

Sri Lanka Institute of Information Technology



Lab Submission
<Lab Sheet 07>

<IT24104049>

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IT2120- Probability and Statistics

B.Sc. (Hons) in Information Technology

1)



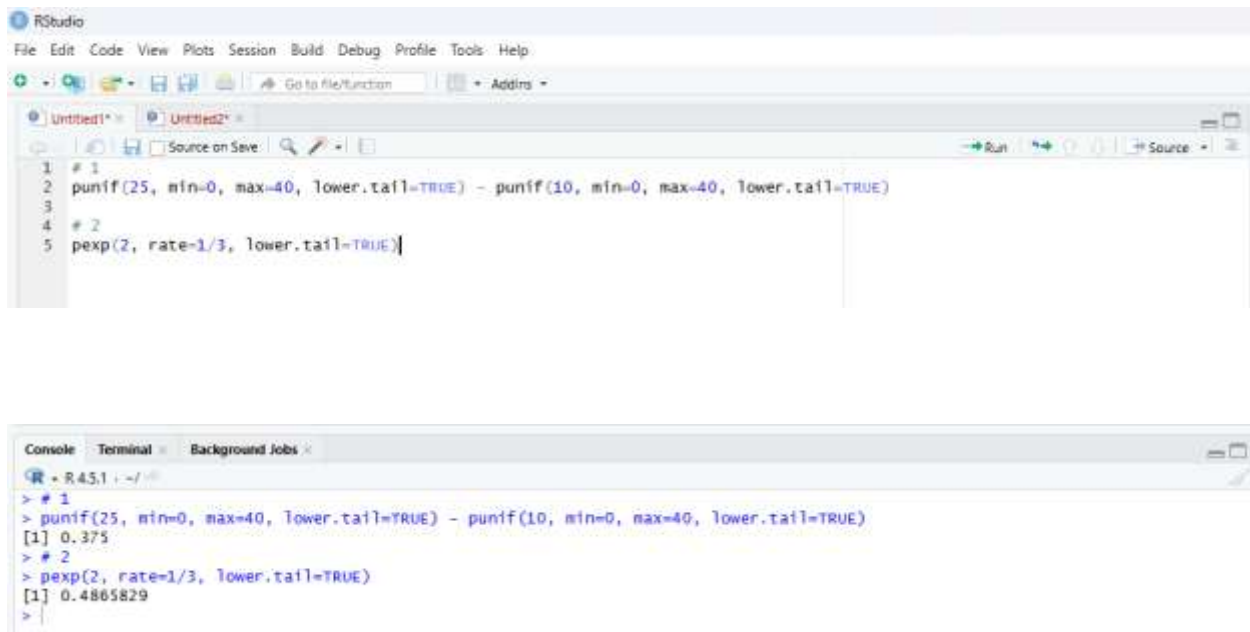
The image shows the RStudio interface. The top pane contains a script with the following code:

```
1 # 1
2 punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
3
4
```

The bottom pane shows the console output:

```
R - R 4.5.1 - ~/
> # 1
> punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
[1] 0.375
>
```

2)



