

HW13 - Functions

Madhu Peduri

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0.0.1 Problem 1

0.1 Document Information.

All of the statistical analyses in this document will be performed using R version 4.1.0 (2021-05-18). R packages used will be maintained using the packrat dependency management system.

```
sessionInfo()
```

```
## R version 4.1.0 (2021-05-18)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 19041)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=English_United States.1252
## [2] LC_CTYPE=English_United States.1252
## [3] LC_MONETARY=English_United States.1252
## [4] LC_NUMERIC=C
## [5] LC_TIME=English_United States.1252
##
## attached base packages:
## [1] grid      stats      graphics  grDevices  utils      datasets  methods
## [8] base
##
## other attached packages:
## [1] Rcpp_1.0.7      jtools_2.1.3    dobson_0.4      Matrix_1.3-4
## [5] psych_2.1.6     leaps_3.1       faraway_1.0.7   xtable_1.8-4
## [9] lmtest_0.9-38   zoo_1.8-9       PairedData_1.1.1 mvtnorm_1.1-2
## [13] gld_2.6.2       ggpubr_0.4.0    car_3.0-11      carData_3.0-4
## [17] mnormt_2.0.2    vcd_1.4-8       epiDisplay_3.5.0.1 nnet_7.3-16
## [21] foreign_0.8-81  Hmisc_4.5-0     Formula_1.2-4   survival_3.2-11
## [25] lattice_0.20-44 MASS_7.3-54     ggplot2_3.3.5   rmarkdown_2.8
## [29] knitr_1.33
##
## loaded via a namespace (and not attached):
## [1] nlme_3.1-152     RColorBrewer_1.1-2 tools_4.1.0
## [4] backports_1.2.1  utf8_1.2.1      R6_2.5.0
## [7] rpart_4.1-15     colorspace_2.0-1 withr_2.4.2
## [10] tidyselect_1.1.1 gridExtra_2.3    curl_4.3.1
## [13] compiler_4.1.0   formatR_1.11     htmlTable_2.2.1
## [16] scales_1.1.1     checkmate_2.0.0  proxy_0.4-26
```

## [19] stringr_1.4.0	digest_0.6.27	minqa_1.2.4
## [22] rio_0.5.27	base64enc_0.1-3	jpeg_0.1-8.1
## [25] pkgconfig_2.0.3	htmltools_0.5.1.1	lme4_1.1-27.1
## [28] htmlwidgets_1.5.3	rlang_0.4.11	readxl_1.3.1
## [31] rstudioapi_0.13	generics_0.1.0	dplyr_1.0.7
## [34] zip_2.2.0	magrittr_2.0.1	munsell_0.5.0
## [37] fansi_0.5.0	abind_1.4-5	lifecycle_1.0.0
## [40] stringi_1.6.1	yaml_2.2.1	parallel_4.1.0
## [43] forcats_0.5.1	crayon_1.4.1	lmom_2.8
## [46] haven_2.4.1	splines_4.1.0	pander_0.6.4
## [49] hms_1.1.0	tmvnsim_1.0-2	pillar_1.6.1
## [52] boot_1.3-28	ggsignif_0.6.2	glue_1.4.2
## [55] evaluate_0.14	latticeExtra_0.6-29	data.table_1.14.0
## [58] nloptr_1.2.2.2	png_0.1-7	vctrs_0.3.8
## [61] cellranger_1.1.0	gtable_0.3.0	purrr_0.3.4
## [64] tidyr_1.1.3	xfun_0.23	openxlsx_4.2.4
## [67] broom_0.7.8	e1071_1.7-7	rstatix_0.7.0
## [70] class_7.3-19	tibble_3.1.2	cluster_2.1.2
## [73] ellipsis_0.3.2		