# MAKE SURE TO RE-NAME the file

# Quant\_stats\_HW\_Marc\_Kissel

#

#

# I set this up as a way to make doing the first homework easier

# let me know if something is not clear

#to answer the questions use this format

# for code just type it below the question

# for prose just write out the answer and

# use # to make it a comment

#protip: in a few weeks we will work on ways to do

#this differenly but for now this is the easyiest, but

#not the most simple way...

# # Part 1 ----------------------------------------------------------------

# a.

#to send to the console i can go to the end of

# the line and hit the run button

# b.

9+1

# c.

365 + 1986

# part 2: math --------------------------------------------------------------

#how do you do the following

#a. 3 minus 4

3-4

#b. 7 divided by 10

7/10

#c. 6 times 89

6\*89

#d. 8 raised to the 7th power

8^7

#e.the square root of 52

sqrt(52)

# part 3 Assigning variables --------------------------------------------------

# a. How would you create a name y and assign it the value 334

y<-334

# b. how would you add the x and y together to get the sum of the two numbers?

x+y

# c. how would you create a new variable (z) that stores the result of x +y

z<- x+y

# d. now, change the value of x to be 500 and see what happens when you add x + y together? if you ask for the value of z now what do you get? why?

the z number remains the same, because we have not told code to update it

# e. what are the rules for what the name of an object in R can be? This can be found by searching online or using the R help function

# part 4- Types of data -----------------------------------------------

# a. assign my\_value to be “hello”. then check its class

character

# Part 5: Vectors --------------------------------------------------------

# let’s say you are doing some research and want to record the biological sex of the skeletons in your study. After analyzing them you decide that this is the correct designation

# male male female male female female female

# a. make a new object called my\_study and make it a vector of the recorded biological sex \*\*\* < - this is harder than it might look.

my\_study<- "male, male, female, male, female, female, female"

# b. how would you get the sex of the third skeleton?

my\_study[3

]

# c. can you figure out how, in one line of code, to get the sex of the 1st and 4th skeleton?

names(my\_study) <- c("one", "two", "three", "four", "five", "six", "seven")

# d. print my\_study now and see how it differs.

one two three four five six seven

"male" "male" "female" "male" "female" "female" "female"

#Part 6: matrices -------------------------------------------------------

# a. how would you make a matrix by row rather than column (use Google if need be)

# b. There are others ways to make a matrix look at the code below and figure out how it works

# c. now, create your own matrix with made up data…give the code you used to make this

#Part 7: data frame

# a. run the code below. it should show an error. Why? rewrite the code so it works!

num <- c(1,2,3,4,5)

food <- c("bread", "butter", "milk", "cheese","coffee", "tea")

quantity <- c(1,1,3,5,7,1)

shopping <- data.frame(num, food, quantity)

# b. what is the class type of the different vectors in the my\_sample dataframe?

numeric

# part 8: comparing values ------------------------------------------------

a <- 5

b <- 9

c <- 7

d <- sqrt(49)

# a. is a bigger than b?

no

# b. is c equal to d (careful with this one..)

yes

# c. is c less than or equal to b?

less then

# d. make a new vector called temp with the values of 1,5,7,9,11,14,6,8. then write a single line of code that evaluates if 3 is greater than each of the values in the vector

temp>3

# e. how would you ask R if the 5th value in temp is larger than 5?

temp[5]>5

Part 10: how did you do

1. What the most challenging part of this homework?

The Matricies and Vectors

1. What could be more clear? What info might be helpful to include?

Small shortcuts and commands

1. After sitting with this, do you think you have a better idea of what R is all about?

Yes

1. Probably the most awful thing about R are the *classes*. If you had to explain what a *class* was

how would you do that?

A class is the type of information that is portrayed by the data, ie characters names, sex, numbers

1. Now that we have an idea of how R thinks, next week we are gonna talk a bit about how to store data. Based on what you now know, what might be good practices for recording data on a spreadsheet so that others can use them?

Easy to use shortcuts, to access data quickly.