HW1-Khairiya-Jay

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9/3/2021

1. Use and show R code to evaluate the following expression:[ln(120)]^3 - π

desired\_value <- (log(120))^3-pi  
print(desired\_value)

## [1] 106.5881

1. Use and show R code to round your answer from number 1 to the nearest hundredth.

round(desired\_value, digits = 2)

## [1] 106.59

1. Use and show R code to produce all even integers greater than 7 but less than 101.

seq(8,100,2)

## [1] 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44  
## [20] 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82  
## [39] 84 86 88 90 92 94 96 98 100

1. Use and show R code to find the mean of all positive integers less than 100.

E <- c(0:99)  
mean(E)

## [1] 49.5

1. For the given data set below, Use and show R code to create a vector and assign the vector to variable,{10, 22, 24, 34, 35, 39, 41, 43, 44, 45.5, 47, 51, 53, 54.5, 55, 56.75, 58, 58.3, 59, 59}

q5\_vector <- c(10, 22, 24, 34, 35, 39, 41, 43, 44, 45.5, 47, 51, 53, 54.5, 55, 56.75, 58, 58.3, 59, 59)

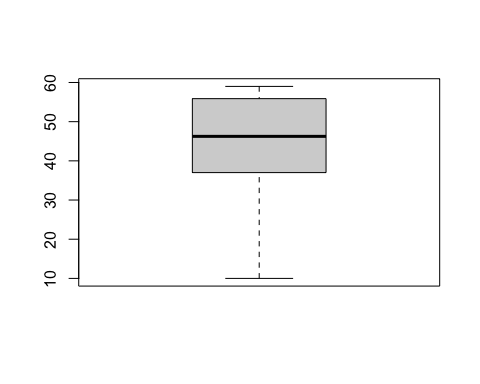
5a) Use and show R code to find the median for the data set.

median(q5\_vector)

## [1] 46.25

5b) Use and show R code to produce a boxplot for the data set.

boxplot(q5\_vector)

 5c) Use and show R code to find the mean, median, maximum, minimum, 1stquartile and the 3rd quartile for the data set.

summary(q5\_vector)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 10.00 38.00 46.25 44.45 55.44 59.00

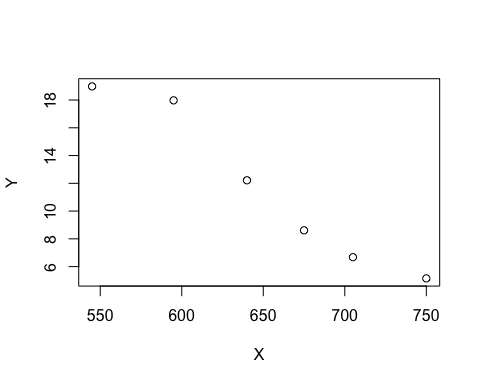
5d) Use and show R code to produce a histogram.

hist(q5\_vector)

 Data is skewed to the left.

6 Use and show R code to produce a scatter plot for the following bivariable data set.  
Let Credit Score be the independent values x and Interest Rate be the dependent values y.

X <- c(545,595,640,675,705,750)  
Y <- c(18.982,17.976,12.218,8.612,6.680,5.150)  
  
plot(X,Y)

 Does your scatter plot suggest a positive or a negative association between the variables? It suggests a negative association.