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Batch: Big Data & Data science Weekend Batch

Structure of Assignment:

Please find below the answers of the assignment. The answer contains 2 parts, R-Script & Output for the same.

Assignment Starts here:

**Answer 1:**

Valid: Sum, this\_is\_acceptable, Number5

Invalid: “total,”, .fine.with.dot, tot@l, 5um, \_fine,,TRUE,.One,

**Answer 2:**

**R Script:**

r <- 27

A= pi\*r\*r

B= pi\*r^2

**Output:**

> A

[1] 2290.221

> B

[1] 2290.221

>

**Answer 3:**

**R commands**

b= 12

c = -12

a= b+c

**Output**:

> a

[1] 0

>

**Answer 4:**

S= TRUE

a = !S

**Output**:

> a

[1] FALSE

>

**Answer 5:**

a=15

b=4

c=a/b

d=a%%b

**Output**:

> c

[1] 3.75

> d

[1] 3

**Answer 6:**

x= T

y =F

z=T

x&y

x&z

x|y

x|z

!x & y

**Output**:

> x&y

[1] FALSE

> x&z

[1] TRUE

> x|y

[1] TRUE

> x|z

[1] TRUE

> !x & y

[1] FALSE

**Answer 7:**

xmat <- matrix (1:12, nrow =3, ncol= 4, dimnames = )

dimnames(xmat) <-list(letters[1:3],letters[1:4])

xx <-cbind(xmat,xmat)

xxx <-rbind(xmat,xmat)

rbind (xx,xxx)

**Output**:

> xmat

a b c d

a 1 4 7 10

b 2 5 8 11

c 3 6 9 12

> xx

a b c d a b c d

a 1 4 7 10 1 4 7 10

b 2 5 8 11 2 5 8 11

c 3 6 9 12 3 6 9 12

> xxx

a b c d

a 1 4 7 10

b 2 5 8 11

c 3 6 9 12

a 1 4 7 10

b 2 5 8 11

c 3 6 9 12

**Answer 8:**

> x <- c(1:10)

> names (x) <- letters[x]

> x

a b c d e f g h i j

1 2 3 4 5 6 7 8 9 10

> x[1:3]

a b c

1 2 3

> x[c(1:10)]

a b c d e f g h i j

1 2 3 4 5 6 7 8 9 10

> x[c(1,10)]

a j

1 10

> x[c(-1,-2)]

c d e f g h i j

3 4 5 6 7 8 9 10

> x[x>5]

f g h i j

6 7 8 9 10

> x[c("a","d")]

a d

1 4

> x[]

a b c d e f g h i j

1 2 3 4 5 6 7 8 9 10

> jj1 <- matrix(1:100, ncol = 10)

> jj1

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10]

[1,] 1 11 21 31 41 51 61 71 81 91

[2,] 2 12 22 32 42 52 62 72 82 92

[3,] 3 13 23 33 43 53 63 73 83 93

[4,] 4 14 24 34 44 54 64 74 84 94

[5,] 5 15 25 35 45 55 65 75 85 95

[6,] 6 16 26 36 46 56 66 76 86 96

[7,] 7 17 27 37 47 57 67 77 87 97

[8,] 8 18 28 38 48 58 68 78 88 98

[9,] 9 19 29 39 49 59 69 79 89 99

[10,] 10 20 30 40 50 60 70 80 90 100

> jj1[1:5,]

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10]

[1,] 1 11 21 31 41 51 61 71 81 91

[2,] 2 12 22 32 42 52 62 72 82 92

[3,] 3 13 23 33 43 53 63 73 83 93

[4,] 4 14 24 34 44 54 64 74 84 94

[5,] 5 15 25 35 45 55 65 75 85 95

> jj1[1:4,x[x<3]]

[,1] [,2]

[1,] 1 11

[2,] 2 12

[3,] 3 13

[4,] 4 14

**Answer 9:**

> xmat <- matrix(1:10, ncol= 2)

> xmat+1

[,1] [,2]

[1,] 2 7

[2,] 3 8

[3,] 4 9

[4,] 5 10

[5,] 6 11

> xmat +xmat

[,1] [,2]

[1,] 2 12

[2,] 4 14

[3,] 6 16

[4,] 8 18

[5,] 10 20

> xmat %\*%t(xmat)

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

[1,] 37 44 51 58 65

[2,] 44 53 62 71 80

[3,] 51 62 73 84 95

[4,] 58 71 84 97 110

[5,] 65 80 95 110 125