**##Question1**

##(a)

scores <- c(58, 46, 50, 90, 42, 52, 62, 44, 96, 92, 54, 82)

scores

##(b)

n <- length(scores)

n

##(c)

first\_and\_second <- scores[1:2]

first\_and\_second

##(d)

first\_and\_last <- scores[c(1,length(scores))]

first\_and\_last

##(e)

middle\_two <- scores[c(6,7)]

middle\_two

##Q2

##(a)

median\_score <- median(scores)

median\_score

##(b)

below\_median <- scores <= median\_score

below\_median

##(c)

above\_median <- scores > median\_score

above\_median

##(d)

count\_below\_median <- sum(below\_median)

count\_below\_median

##(e)

count\_above\_median <- sum(above\_median)

count\_above\_median

##Q3

##(a)

scores\_below\_median <- scores[below\_median == "TRUE"]

scores\_below\_median

##(b)

scores\_above\_median <- scores[above\_median == "TRUE"]

scores\_above\_median

##Question4

##(a)

odd\_index\_values <- scores[seq(1, length(scores), 2)]

odd\_index\_values

##(b)

even\_index\_values <- scores[seq(0,length(scores), 2)]

even\_index\_values

##Question5

##(a)

format\_scores\_version1 <- paste(LETTERS[0:length(scores)],scores,sep = "=")

format\_scores\_version1

##(b)

format\_scores\_version2 <- paste(LETTERS[length(scores):0], scores, sep = "=")

format\_scores\_version2

##Question6

##(a)

scores\_matrix <- matrix(scores, nrow = 2, ncol = 6, byrow = TRUE, dimnames = NULL)

scores\_matrix

##(b)

first\_and\_last\_version1 <- scores\_matrix[,c(1,6)]

first\_and\_last\_version1

##Q7

##(a)

named\_matrix <- scores\_matrix

rownames(named\_matrix) <- rownames(named\_matrix, do.NULL = FALSE, prefix = "Quiz\_")

colnames(named\_matrix) <- colnames(named\_matrix, do.NULL = FALSE, prefix = "Student\_")

named\_matrix

##(b)

first\_and\_last\_version2 <- named\_matrix[,c(1,ncol(named\_matrix))]

first\_and\_last\_version2

Console output

> ##Question1

> ##(a)

> scores <- c(58, 46, 50, 90, 42, 52, 62, 44, 96, 92, 54, 82)

> scores

[1] 58 46 50 90 42 52 62 44 96 92 54 82

> ##(b)

> n <- length(scores)

> n

[1] 12

> ##(c)

> first\_and\_second <- scores[1:2]

> first\_and\_second

[1] 58 46

> ##(d)

> first\_and\_last <- scores[c(1,length(scores))]

> first\_and\_last

[1] 58 82

> ##(e)

> middle\_two <- scores[c(6,7)]

> middle\_two

[1] 52 62

> ##Question2

> ##(a)

> median\_score <- median(scores)

> median\_score

[1] 56

> ##(b)

> below\_median <- scores <= median\_score

> below\_median

[1] FALSE TRUE TRUE FALSE TRUE TRUE FALSE TRUE FALSE FALSE TRUE FALSE

> ##(c)

> above\_median <- scores > median\_score

> above\_median

[1] TRUE FALSE FALSE TRUE FALSE FALSE TRUE FALSE TRUE TRUE FALSE TRUE

> ##(d)

> count\_below\_median <- sum(below\_median)

> count\_below\_median

[1] 6

> ##(e)

> count\_above\_median <- sum(above\_median)

> count\_above\_median

[1] 6

> ##Question3

> ##(a)

> scores\_below\_median <- scores[below\_median == "TRUE"]

> scores\_below\_median

[1] 46 50 42 52 44 54

> ##(b)

> scores\_above\_median <- scores[above\_median == "TRUE"]

> scores\_above\_median

[1] 58 90 62 96 92 82

> ##Question4

> ##(a)

> odd\_index\_values <- scores[seq(1, length(scores), 2)]

> odd\_index\_values

[1] 58 50 42 62 96 54

> ##(b)

> even\_index\_values <- scores[seq(0, length(scores), 2)]

> even\_index\_values

[1] 46 90 52 44 92 82

> ##Question5

> ##(a)

> format\_scores\_version1 <- paste(LETTERS[0:length(scores)],scores,sep = "=")

> format\_scores\_version1

[1] "A=58" "B=46" "C=50" "D=90" "E=42" "F=52" "G=62" "H=44" "I=96" "J=92" "K=54" "L=82"

> ##(b)

> format\_scores\_version2 <- paste(LETTERS[length(scores):0], scores, sep = "=")

> format\_scores\_version2

[1] "L=58" "K=46" "J=50" "I=90" "H=42" "G=52" "F=62" "E=44" "D=96" "C=92" "B=54" "A=82"

> ##Question6

> ##(a)

> scores\_matrix <- matrix(scores, nrow = 2, ncol = 6, byrow = TRUE, dimnames = NULL)

> scores\_matrix

[,1] [,2] [,3] [,4] [,5] [,6]

[1,] 58 46 50 90 42 52

[2,] 62 44 96 92 54 82

> ##(b)

> first\_and\_last\_version1 <- scores\_matrix[,c(1,6)]

> first\_and\_last\_version1

[,1] [,2]

[1,] 58 52

[2,] 62 82

> ##Question7

> ##(a)

> named\_matrix <- scores\_matrix

> rownames(named\_matrix) <- rownames(named\_matrix, do.NULL = FALSE, prefix = "Quiz\_")

> colnames(named\_matrix) <- colnames(named\_matrix, do.NULL = FALSE, prefix = "Student\_")

> named\_matrix

Student\_1 Student\_2 Student\_3 Student\_4 Student\_5 Student\_6

Quiz\_1 58 46 50 90 42 52

Quiz\_2 62 44 96 92 54 82

> ##(b)

> first\_and\_last\_version2 <- named\_matrix[,c(1,ncol(named\_matrix))]

> first\_and\_last\_version2

Student\_1 Student\_6

Quiz\_1 58 52

Quiz\_2 62 82