**Homework Submission Sample**

R Code – unexecuted

# ---------- HW1: Intro -----------

# create a vector "height" containing numbers

height <- c(59,60,61,58,67,72,70)

# create a vector "weight" containing numbers

weight <- c(150,140,180,220,160,140,130)

# define a variable a (a = 150)

a <- 150

# ---------------------------------

# Step 1: Calculating means

# compute, using R, the average(mean) height

mean(height) #Mean of height

# compute, using R, the average(mean) weight

mean(weight) #Mean of weight

# calculate the length of the vector height (the number of elements inside the vector)

length(height) #Length of weight

lengthheight <- length(height) #Assign length(height) to lengthheight

# calculate the length of the vector weight (the number of elements inside the vector)

length(weight) #Length of height

lengthweight <- length(weight) #Assign length(weight) to lengthweight

# calculate the sum of the heights

sum(height) #Sum of height

# compute the average height by dividing the sum by the length of the vector

sumheight/sum(lengthheight) #Average of height using Sum/Length

# compute the average weight by dividing the sum by the length of the vector

sumweight/sum(lengthweight) #Average of weight using Sum/Length

# ---------------------------------

# Step 2: Using max/min functions

# compute the max height, store the result in maxH

max(height) #Max of height

# compute the min weight, store the results in minW

min(weight) #Min of weight

# ---------------------------------

# Step 3: Vector Math

# create a new vector, which is the weight + 5 (every person gained 5 pounds)

weight5<-c(150,140,180,220,160,140,130)+5 #Assign new Vector to weight5- Weight + 5 pounds

# compute the pounds/inch for each person, using the new weight just created

(weight5)/(height) #New Weight/Height for each person using weight+5

# ---------------------------------

# Step 4: Using Conditional if statements

# test if max height is greater than 60 (output âyesâ or ânoâ)

if (maxH > 60) "yes" else "no" #Test max height vs 60

# test if min weight is greater than the variable âaâ (output âyesâ or ânoâ)

if (minW > a) "yes" else "no" #Test min weight vs assignment of "a"

Console log w/plot

Executed code

> #

> # HW1 Jake Dineen

> height <- c(59,60,61,58,67,72,70) #Assign Values to height

> weight <- c(150,140,180,220,160,140,130) #Assign Values to weight

> a <- 150 #Assign Value to a

>

> mean(height) #Mean of height

[1] 63.85714

> mean(weight) #Mean of weight

[1] 160

>

> length(weight) #Length of height

[1] 7

> length(height) #Length of weight

[1] 7

> lengthweight <- length(weight) #Assign length(weight) to lengthweight

> lengthheight <- length(height) #Assign length(height) to lengthheight

>

>

> sum(height) #Sum of height

[1] 447

> sum(weight) #Sum of weight

[1] 1120

> sumheight <- sum(height) #Assign sum(height) to sumheight

> sumweight <- sum(weight) #Assign sum(weight) to sumweight

>

> sumheight/sum(lengthheight) #Average of height using Sum/Length

[1] 63.85714

> sumweight/sum(lengthweight) #Average of weight using Sum/Length

[1] 160

>

> max(height) #Max of height

[1] 72

> maxH <- max(height) #Assign min(height) to maxheight

>

> min(weight) #Min of weight

[1] 130

> minW <- min(weight) #Assign min(weight) to minweight

>

> weight5<-c(150,140,180,220,160,140,130)+5 #Assign new Vector to weight5- Weight + 5 pounds

> (weight5)/(height) #New Weight/Height for each person using weight+5

[1] 2.627119 2.416667 3.032787 3.879310 2.462687 2.013889 1.928571

>

> if (maxH > 60) "yes" else "no" #Test max height vs 60

[1] "yes"

> if (minW > a) "yes" else "no" #Test min weight vs assignment of "a"

[1] "no"

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| --- |
|  |
| |  | | --- | |  | |

Unexecuted:

#

# HW1 Jake Dineen

height <- c(59,60,61,58,67,72,70) #Assign Values to height

weight <- c(150,140,180,220,160,140,130) #Assign Values to weight

a <- 150 #Assign Value to a

mean(height) #Mean of height

mean(weight) #Mean of weight

length(weight) #Length of height

length(height) #Length of weight

lengthweight <- length(weight) #Assign length(weight) to lengthweight

lengthheight <- length(height) #Assign length(height) to lengthheight

sum(height) #Sum of height

sum(weight) #Sum of weight

sumheight <- sum(height) #Assign sum(height) to sumheight

sumweight <- sum(weight) #Assign sum(weight) to sumweight

sumheight/sum(lengthheight) #Average of height using Sum/Length

sumweight/sum(lengthweight) #Average of weight using Sum/Length

max(height) #Max of height

maxH <- max(height) #Assign min(height) to maxheight

min(weight) #Min of weight

minW <- min(weight) #Assign min(weight) to minweight

weight5<-c(150,140,180,220,160,140,130)+5 #Assign new Vector to weight5- Weight + 5 pounds

(weight5)/(height) #New Weight/Height for each person using weight+5

if (maxH > 60) "yes" else "no" #Test max height vs 60

if (minW > a) "yes" else "no" #Test min weight vs assignment of "a"