IT24102453

Lab sheet 07

01)

```
> # Exercise Question 1
>
> prob_q1 <- punif(25, min=0, max=40) - punif(10, min=0, max=40)
> cat("Q 1: Probability that the train arrives between 8:10 a.m. and 8:25 a.m.","\n", prob_q1, "\n")
Q 1: Probability that the train arrives between 8:10 a.m. and 8:25 a.m.
 0.375
>
```

02)

```
> # Exercise Question 2
>
> prob_q2 <- pexp(2, rate=1/3)
> cat("Q 2: Probability that an update takes at most 2
hours ","\n", prob_q2, "\n")
Q 2: Probability that an update takes at most 2 hours
 0.4865829
```

03)

```
> # Exercise Question 3i
>
> prob_q3i <- 1 - pnorm(130, mean=100, sd=15)
> cat("Q 3i: Probability of IQ above 130 ","\n", prob_q
3i, "\n")
Q 3i: Probability of IQ above 130
 0.02275013
>
>
> # Exercise Question 3ii
>
> iq_95th <- qnorm(0.95, mean=100, sd=15)
> cat("Q 3ii: IQ score for 95th percentile ","\n", iq_9
5th, "\n")
Q 3ii: IQ score for 95th percentile
 124.6728
>
```