

Probability and Statistics

IT24104294

Lab

```
> setwd('D:/Other/University/LabSheet/2Y_1st_SEM/PS/Lab07')
> punif(10, min = 0, max = 30, lower.tail = TRUE)
[1] 0.3333333
> 1-punif(20, min = 0, max = 30, lower.tail = TRUE)
[1] 0.3333333
> punif(20, min = 0, max = 30, lower.tail = FALSE)
[1] 0.3333333
> pexp(3, rate = 0.5, lower.tail = TRUE)
[1] 0.7768698
> 1-pexp(4, rate = 0.5, lower.tail = TRUE)
[1] 0.1353353
> pexp(4, rate = 0.5, lower.tail = FALSE)
[1] 0.1353353
>
```

```
> pexp(4, rate = 0.5, lower.tail = TRUE)-pexp(2, 0.5, lower.tail = TRUE)
[1] 0.2325442
> pnorm(37.6, mean = 36.8, sd = 0.4, lower.tail = FALSE)
[1] 0.02275013
> pnorm(36.9, mean = 36.8, sd = 0.4,
+       lower.tail = TRUE)-pnorm(36.4, mean = 36.8, sd = 0.4,
+       lower.tail = TRUE)
[1] 0.4400511
> qnorm(p = 0.012, mean = 36.8, sd = 0.4, lower.tail = TRUE)
[1] 35.89715
> qnorm(p = 0.01, mean = 36.8, sd = 0.4, lower.tail = FALSE)
[1] 37.73054
>
>
```

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Exercise

```
> setwd('D:/Other/University/LabSheet/2Y_1st_SEM/PS/Lab07')
> punif(25, min = 0, max = 40,
+       lower.tail = TRUE)-punif(10, min = 0, max = 40, lower.tail = TRUE)
[1] 0.375
> pexp(2, rate = 1/3, lower.tail = TRUE)
[1] 0.4865829
> pnorm(q = 130, mean = 100, sd = 15, lower.tail = FALSE)
[1] 0.02275013
> qnorm(0.95, mean = 100, sd = 15, lower.tail = FALSE)
[1] 75.3272
> |
```