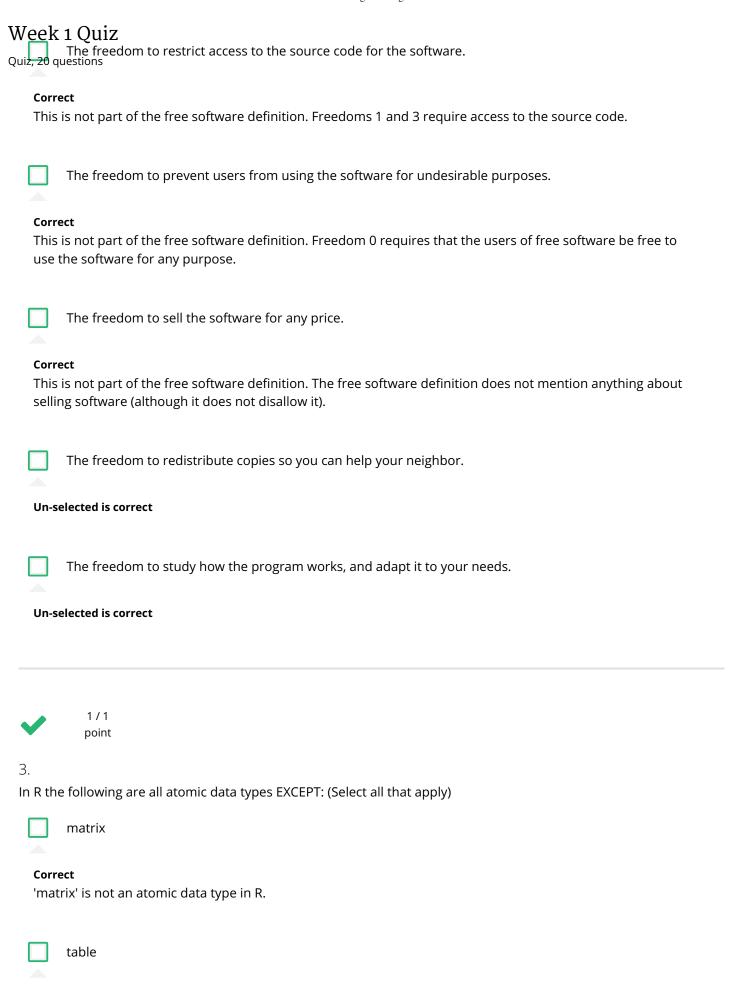
# Week 1 Quiz

Quiz, 20 questions

<b>~</b>	Congratulations! You passed!	Next Item	
<b>~</b>	1 / 1 point		
1. R was	developed by statisticians working at		
	Bell Labs		
	Harvard University		
0	The University of Auckland		
	<b>ect</b> R language was developed by Ross Ihaka and Robert Gentleman who were statis uckland in New Zealand.	sticians at the University	
	StatSci		
<b>~</b>	1/1 point		
	finition of free software consists of four freedoms (freedoms 0 through 3). Which	h of the following is NOT or	ne of
	The freedom to improve the program, and release your improvements to the program, and release your improvements to the program.	oublic, so that the whole	
Un-s	elected is correct		
	The freedom to run the program, for any purpose.		
Un-s	elected is correct		



Correct Weggeli Quizn atomic data type in R.									
Quiz, 20 questions									
array									
Correct									
'array' is not an atomic data type in R.									
numeric									
Un-selected is correct									
integer									
Un-selected is correct									
character									
Un-selected is correct									
complex Un-selected is correct									
On-selected is correct									
logical									
Un-selected is correct									
list									
Correct 'list' is not an atomic data type in R.									
data frame									
<b>Correct</b> 'data frame' is not an atomic data type in R.									

Week 1 Quiz	
Quiz, 20 questions 1	
point	
4.	a class of the chiest 'vi as determined by the 'alega'() from tion?
	e class of the object `x' as determined by the `class()' function?
logical	
complex	
matrix	
numeric	
Character	
integer	
Correct	
The 'L' suffix creates an integer vector as oppos	sed to a numeric vector.
1/1	
point	
5.	
What is the class of the object defined by the exp	ression x <- c(4, "a", TRUE)?
mixed	
numeric	
character	
<b>Correct</b> The character class is the "lowest common den class.	nominator" here and so all elements will be coerced into that
logical	
integer	

