IT24103040

Lab Sheet 07

Code

```
#1
#uniform distribution
prob1 <- punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
prob1
```

Output

```
Console   Terminal   Background Jobs
R 4.5.1 · C:/Users/Administrator/OneDrive/Desktop/IT24102980/
Type 'q()' to quit R.

> setwd("C:\\Users\\Administrator\\OneDrive\\Desktop\\IT24102980")
> prob1 <- punif(25, min = 0, max = 40) - punif(10, min = 0, max = 40)
> prob1
[1] 0.375
```

Code

```
#2
#Exponential distribution
prob2 <- pexp(2, rate = 1/3)
prob2
```

Output

```
> prob1
[1] 0.375
> prob2 <- pexp(2, rate = 1/3)
> prob2
[1] 0.4865829
```

Code

```r
#3
#Normal distribution
prob3_i <- 1 - pnorm(130, mean = 100, sd = 15)
prob3_i

iq_95 <- qnorm(0.95, mean = 100, sd = 15)
iq_95
```

Output

```
[1] 0.4865829
> prob3_i <- 1 - pnorm(130, mean = 100, sd = 15)
> prob3_i
[1] 0.02275013
> iq_95 <- qnorm(0.95, mean = 100, sd = 15)
> iq_95
[1] 124.6728
>
```