

Unit 2 - Week 1

Course outline
How does an NPTEL online course work?
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Assignment 1

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-04, 23:59 IST.

- 1) The correct command to load the library `splines` in R console is 1 point
- `library(splines)`
 `Library("splines")`
 `load.library(splines)`
 `library.load("splines")`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `library(splines)`
- 2) The output of the R command `c(3,1,3,1)**c(2,3,1,2)` is 1 point
- `6 3 3 2`
 `9 1 3 1`
 `8 3 1 2`
 `6 3 3 2 6 3 3 2`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `9 1 3 1`
- 3) The output of the R command `(c(3,2,3,2)**c(2,3,1,3))^c(2,1,2,3)*c(2,3,3,2)` is 1 point
- `24 18 18 36`
 `36 24 18 48`
 `72 18 27 432`
 `162 24 27 1024`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `162 24 27 1024`
- 4) The output of the R command `max(c(5,2,3,4))*min(c(-5,-2,-3,-4))` is 1 point
- `-25`
 `25`
 `0.00032`
 `-25 -4 -9 -16`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `0.00032`
- 5) The output of the R command `(min(c(4,3,2,1))-max(c(-1,-2,-3,-4)))*c(-1,-2,3,4)` is 1 point
- `0 0 0 0`
 `1 1 1 1`
 `-2 -4 6 8`
 `0.50 0.25 8.00 16.00`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `-2 -4 6 8`
- 6) The output of the R command `(sqrt(c(4,9,16,36))+abs(c(-6,-4,4,6)))**2` is 1 point
- `64 49 64 144`
 `16 14 16 24`
 `Error`
 `NA NA NA NA`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `64 49 64 144`
- 7) The output of the R command `sqrt(c(36,16,9,4)) - abs(c(-6,-4,3,2))/sqrt(c(36,9,16,4)) - abs(c(2,3,-4,-6))*sqrt(c(9,16,4,36)) + abs(c(-6,-4,3,2))` is 1 point
- `5.000000 -5.333333 -2.750000 -33.000000`
 `7.000000 -2.666667 -1.250000 -31.000000`
 `19.000000 21.333333 14.750000 41.000000`
 `NA NA NA NA`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `5.000000 -5.333333 -2.750000 -33.000000`
- 8) If `x` is a matrix specified by the R command `x = matrix(nrow=2, ncol=2, data=c(-3,-4,-5,-6))`, then the output of R command `t(x)` is 1 point
- ```

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

```

```

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

```

```

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

```

```

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

```
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: 

```

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

```
- 9) If `x` is a matrix specified by the R command `x = matrix(nrow=3, ncol=3, data=c(1,8,10,12,4,12,18,16))`, `byrow=TRUE`, then the output of the R command `t(x)-3*t(x)+2*t(x)%*t(x)` is 1 point
- ```

      [,1] [,2] [,3]
[1,]   4  40  48
[2,]  32  48  72
[3,]  32  16  64
    
```

```

      [,1] [,2] [,3]
[1,]  -2 -20 -24
[2,] -16 -24 -36
[3,] -16  -8 -32
    
```

```

      [,1] [,2] [,3]
[1,]   4  40  48
[2,]  32  48  72
[3,]  32  16  64
    
```

```

      [,1] [,2] [,3]
[1,]  -2 -20 -24
[2,]  32  48  72
[3,]  24  12  48
    
```
- No, the answer is incorrect.
Score: 0
Accepted Answers:

```

      [,1] [,2] [,3]
[1,]  -2 -20 -24
[2,] -16 -24 -36
[3,] -16  -8 -32
    
```
- 10) If `x` is a matrix specified by the R command `x = matrix(nrow=3, ncol=3, data=1:9, byrow=T)`, then the outputs of the R command `x[1:2,2:3]` and `x[3,]` are 1 point
- ```

 [,1] [,2]
[1,] 2 3
[2,] 5 6
and 7 8 9 respectively.

```

```

 [,1] [,2]
[1,] 2 3
[2,] 5 6
and 3 6 9 respectively.

```

```

 [,1] [,2]
[1,] 2 5
[2,] 3 6
and 7 8 9 respectively.

```

```

 [,1] [,2]
[1,] 2 5
[2,] 3 6
and 3 6 9 respectively.

```
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: 

```

 [,1] [,2]
[1,] 2 3
[2,] 5 6
and 7 8 9 respectively.

```
- 11) If `x=matrix(nrow = 4, ncol = 4, data = 2*c(1,0,0,0,0,1,0,0,0,0,1,0,0,0,1))` then which one of the following relation specified by the R command holds true? 1 point
- `x%*%x=x`  
 `x%*%x-x=x`  
 `x*4=4*x`  
 `2x%*%x=2x`
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: `x%*%x-x=x`
- 12) The outcome of the following set of commands is 1 point
- ```

x = matrix(nrow=2, ncol=4, data=c(11,12,13,14,15,16,17,18))
y=8-2*x
y[2,3]
    
```
- `-24`
 `-22`
 `15`
 `16`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `-24`
- 13) The outcome of the R command `c(2,4,3,5)^c(3,2,1)` is 1 point
- `8 16 3 125`
 `8 16 3 125` with a warning message
 `6 8 3 15` with a warning message
 `6 8 3 15`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `8 16 3 125 with a warning message`
- 14) The outcome of the R command `c(3,4,5,6,7,8)**c(1,2,3) - (c(1,2,3,4,5,6)^c(2,3,1))**2` is 1 point
- `1 0 119 -26 -201 500` without a warning message
 `1 0 119 -26 -201 500` with a warning message
 `2 -48 116 -250 -15576 476` without a warning message
 `2 -48 116 -250 -15576 476` with a warning message
- No, the answer is incorrect.
Score: 0
Accepted Answers: `2 -48 116 -250 -15576 476 without a warning message`
- 15) The outcome of the R command `(c(5,4,3,2,1) * 8/2)**2` is 1 point
- `400 256 144 64 16`
 `40 32 24 16 8`
 `NA NA NA NA NA`
 `Error`
- No, the answer is incorrect.
Score: 0
Accepted Answers: `400 256 144 64 16`