Week 1 Quiz											
Quiz, 20 questions											
6. If I have two vectors $x <- c(1,3,5)$ and $y <- c(3,2,10)$ , what is produced by the expression cbind( $x$ , $y$ )?											
a 2 by 2 matrix											
a matrix with 2 columns and 3 rows											
Correct  The lebind! function treats vectors as if they were solumns of a matrix. It then takes these vectors and binds											
The 'cbind' function treats vectors as if they were columns of a matrix. It then takes those vectors and binds them together column-wise to create a matrix.											
a vector of length 3											
a 2 by 3 matrix											
a vector of length 2											
a 3 by 3 matrix											
1/1 point											
7.											
A key property of vectors in R is that											
the length of a vector must be less than 32,768											
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											
Correct											

1/1 point

elements of a vector can be of different classes

8. Week	$\frac{10uiz}{8}$ se I have a list defined as x <- list(2, "a", "b", TRUE). What does x[[2]] give me? Select all that apply.											
Quiz, 20 q	uestions											
	a list containing a character vector with the elements "a" and "b".											
Un-s	Un-selected is correct											
	a character vector containing the letter "a".											
Corr	ect											
	a character vector of length 1.											
	a character vector of length 1.											
Corr	ect											
	a character vector with the elements "a" and "b".											
Un-s	elected is correct											
	a list containing character vector with the letter "a".											
Un-s	elected is correct											
	1/1											
	1 / 1 point											
9.												
	se I have a vector x <- 1:4 and a vector y <- 2. What is produced by the expression x + y?											
	a numeric vector with elements 3, 2, 3, 4.											
	an integer vector with elements 3, 2, 3, 6.											
O	a numeric vector with elements 3, 4, 5, 6.											
Corr	ect											
·												
	an integer vector with elements 3, 2, 3, 4.											

a numeric vector with elements 3, 2, 3, 6.

### Week 1 Quiz

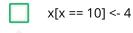
Quiz, 20 questionmeric vector with elements 1, 2, 3, 6.



1/1 point

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.



**Un-selected is correct** 

$$x[x > 10] == 4$$

**Un-selected is correct** 

$$x[x >= 10] <- 4$$

**Un-selected is correct** 

**Un-selected is correct** 

**Un-selected is correct** 

$$x[x > 10] < -4$$

#### Correct

You can create a logical vector with the expression x > 10 and then use the [ operator to subset the original vector x.

$$x[x == 4] > 10$$

## Wellekele Codifizorrect

Quiz, 20 questions



$$x[x >= 11] <- 4$$

#### Correct

You can create a logical vector with the expression  $x \ge 11$  and then use the [ operator to subset the original vector x.



1/1 point

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?



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

#### Correct

You can get the column names of a data frame with the `names()' function.

- Ozone, Solar.R, Wind
- Month, Day, Temp, Wind
- 1, 2, 3, 4, 5, 6



1/1 point

12.

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

	1		0zone	Solar.R	Wind	Temp	Month	Day
_	2	1	9	24	10.9	71	9	14
	3	2	18	131	8.0	76	9	29



#### Correct

You can extract the first two rows using the [ operator and an integer sequence to index the rows.

1 Ozone Solar.R Wind Temp Month Day
2 1 18 224 13.8 67 9 17
3 2 NA 258 9.7 81 7 22



1/1 point

13.

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

- 129
- 160
- 153

#### Correct

You can use the `nrows()' function to compute the number of rows in a data frame.

45



1/1 point

14.

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

1 Ozone Solar.R Wind Temp Month Day
2 152 34 307 12.0 66 5 17
3 153 13 27 10.3 76 9 18



## Week 1 Quiz

Quiz,720eqùeatlohfunction is an easy way to extract the last few elements of an R object.

1		0zone	Solar.R	Wind	Temp	Month	Day
2	152	31	244	10.9	78	8	19
3	153	29	127	9.7	82	6	7

1		0zone	Solar.R	Wind	Temp	Month	Day
2	152	11	44	9.7	62	5	20
3	153	108	223	8.0	85	7	25



1/1 point

15.

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



#### Correct

The single bracket [ operator can be used to extract individual rows of a data frame.

	34
	24







1/1 point

16.

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



37

#### Correct

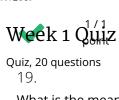
The `is.na' function can be used to test for missing values.

43

# Week 1, Quiz Quiz, 20 questions 9 1/1 point 17. What is the mean of the Ozone column in this dataset? Exclude missing values (coded as NA) from this calculation. 53.2 42.1 Correct The `mean' function can be used to calculate the mean. 31.5 18.0 1/1 point 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? 334.0 185.9 205.0 212.8

#### Correct

You need to construct a logical vector in R to match the question's requirements. Then use that logical vector to subset the data frame.



What is the mean of "Temp" when "Month" is equal to 6? 85.6 75.3 90.2 79.1 Correct 1/1 point 20. What was the maximum ozone value in the month of May (i.e. Month is equal to 5)? 115 Correct 18 97 100

