

IT24100161

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PS_lab07

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1 setwd("C:\\Users\\ASUS\\OneDrive\\Desktop\\IT24100161_PS_LAB07")
2
3 #Exercise
4 #Q1) Uniform distribution
5 prob_q1 <- (25 - 10) / 40
6 prob_q1
7
8 #Q2 Exponential distribution
9 lambda <- 1/3
10 prob_q2 <- pexp(2, rate=lambda) #  $P(X \leq 2)$ 
11 prob_q2
12
13 #Q3 i) Normal distribution -  $P(X > 130)$ 
14 prob_q3_i <- 1 - pnorm(130, mean=100, sd=15)
15 prob_q3_i
16
17 #Q3 ii) Normal distribution - 95th percentile
18 q3_ii <- qnorm(0.95, mean=100, sd=15)
19 q3_ii
20
```

```
> setwd("C:\\Users\\ASUS\\OneDrive\\Desktop\\IT24100161_PS_LAB07")
> prob_q1 <- (25 - 10) / 40
> prob_q1
[1] 0.375
> lambda <- 1/3
> prob_q2 <- pexp(2, rate=lambda) #  $P(X \leq 2)$ 
> prob_q2
[1] 0.4865829
> prob_q3_i <- 1 - pnorm(130, mean=100, sd=15)
> prob_q3_i
[1] 0.02275013
> q3_ii <- qnorm(0.95, mean=100, sd=15)
> q3_ii
[1] 124.6728
> |
```