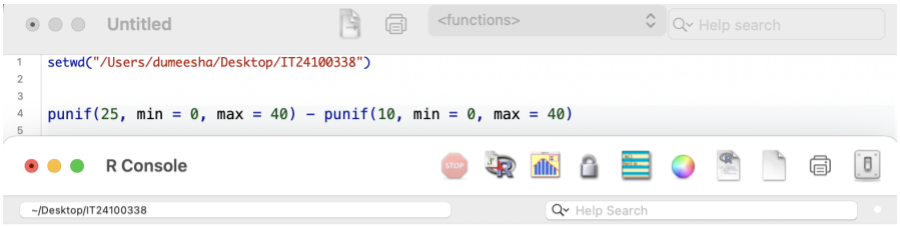
Exercise

1




```
R version 4.5.1 (2025-06-13) -- "Great Square Root"
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Platform: aarch64-apple-darwin20

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Type 'q()' to quit R.

[R.app GUI 1.82 (8536) aarch64-apple-darwin20]

[Workspace restored from /Users/dumeesha/.RData]
[History restored from /Users/dumeesha/.Rapp.history]

> setwd("/Users/dumeesha/Desktop/IT24100338")
> punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
[1] 0.375
```

2

```
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> setwd("/Users/dumeesha/Desktop/IT24100338")
> punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
[1] 0.375
> prob2 <- pexp(2, rate = 1/3)
>
> pexp(2, rate = 1/3)
[1] 0.4865829
```

3

I.

```
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> punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
[1] 0.375
> prob2 <- pexp(2, rate = 1/3)
>
> pexp(2, rate = 1/3)
[1] 0.4865829
> pnorm(130, mean = 100, sd = 15)
[1] 0.9772499
```

II.

```
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> punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
[1] 0.375
> prob2 <- pexp(2, rate = 1/3)
>
> pexp(2, rate = 1/3)
[1] 0.4865829
> pnorm(130, mean = 100, sd = 15)
[1] 0.9772499
> qnorm(0.95, mean = 100, sd = 15)
[1] 124.6728
```