Quiz #1

1. Write simple arithmetic expressions (e.g. addition, subtraction, multiplication and division). Check the type of each expression.
   Output: ## 20.8
   Output: ## [1] "numeric"
   Output: ## 5
   Output: ## [1] "numeric"
   Output: ## 36
   Output: ## [1] "numeric"
   Output: ## 3
   Output: ## [1] "numeric"
2. When you write numbers like 4 and 3, they are interpreted as floating-point numbers. How can you explicitly write simple arithmetic expressions with integer type numbers. Check the type of each expression.
   Output: ## 20
   Output: ##[1] "integer"
   Output: ## 5
   Output: ##[1] "integer"
   Output: ## 36
   Output: ##[1] "integer"
   Output: ## 3
   Output: ##[1] "integer"
3. Write three ways that you would assign the value 2 to the variable x
4. Print directly to the console the following line: “Waxaan ahay arday barta R”
   Output: ## [1] "Waxaan ahay arday barta R"
   Output: ## Waxaan ahay arday barta R
5. Let’s suppose that I have 100 sales in February, 200 sales in March and 50 sales in April, and no other book sales for the rest of the year. Let’s use the sales_by_month vector to store all the sales data from Jan to Dec.
   Output: ## [1] 0 100 200 50 0 0 0 0 0 0 0 0
6. Suppose I want to pull out the February sales data only, how would you do it.
   Output: ## [1] 100
7. Suppose there are actually an additional 25 books sold in May, how would you change only the 5th element of the vector to 25.
   Output: ## [1] 0 100 200 50 25 0 0 0 0 0 0 0
8. Can you use the length() function to know how many elements there are in a vector.
   Output: ## [1] 12
9. Since I’m earning, as an author, an exciting $7 per book, suppose I wanted to figure out how much money I made in each month. How would you calculate this based on previous vector values
   Output: ## [1] 0 700 1400 350 175 0 0 0 0 0 0 0
10. If we were to continue with the previous example at the monthly sales data, how would you create a vector that stores the names of all 12 months.
    Output: ## [1] "January" "February" "March" "April" "May" "June" "July"

[8] "August" "September" "October" "November" "December"

11. Suppose I wanted R to tell me, for each month of the year, whether I actually sold a book in that month
    Output: ## [1] FALSE TRUE TRUE TRUE TRUE FALSE FALSE FALSE FALSE FALSE FALSE
    ## [12] FALSE
12. Suppose I wanted to extract the data for February, March and April
    Output: ## [1] 100 200 50
13. Suppose that I wanted to extract everything from the 2nd month through to the 8th month, write 2 ways that can be used to extract the following output:
    Output: ## [1] 100 200 50 25 0 0 0
14. Create a new list variable called Abdi, which is a bundle of three different variables: age, nerd and parents, the output should be the following:
    ## $age
    [1] 24

    $nerd
    [1] TRUE

    $parents
    [1] "Geedi" "Caasho"
15. Can you extract the variables from the list using the $ operator, e.g, generate the following output:
    ## [1] TRUE
16. Suppose, I was doing a study in which people could belong to one of three different treatment conditions. I might want to have a variable that keeps track of each group of people who are asked to complete the same task. Create a vector variable that stores the printed numeric data. Also, create a factor variable that stores those categorical numerical data. Finally, assign meaningful labels to the different *levels* of the factor.
    Output: ## [1] 1 1 1 2 2 2 3 3 3
    ## [1] group 1 group 1 group 1 group 2 group 2 group 2 group 3 group 3 group 3
    ## Levels: group 1 group 2 group 3