MRI Lab worksheet

Name:

1 - # Write three to five equations below using any combination of these operators

# and run the code by highlighting & pressing CTRL+ENTER.

2 - # Some functions will have arguments in addition to the data you give them.

# Write a line of code to look up the help (?) for the paste function.

# Then modify the code on line 87 to produce the following output:

# "You.1-Can.7-Even.9-Make.100-A.80-List.280-of.2-strings.59"

# and paste these two lines of code in the worksheet under entry 2.

3 - # Now write two lines of code.

# The first should assign the DNase to a new variable name.

# The second should using the dim() function to check that it is the same size as DNase.

# Paste both the lines into answer #3 on the worksheet.

4 - # Write a line of code that selects the last 5 rows and paste it and

# the output it produces into answer #4 of the worksheet

5 - # And from here I could make it a "good graph" by looking at ?plot

# and filling in the other arguments.

# (assume concentration is in mM and density is in lumens)

# paste your updated code into #5 on the worksheet

6 – # now write a line of code using the dim() function on the T1 variable.

# Paste the output of this code and describe what you think it means in a few sentences in the worksheet #6.

7- # For #7 of the worksheet describe which anatomic planes are displayed

# in the top left, top right and bottom left images. Also what is the

# relationship of the red lines in each image?

8 - # The default placement of the red lines is in the very center of the image

# sagittal, axial and coronal planes. You can determine what the middle

# coordinates of the MRI are by dividing the dimensions of the MRI by two.

# Write one line of code below that returns the three mid points of the MRI

# as a list and paste the code and its output for # 8 on the worksheet:

9 – # Pons

10- # Corpus Callosum

11 - # Left Ventricle

12 - # using the orthographic function view this image.

# If there is anything of note, use the xyz = argument

# to put the cross hairs on it and save a image for worksheet answer 12

13 - # Explore the location of the tumor by changing the xyz = argument

# in the code above. Based on what areas of the brain the tumor has invaded

# hypothesize as to what you think this persons symptoms would be for #13 in the

# work sheet.

14 - # The last part of this lab is for you to make a graph using the data in

# this spread sheet and the barplot() function. You can read about the barplot()

# function using the help command and at the following website:

# https://www.statmethods.net/graphs/bar.html

# Once you have made a graph save it and paste it under answer 14 in the work sheet.

15 - # Then do some research on your own to determine what the brain areas

# damaged by the tumor do and up date what what you think this persons symptoms

# would be now that you have more specific information for # 15. This part can be

# done outside of lab. Email your worksheet to your TA when it is completed.