Week 1 Quiz

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Graded Quiz • 30 min

Due Sep 28, 12:59 PM +06

Week 1 Quiz

Total points 20
1.
Question 1

R was developed by statisticians working at

1 point

Johns Hopkins University

The University of Auckland

Microsoft

Harvard University

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.

1 point

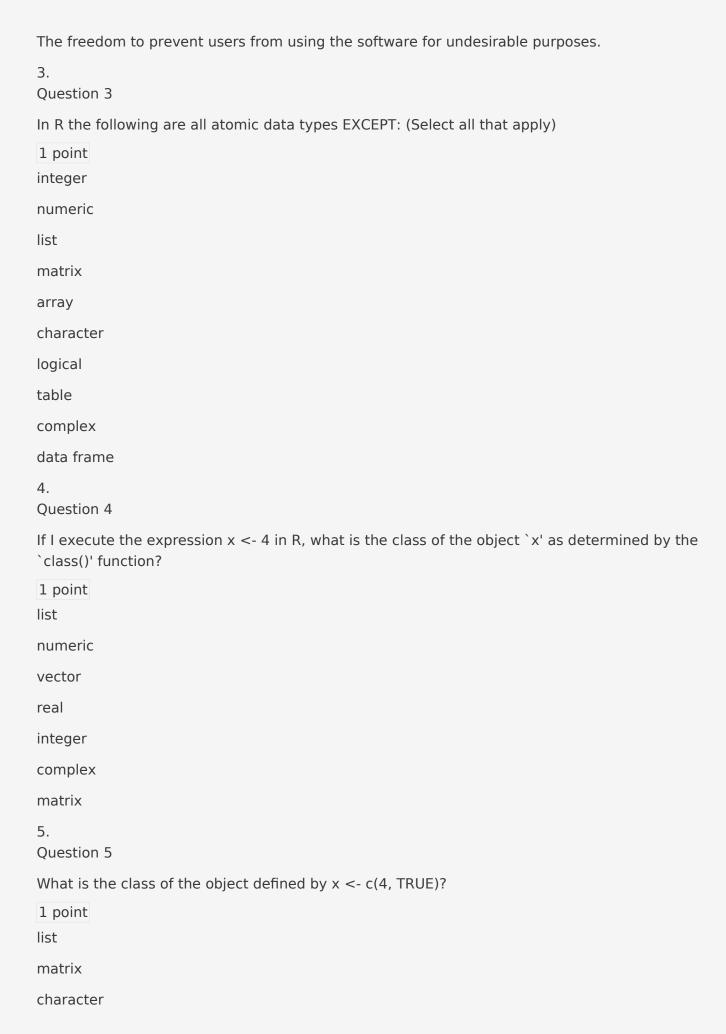The freedom to restrict access to the source code for the software.

The freedom to run the program, for any purpose.

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

The freedom to sell the software for any price.

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.

3.
Question 3

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

1 point

integer

numeric

list

matrix

array

character

logical

table

complex

data frame

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?

1 point

list

numeric

vector

real

integer

complex

matrix

5.
Question 5

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

1 point

list

matrix

character

integer

logical

numeric

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)?

1 point

a 3 by 2 matrix

a vector of length 2

a matrix with two rows and three columns

a 2 by 2 matrix

a 3 by 3 matrix

a vector of length 3

7.
Question 7

A key property of vectors in R is that

1 point

a vector cannot have have attributes like dimensions

elements of a vector can only be character or numeric

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

elements of a vector all must be of the same class

elements of a vector can be of different classes

8.
Question 8

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

1 point

a list containing the number 2 and the letter "a".

a list containing character vector with the letter "a".

a character vector with the elements "a" and "b".

a character vector of length 1.

a character vector containing the letter "a".

9.

Question 9

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

1 point

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

an error.

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

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

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

a warning

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

10.
Question 10

Suppose I have a vector x <- c(17, 14, 4, 5, 13, 12, 10) and I want to set all elements of this vector that are greater than 10 to be equal to 4. What R code achieves this? Select all that apply.

1 point

x[x >= 10] <- 4

x[x >= 11] <- 4

x[x > 4] <- 10

x[x == 4] > 10

x[x > 10] == 4

x[x < 10] <- 4

x[x > 10] <- 4

x[x == 10] <- 4

11.
Question 11

Use the Week 1 Quiz Data Set to answer questions 11-20.

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

1 point

Month, Day, Temp, Wind

Ozone, Solar.R, Wind

1, 2, 3, 4, 5, 6

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

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 point

/textarea>

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

/textarea>

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

/textarea>

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

/textarea>

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

13.
Question 13

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

153

129

160

45

14.
Question 14

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

/textarea>

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

/textarea>

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

/textarea>

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

/textarea>

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

15.
Question 15

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

1 point

34

63

21

18

16.
Question 16

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

1 point

9

37

43

78

17.
Question 17

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

1 point

31.5

42.1

53.2

18.0

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?

1 point

334.0

185.9

205.0

212.8

19.
Question 19

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

1 point

90.2

79.1

85.6

75.3

20.
Question 20

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

1 point

97

18

115

100

Upgrade to submit