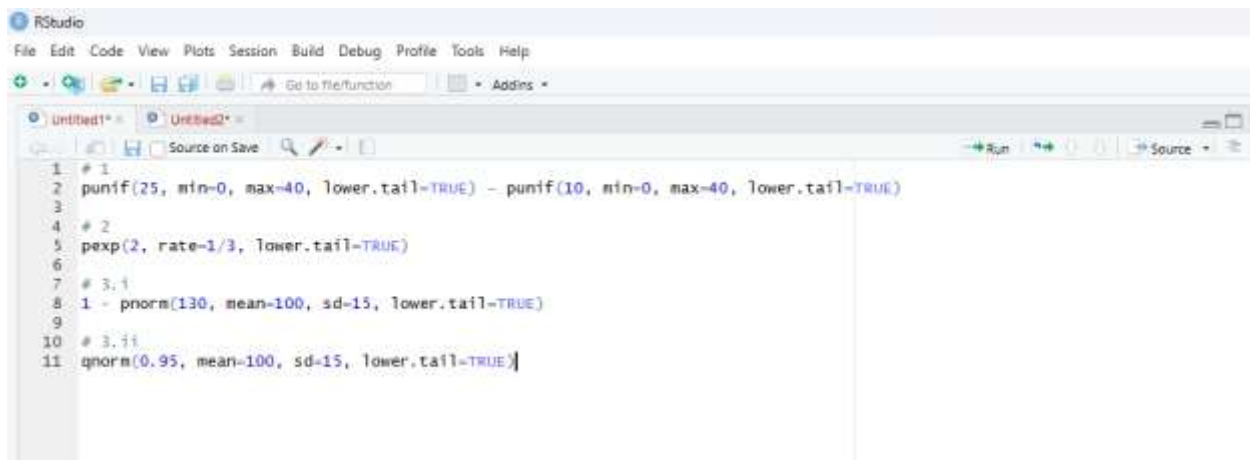
The image shows the RStudio interface. The top pane contains a script with the following code:

```
1 # 1
2 punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
3
4 # 2
5 pexp(2, rate=1/3, lower.tail=TRUE)
```

The bottom pane shows the console output:

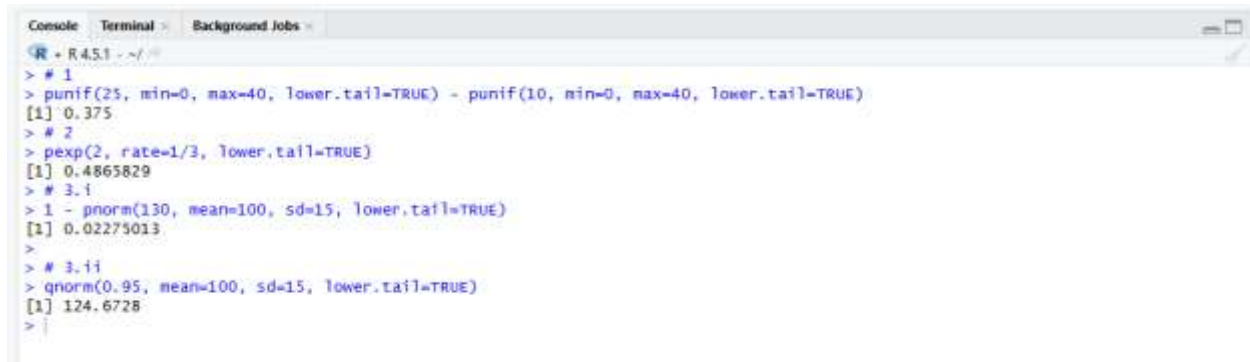
```
R - R 4.5.1 - ~/
> # 1
> punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
[1] 0.375
> # 2
> pexp(2, rate=1/3, lower.tail=TRUE)
[1] 0.4865829
>
```

3)



The image shows the RStudio editor window with a script titled 'Untitled1'. The script contains the following R code:

```
1 # 1
2 punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
3
4 # 2
5 pexp(2, rate=1/3, lower.tail=TRUE)
6
7 # 3.i
8 1 - pnorm(130, mean=100, sd=15, lower.tail=TRUE)
9
10 # 3.ii
11 qnorm(0.95, mean=100, sd=15, lower.tail=TRUE)
```



The image shows the RStudio console window with the following output:

```
R + R4.5.1 ~ /
> # 1
> punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
[1] 0.375
> # 2
> pexp(2, rate=1/3, lower.tail=TRUE)
[1] 0.4865829
> # 3.i
> 1 - pnorm(130, mean=100, sd=15, lower.tail=TRUE)
[1] 0.02275013
>
> # 3.ii
> qnorm(0.95, mean=100, sd=15, lower.tail=TRUE)
[1] 124.6728
>
```