Recitation 1

1. Using R, how would you calculate the square root of half of the average of the numbers 25.2, 10, 16.44, 17.3, and 18.6?
2. Find log (base e) of 0.3.
3. Create an object (variable) that stores the value 3^2 x 4^(1/8). Then overwrite that value with itself divided by 2.35. Print the result to the console.
4. Create and store a sequence of values from 5 to -15 that progresses in steps of 0.3.
5. Reverse the order of the sequence from (4) and save it to a new variable.
6. Repeat the vector c(-1, 3, -5, 7, -9) ten times and store the result. Display the result sorted from largest to smallest.
7. Find the length of the vector created in (6).
8. Create and store a vector that contains the following in this order: 1) a sequence of length 5 from 3 to 6 inclusive, 2) a two-fold repetition of the vector c(2, -5.1, -43), and 3) the value of 7/24+3.
9. Extract and add the first and last elements of your vector from (9) and store them as a new object.
10. Store as an object the values returned by omitting the first and last values of your vector from (8).
11. Find the formula online for converting degrees Fahrenheit to Celsius. Use a vector to convert the temperatures 45, 77, 20, 101, 120, and 212 in degrees F to C.
12. Construct and store a 4 x 2 matrix that's filled row-wise with the values 4.3, 3.1, 8.2, 3.2, 0.9, 1.6, 5.2, and 6.5, in that order.
13. Confirm that the dimensions of the matrix from (12) are 3 x 2 if you remove any one row.
14. Overwrite the second column of the matrix from (12) with that same column sorted from largest to smallest.
15. What does R return if you delete the fourth row and the first column from (14)?
16. Create and store a three-dimensional array with six layers of a 4 x 2 matrix, filled with a decreasing sequence of values between 4.8 and 0.1 of the appropriate length.