

Sri Lanka Institute of Information Technology



Lab Submission  
Worksheet No 07

**IT24103989**

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B.Sc. (Hons) in Information Technology

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1 setwd("C:\\Users\\Sajan Gunarathna\\Downloads\\IT24103989")
2 getwd()
3
4 # 1. Uniform : P(10 < X < 25)
5 prob1 <- punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
6 print(prob1)
7
8 # 2. Exponential : P(X <= 2)
9 prob2 <- pexp(2, rate=1/3, lower.tail=TRUE)
10 print(prob2)
11
12 # 3. Normal
13 # i. P(X > 130)
14 prob3_i <- 1 - pnorm(130, mean=100, sd=15, lower.tail=TRUE)
15 print(prob3_i)
16
17 # ii. 95th |
18 iq_95 <- qnorm(0.95, mean=100, sd=15, lower.tail=TRUE)
19 print(iq_95)

```

```

> # 1. Uniform Distribution: P(10 < X < 25)
> prob1 <- punif(25, min=0, max=40, lower.tail=TRUE) - punif(10, min=0, max=40, lower.tail=TRUE)
> print(prob1)
[1] 0.375
> # 2. Exponential Distribution: P(X <= 2)
> prob2 <- pexp(2, rate=1/3, lower.tail=TRUE)
> print(prob2)
[1] 0.4865829
> # 3. Normal Distribution
> # i. P(X > 130)
> prob3_i <- 1 - pnorm(130, mean=100, sd=15, lower.tail=TRUE)
> print(prob3_i)
[1] 0.02275013
> # ii. 95th Percentile
> iq_95 <- qnorm(0.95, mean=100, sd=15, lower.tail=TRUE)
> print(iq_95)
[1] 124.6728
> |

```

R | Global Environment

#### Values

i	5L
iq_95	124.672804404272
max_ind	4L
max_index	4L
prob1	0.375
prob2	0.486582880967408
prob3_i	0.0227501319481792
vec	num [1:5] 10 45 23 99 56
x	num [1:3] 1 2 3