

Suppose I have a list defined as x <- list(2, "a", "b", TRUE). What does x[[1]] give me? Select all that apply.



a numeric vector containing the element 2.



a list containing the letter "a".



a list containing the number 2.



a numeric vector of length 1.



a character vector containing the element "2".

Question 9

1  
point

**9. Question 9**

Suppose I have a vector x <- 1:4 and y <- 2:3. What is produced by the expression x + y?



a numeric vector with the values 1, 2, 5, 7.



an integer vector with the values 3, 5, 3, 4.



a warning



a numeric vector with the values 3, 5, 3, 4.



an numeric vector with the values 3, 5, 5, 7.



an error.



an integer vector with the values 3, 5, 5, 7.

Question 10

1  
point

**10. Question 10**

Suppose I have a vector x <- c(3, 5, 1, 10, 12, 6) and I want to set all elements of this vector that are less than 6 to be equal to zero. What R code achieves this? Select all that apply.



x[x > 0] <- 6



x[x >= 6] <- 0



x[x %in% 1:5] <- 0



x[x == 0] <- 6



x[x > 6] <- 0



x[x < 6] == 0



x[x < 6] <- 0



x[x == 6] <- 0



x[x <= 5] <- 0



x[x == 0] < 6



x[x != 6] <- 0

Question 11

1  
point

**11. Question 11**

Use the [Week 1 Quiz Data Set](https://d396qusza40orc.cloudfront.net/rprog/data/quiz1_data.zip) to answer questions 11-20.

In the dataset provided for this Quiz, what are the column names of the dataset?



Ozone, Solar.R, Wind



Ozone, Solar.R, Wind, Temp, Month, Day



Month, Day, Temp, Wind



1, 2, 3, 4, 5, 6

Question 12

1  
point

**12. Question 12**

Extract the first 2 rows of the data frame and print them to the console. What does the output look like?





1

2

3

Ozone Solar.R Wind Temp Month Day

1 18 224 13.8 67 9 17

2 NA 258 9.7 81 7 22





1

2

3

Ozone Solar.R Wind Temp Month Day

1 41 190 7.4 67 5 1

2 36 118 8.0 72 5 2





1

2

3

Ozone Solar.R Wind Temp Month Day

1 9 24 10.9 71 9 14

2 18 131 8.0 76 9 29





1

2

3

Ozone Solar.R Wind Temp Month Day

1 7 NA 6.9 74 5 11

2 35 274 10.3 82 7 17

Question 13

1  
point

**13. Question 13**

How many observations (i.e. rows) are in this data frame?



153



45



129



160

Question 14

1  
point

**14. Question 14**

Extract the *last* 2 rows of the data frame and print them to the console. What does the output look like?





1

2

3

Ozone Solar.R Wind Temp Month Day

152 18 131 8.0 76 9 29

153 20 223 11.5 68 9 30





1

2

3

Ozone Solar.R Wind Temp Month Day

152 34 307 12.0 66 5 17

153 13 27 10.3 76 9 18





1

2

3

Ozone Solar.R Wind Temp Month Day

152 31 244 10.9 78 8 19

153 29 127 9.7 82 6 7





1

2

3

Ozone Solar.R Wind Temp Month Day

152 11 44 9.7 62 5 20

153 108 223 8.0 85 7 25

Question 15

1  
point

**15. Question 15**

What is the value of Ozone in the 47th row?



34



21



63



18

Question 16

1  
point

**16. Question 16**

How many missing values are in the Ozone column of this data frame?



37



43



9



78

Question 17

1  
point

**17. Question 17**

What is the mean of the Ozone column in this dataset? Exclude missing values (coded as NA) from this calculation.



31.5



53.2



42.1



18.0

Question 18

1  
point

**18. Question 18**

Extract the subset of rows of the data frame where Ozone values are above 31 and Temp values are above 90. What is the mean of Solar.R in this subset?



185.9



212.8



334.0



205.0

Question 19

1  
point

**19. Question 19**

What is the mean of "Temp" when "Month" is equal to 6?



90.2



75.3



79.1



85.6

Question 20

1  
point

**20. Question 20**

What was the maximum ozone value in the month of May (i.e. Month is equal to 5)?



97



115



100



18

Upgrade to submit